

## **The Kaizen Calculation: Differential Evaluation Methods for Operational and Administrative Excellence**

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### **Abstract**

In today's HR landscape, People Analytics helps the organizations to translate workforce behavior into actionable insights. This study explores the role of HR based evidence in evaluating Kaizen, a continuous improvement initiative across different job roles in a production company based in Coimbatore. The case investigates how Kaizen performance metrics and participation are assessed distinctly among blue collar and white-collar employees, reflecting variations in task nature, goal orientation, and performance visibility. This research analyzes Kaizen metrics, Evaluation methods and reward structures linked to Kaizen suggestions. Findings reveal that while blue collar metrics often focus on measurable efficiency and process improvements, white collar assessments lean toward innovation, documentation, and cross-functional collaboration.

**Keywords:** *People Analytics, Evidence Based HR, Kaizen Evaluation, Performance Measurement, Continuous Improvement*

### **Introduction:**

In the modern industrial world, People Analytics has become a vital tool for turning daily employee behavior into data-driven insights through Kaizen, the philosophy of continuous improvement. A major challenge for many companies is that they often try to measure everyone with the same yardstick, even though the work on a shop floor is very different from work in an office. This research explores The Kaizen Calculation, a method for evaluating success by separating it into two tracks: Operational Excellence for blue-collar roles and Administrative Excellence for white-collar roles.

The nature of these roles creates a gap in how performance is seen and measured. For blue-collar teams, the focus is on physical and measurable efficiency, such as building a new fixture to ensure that plastic parts are seated correctly during inspection. In contrast, white-collar and technical roles focus on innovation and system reliability, such as upgrading workstations to handle high-performance design software. By using an evidence-based HR approach, organizations can move beyond a single evaluation style. This study uses real Kaizen reports to show how different metrics, root cause analyses, and reward structures are needed to balance traditional shop-floor precision with the speed of new technology.

## Review of Literature

Crucial Points in Work Style Reform in the White-Collar Workplace Compared with the Blue-Collar Workplace, Mitsubishi UFJ Research and Consulting (2019) This study investigates why productivity improvements often fail in office settings, finding that many companies mistakenly apply blue-collar "shop floor" methods to white-collar roles. The research identifies a fundamental split: blue-collar work is typically standardized and uniform with clearly observable inputs and outputs, whereas white-collar work is diverse and autonomous, requiring more employee discretion over time and tasks. A critical point made by the authors is that while blue-collar goals are often quantitative (such as production cost or unit counts), white-collar output is difficult to define, often leading management to focus incorrectly on inputs like overtime. The study suggests that white-collar Kaizen must focus on "questioning awareness" to eliminate intangible wastes like unnecessary documentation or redundant meetings.

**4 Types of Kaizen and How to Implement Kaizen in Your Workflow, Amper Technologies (2022)** This research identifies four distinct methodologies for continuous improvement: Kaizen Teian (bottom-up), Kaizen Events (short-term projects), Kaikaku (radical change), and Kakushin (breakthrough innovation). The study found that while most daily improvements are incremental, some situations require a "Kaikaku" approach, such as moving from manual to automated processes. A vital point for your calculation framework is that regardless of the scope, the end goal is to create more optimized and forward-thinking processes. The author emphasizes that a successful Kaizen project requires mutual respect and accountability from all team members, ensuring that every level of the organization contributes to profitability and efficiency.

**The Impact of Kaizen on Improving Product Quality: A Case Study, Haileit Berhe (2022)** This recent case study found a strong and statistically significant correlation between Kaizen participation and final product quality, with employee engagement being the single biggest driver of success. The research emphasizes that Kaizen is not just about reducing waste but about "Standardization", the unification of procedures to ensure stable performance and reduced variation. A vital point for the paper is that the study recommends "activating" different dimensions of Kaizen for different roles, such as focusing on "Autonomous Maintenance" for shop-floor operators and "System Coordination" for managers. This confirms that a differential evaluation method is necessary to accurately capture the value added by different sectors of the workforce.

**Blue collar vs White collar engagement: Boost retention in 2025 by Culture Monkey (2025)** This article examines the distinct motivational drivers required to engage different occupational groups in the modern workforce. The study found that blue-collar engagement is largely tied to extrinsic factors such as fair wages, physical safety, and job security, whereas white-collar careers thrive on intrinsic rewards like career growth, work-life balance, and professional recognition. A major point of the research is that managing these two groups is like "running two different marathons," requiring tailored communication strategies for each. The author recommends using digital engagement platforms to bridge the gap between the shop floor and the office, allowing leadership to use real-time feedback to make more inclusive, data-driven decisions that improve retention across the entire organization.

## Research Methodology

### *Research Design*

This study adopts a qualitative-dominant case study research design supported by documentary evidence to examine how Kaizen is calculated and evaluated differently for blue-collar and white-collar employees. A case study approach is appropriate as the research focuses on understanding role-specific evaluation practices within a real organizational context, rather than testing abstract Kaizen theory. The study emphasizes evidence-based HR practices, using actual Kaizen documentation as primary data sources.

