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Implementation of Total Quality Management (TQM) and Malcolm Baldrige National Quality Award (MBNQA) for Work Quality Improvement

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ABSTRACT

Performance measurement is needed to improve organizational performance by systematically measuring the level of performance achievement. This is done so that the company can know its position so that improvements can be made which will have an impact on increasing the productivity of the company. PT Esa Solusi Mandiri with the brand name Esaco is a consulting, training, assessment and equipment inspection agency. Esaco needs to improve its performance because the success of a company can be assessed by accurate and precise performance indicators to reflect its competitiveness. The approach used for performance measurement uses the Malcolm Baldrige National Quality Award (MBNQA). This study shows that Esaco's performance is in the average category with a score of 416.17, which indicates that the company is in the early improvement stage in the service sector.

Keywords: *total quality management, malcolm baldrige, quality of work.*

ABSTRACT

Pengukuran kinerja diperlukan untuk meningkatkan kinerja organisasi dengan mengukur tingkat capaian kinerja secara sistematis. Hal ini dilakukan agar perusahaan dapat mengetahui posisinya sehingga dapat dilakukan perbaikan yang akan berdampak pada peningkatan produktivitas dari perusahaan. PT. Esa Solusi Mandiri dengan nama merk Esaco merupakan lembaga konsultasi, pelatihan, asesmen dan inspeksi peralatan. Esaco perlu meningkatkan kinerjanya karena keberhasilan sebuah perusahaan dapat dinilai dengan indikator kinerja yang akurat dan tepat untuk mencerminkan daya saingnya. Pendekatan yang digunakan untuk pengukuran kinerja menggunakan Malcolm Baldrige National Quality Award (MBNQA). Penelitian ini menunjukkan bahwa kinerja Esaco berada pada kategori rata-rata dengan skor 416,17, yang mengindikasikan bahwa perusahaan berada pada tahap awal pengembangan (early improvement) dalam sektor pelayanan.

Keywords: *total quality management, malcolm baldrige, mutu kerja.*

INTRODUCTION

Nowadays, globalization has reached various aspects of life.With intensified competition in the market accompanied by changing consumer preferences, rapid advances in technology, and socio-economic dynamics, companies face a new set of challenges and opportunities. This condition requires companies to not only excel, but also to be the best among the best to ensure their survival in this dynamic era of globalization. It also forces companies to consistently update their strategies and improve their performance to remain competitive and relevant in the ever-changing business environment, so that their existence can be sustained.

One of the critical strategies for companies to thrive and outshine their competitors in today's market is through meticulous performance measurement [1]. By systematically evaluating the level of performance achievement, organizations can gain valuable insights to improve their overall performance. This practice not only clarifies organizational goals, but also provides a tangible framework for realizing them. In addition, performance measurement is indispensable for companies to understand their competitive position and identify areas for improvement, which ultimately leads to increased productivity [2].

Established in 2016, PT Esa Solusi Mandiri with the brand name Esaco, is designed as a knowledge and competency development center for professionals from companies or manufacturing industries, oil and gas, state-owned enterprises, academics who are fully committed to developing the competence of their employees. This is intended to provide added value to domestic companies, foreign medium-sized companies, and state-owned enterprises and achieve their goals by developing their business. Esaco's business process includes consulting, training, assessment and equipment inspection. In every business, Esaco always strives to maintain quality. Esaco as a professional training service institution is required to be better in providing services. There are still many problems that exist in Esaco, such as errors in inputting participant data which causes printing errors in issuing certificates, limited instructors who are competent in the K3 field, still lacking the availability of infrastructure for practical activities.

Esaco must improve its performance to remain competitive in today's market. Accurate and precise performance indicators are essential to assess the success of the company. To achieve this, PT Esa Solusi Mandiri must implement performance measurement using the Malcolm Baldrige National Quality Award (MBNQA) [3],[4],[5]. MBNQA is a proven method for improving overall and sustainable company performance. Originally consisting of 11 criteria, MBNQA has been simplified to seven key areas namely leadership, strategy, customer and market focus, measurement, analysis, and knowledge management, workforce focus, operations focus, and results [6].

LITERATURE REVIEW

Malcolm Baldrige National Quality Award (MBNQA)

MBNQA is a renowned quality evaluation framework widely recognized for its effectiveness. Established in 1987, MBNQA was initially used to assess the performance excellence of U.S. national companies [4]. MBNQA is an award program rooted in the Malcolm Baldrige Criteria for Performance Excellence (MBCfPE). The Baldrige Assessment measures organizational achievement against these criteria, providing a comprehensive evaluation of a company's overall performance [7]. MBCfPE is a valuable management tool that can elevate a company to new heights of excellence, quality, and global competitiveness.

The Malcolm Baldrige criteria based award has improved the country's competitiveness in global competition. It is the most comprehensive system for measuring and improving an organization's performance in quality. With the MBNQA, companies in the United States compete for it by improving their quality management. This Malcolm Baldrige application has been used in various company sectors in the world, such as in research [8] Malcom Baldrige is used for performance measurement in the field of education, in manufacturing [9], and [10] in the health sector. In Indonesia, MBCfPE is also adopted into the Indonesia Quality Award by the government, especially in state-owned enterprises.

In a study [11], a review of 50 journals on the MBNQA revealed its widespread application as a valuable tool for measuring and assessing organizational performance and developing effective strategies in today's competitive landscape. Analysis of the 50 journals across six sectors demonstrated that approximately 48% of organizations utilized the MBCfPE as a benchmark for evaluating their performance. This finding underscores the MBNQA framework's significance as a widely adopted standard for assessing organizational excellence

The Baldrige criteria are an integrated management system for evaluating organizational performance. Measurement, analysis and knowledge management are essential for assessing service quality. This research uses all Baldrige criteria to measure the company's performance, starting from leadership to results.



Figure 1. MBCfPE Framework

MBCfPE is a framework for assessing organizational performance, with each criterion having a maximum score of 1000 points. The total score is calculated by summing the individual scores for each of the seven Malcolm Baldrige Criteria, the score is grouped into several levels as follows:

Predicate Level	Score	Level
Early Development	0-275	Poor
Early Result	276-375	
Early Improvement	376-475	Average
Good Performance	476-575	
Emerging Industry Leader	576-675	
Industri Leader	676-775	Excellent
Benchmark Leader	776-875	
World Leader	876-1000	

Figure 2. Performance Levels Based on Malcolm Baldrige

METHOD

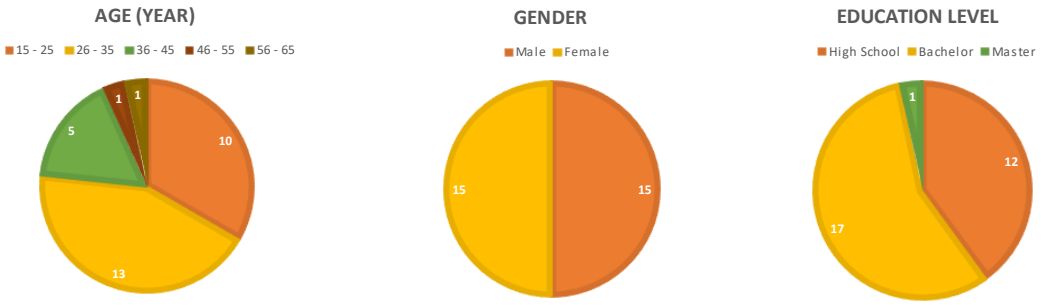
The research conducted is descriptive research with data obtained from questionnaires filled out by employees of PT Esa Solusi Mandiri with a total of 30 respondents. The data obtained during the study were collected using a questionnaire containing statements based on experiences and facts in daily activities in the company. Data collection focused on assessing company characteristics based on MBCfPE. The initial step in the performance measurement process using the Malcolm Baldrige Criteria at Esaco was to conduct a survey to assess the company's current performance. This initial assessment provides a basic understanding of the organization's strengths, weaknesses, and areas for improvement. The next step is to compile a questionnaire for Malcolm Baldrige score assessment. The questionnaire is made in accordance with the items of the Malcolm Baldrige criteria. After data collection, the questionnaire answers were analyzed and scored based on the Malcolm Baldrige Criteria. The ADLI (approach, application, learning, and integration) and LeTCI (level, trend, comparison, integration) methods were used to weight the scores and provide an evaluation of Esaco's performance [6],[12]. The processed data will be divided into questionnaire results and interview results. The final step is to determine the performance level of the company and conclude the results of the study based on MBNQA and provide recommendations for improvement for Esaco.

RESULTS AND DISCUSSION

Questionnaire Results

Characteristics of respondents consisted of 3, namely: age, gender, and education level. Figure (a) shows that the most respondents were obtained in the age group 26-35 years, namely 13 respondents (43.3%). The fewest were in the age group 46-55 and 56-65 years, namely 1 respondent (3.3%). Figure (b) shows that there is no difference between male and female gender. Male and female gender each obtained 15 respondents (50%). The frequency of characteristics of gender is

described in the table below. shows that respondents with bachelor's degree education level are the largest group, namely 17 respondents (56.7%). While the smallest respondent, namely at the master's degree education level as many as 1 respondent (3.3%).



(a) (b) (c)

Figure 3. a) age frequency, b) gender frequency, c) education level frequency.

Source: primary data

The next step is to recapitulate the score achievements of all categories based on questionnaire results, as shown in the following table:

Table 1. Score of All Categories Based on Questionnaire Results at Esaco

No	Categories	Max. Score	Company Score	Percent (%)
1	Leadership	120	79	66,2%
2	Strategy	85	55	65,1%
3	Customers	85	57	67,5%
4	Measurement, analysis, and knowledge management	90	59	65,5%
5	Workforce	85	56	65,3%
6	Operational	85	59	69,8%
7	Results	450	306	68,1%
	Total	1000	672	67,2%

The total score achieved across all categories of the MBNQA based on the questionnaire results amounts to 672 points, representing 67,2% of the maximum possible 1000 points. The highest-scoring category is the result, with 306 points, while the strategy category scores the lowest with 55 points. In terms of achievement percentage, operational category is the largest with 69,8%, while the strategy category has the lowest at 65,1%.

Interview Result and Document Observation

Table 2. Score of All Categories Based on Interview Results

Categories and Items	Maximum Score	Weight	Item Score	Category Score
1. Leadership	**120**	**22,50%**		**27**
• Senior Leadership	70	35%	24,5	
• Governance and social responsibility	50	5%	2,5	
2. Strategy	**85**	**23,24%**		**19,75**
• Strategy Development	40	10%	4	
• Strategy Implementation	45	35%	15,75	
3. Customers	**85**	**30,29%**		**25,75**

	Categories and Items	Maximum Score	Weight	Item Score	Category Score
	• Voice of Customer	40	25%	10	
	• Customer Engagement	45	35%	15,75	
4.	Measurement, Analysis And Knowledge Management	**90**	**27,50%**		**24,75**
	• Measurement, Analysis, and Improvement of Organizational Performance	45	30%	13,5	
	• Knowledge, Information, and Information Technology Management	45	25%	11,25	
5.	Workfoce	**85**	**21,76%**		**18,5**
	• Workfoce Environment	40	35%	14	
	• Workfoce Engagement	45	10%	4,5	
6.	Operational	**85**	**25,29%**		**21,5**
	• Work Process	45	30%	13,5	
	• Operational Effecttiveness	40	20%	8	
7.	Results	**450**	**33,67%**		**151,5**
	• Service and Process Results	120	40%	48	
	• Customer Focus Results	80	45%	36	
	• Workfoce Focus Results	80	15%	12	
	• Leadership and Governance Results	80	30%	24	
	• Financial and Market Results	90	35%	31,5	
	Total	1000	28,88%		288,75

Based on Table 2, PT Esa Solusi Mandiri achieved a total score of 288.75 (28.88%) out of 1000 points when evaluated against the MBNQA. The results category showed the strongest performance with a score of (151.5), while Labor emerged as the area most in need of improvement with a score of (18.5). In terms of achievement weight, results also had the highest score of 33.67%, emphasizing its significance in overall performance. In contrast, workforce was the lowest scoring category with a weighting of 21.76%.

Company Performance Level Score

To calculate the average score for each Malcolm Baldrige Criteria, data from questionnaires, interviews, and document reviews were consolidated and analyzed. The average score for each category was then determined using a standardized formula. Average score for each category (score of category based on questionnaire x 1/3) + (score of category based on interview and observation x 2/3).

Table 3. Score of Each Category Based on Questionnaire Results and Interview Results

Categories	Max Score	Average category score	Percent (%)
Leadership	120	44,33	36,94%
Strategy	85	31,50	37,06%
Customers	85	36,17	42,55%

Categories	Max Score	Average category score	Percent (%)
Measurement, analysis, and knowledge management	90	36,17	40,19%
Workforce	85	31,00	36,47%
Operational	85	34	40%
Results	450	203,00	45,11%
Total	1000	416,17	41,62%

Overall, Esaco demonstrates commendable performance, although certain areas exhibit a disparity between expectations and current achievements. As highlighted in research [13], leadership and workforce development represent notable gaps compared to other criteria. The leadership category received a percentage score of 36.94% and the workfoce category of 36.47%.

Predicate Level	Score	Level
Early Development	0-275	Poor
Early Result	276-375	
Early Improvement	376-475	Average
Good Performance	476-575	
Emerging Industry Leader	576-675	
Industri Leader	676-775	Excellent
Benchmark Leader	776-875	
World Leader	876-1000	

Figure 4. Organization Category Score

The total score achieved by Esaco is 416.17. This means that the performance level of PT Esa Solusi Mandiri has an average predicate and is included in the early improvement category. [5],[6],[14],[15]. Early improvement means Esaco is in an early stage improvement position in the service sector.

Discussion

In the case of Esaco, the low score of the leadership category is caused by the ineffective delivery of information due to the lack of communication between senior leaders and employees which causes the implementation of the socialization of company rules and policies is still lacking. The low score of the strategy category is due to the fact that Esaco still has not implemented a strategy to expand market share in East Java, so the company is less competitive compared to other companies that are well-prepared with a wide market share. The low score of the measurement, analysis, and knowledge management category is due to the implementation of the company's performance measurement carried out on an uncertain schedule, so the company is less able to make the right decisions in facing a dynamic market. The low score of the operational category is due to the lack of facilities and infrastructure to do the job, so employees cannot do the job optimally.

In an effort to improve its performance as a service company, Esaco can expand its market share in East Java which can be focused on strategic cities such as Surabaya, Malang, and Sidoarjo, which have high demand for consulting services. The implementation of internal communication systems needs to be optimized by building a digital platform that allows real-time collaboration between divisions, as well as ensuring clear communication flow through structured SOPs. Performance evaluation should be conducted on a regular schedule with measurable and data-based indicators, so that improvements can be implemented immediately. To improve operational efficiency, it is recommended to conduct a cost analysis that includes a review of the resource allocation process to reduce cost waste. Then, human resource development can be improved by organizing ongoing training that focuses on customer service skills, management, or the latest

technology so that employees are able to provide more professional services and be responsive to client needs.

CONCLUSION

This study shows that Esaco's performance through the Malcolm Baldrige National Quality Award (MBNQA) approach is in the average category with a score of 416.17, which indicates that the company is at an early stage of development (early improvement) in the service sector. To improve performance, some strategic recommendations are suggested by expanding market share in East Java, implementing an effective and structured internal communication system, conducting regular performance evaluations, increasing operational efficiency with cost analysis, and developing human resources through continuous training.

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