### Data Sources

*The study relies on organizational secondary data and documented evidence, including:*

- Completed Kaizen sheets from blue-collar roles (e.g., quality inspection fixtures, process alignment improvements)
- Completed Kaizen sheets from white-collar roles (e.g., IT infrastructure upgrades, design productivity enhancement)
- Kaizen evaluation fields such as problem statement, Why–Why analysis, root cause identification, countermeasures, results, and standardization
- Approval records involving HOD, Finance, and BE/Functional coordinators

These documents provide verifiable evidence of how Kaizen contributions are assessed, approved, and standardized across roles.

### Ethical Considerations

All organizational data used in the study is anonymized to protect employee and company identity. The research relies solely on existing documentation and does not involve direct employee intervention, ensuring minimal ethical risk.

### Data Analysis Technique

The study uses **thematic content analysis** of Kaizen documentation. Key themes such as efficiency improvement, innovation enablement, problem visibility, and standardization depth are coded and compared across blue-collar and white-collar Kaizens. Patterns in evaluation emphasis and approval justification are analyzed to identify structural differences in Kaizen calculation logic.

### What Was Analyzed

Each Kaizen submission was treated as a unit of analysis. Rather than evaluating the employee, the focus was on how the Kaizen itself was assessed. The Kaizens were grouped into:

- **Operational Level Role Kaizens**, which usually show immediate and visible improvements on the shop floor.
- **Administrative Level Role Kaizens**, which mainly support productivity, system performance, and long-term efficiency.

**Differences in Kaizen Calculation Across Operational and Administrative Levels**

Although the organization follows a standardized Kaizen format across all functions, the basis on which Kaizen outcomes are calculated and evaluated differs between operational-level and administrative-level roles. These differences arise due to variations in the nature of work, outcome visibility, and the type of evidence generated through Kaizen initiatives. Table 1 presents a comparative summary of the key dimensions along which Kaizen calculation varies across the two levels.

**Table 1: Differences in Kaizen Calculation Between Operational and Administrative Levels**

Dimension	Operational Level Kaizen	Administrative Level Kaizen
Nature of Work	Execution-focused and process-driven activities	Planning, coordination, system, and support-oriented activities
Typical Kaizen Focus	Quality improvement, inspection accuracy, cycle-time reduction, ease of operation	Productivity enablement, system performance improvement, infrastructure support
Problem Visibility	Immediately observable and physically visible	Indirect and often visible over a longer period
Type of Evidence Used	Physical changes, before–after comparison, measurable results	Documentation quality, system performance indicators, usage efficiency
Measurement Approach	Quantitative metrics such as time saved, error reduction, and process stability	Qualitative and semi-quantitative indicators such as productivity gain and downtime reduction
Basis of Kaizen Calculation	Direct operational impact and tangible outcomes	Contribution to organizational capability and long-term efficiency
Standardization Method	SOPs, OPLs, checklists, and physical process controls	Process alignment, system upgrades, and workflow documentation
Approval Emphasis	Immediate operational benefit, quality impact, and cost avoidance	Long-term value creation, scalability, and productivity enhancement
Time Horizon of Results	Short-term and immediate	Medium- to long-term
Risk of Evaluation Bias	Lower due to measurable outputs	Higher if evaluated using only tangible metrics

HR Evaluation Implication	Easily captured using traditional performance measures	Requires role-sensitive and evidence-based evaluation criteria
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The comparison indicates that while operational-level Kaizens are evaluated primarily through direct and measurable outcomes, administrative-level Kaizens depend more on indirect indicators and documentation-based evidence. Applying uniform evaluation or scoring mechanisms across both levels may therefore lead to unequal assessment of Kaizen contributions, reinforcing the need for differentiated evaluation criteria within evidence-based HR systems.

**Implications of Differential Kaizen Calculation**

While the Kaizen format remains uniform across the organization, the **meaning of “value creation” differs significantly between operational and administrative roles**. Applying identical scoring or reward criteria to both levels can lead to uneven evaluation, where operational improvements appear more measurable and administrative improvements appear less impactful, despite requiring comparable analytical effort and organizational contribution.

This study highlights that effective Kaizen evaluation requires **role-sensitive calculation criteria**, even within a standardized framework. Recognizing these differences allows organizations to design fairer performance assessment systems and strengthen the role of evidence-based HR in continuous improvement initiatives.

**Findings**

The analysis of Kaizen records across operational and administrative levels reveals clear differences in how Kaizen contributions are evaluated, approved, and interpreted within the organization. Although a common Kaizen format is used, the calculation logic and evidence emphasis vary systematically by role level.

At the operational level, Kaizen outcomes are predominantly evaluated through direct, visible, and quantifiable improvements. Most Kaizens demonstrate immediate impact in terms of quality accuracy, ease of inspection, time reduction, or process stability. Evidence supporting these Kaizens is typically physical in nature, supported by before–after conditions, measurable improvements, and linkage to standardization through SOPs or OPLs. Approval decisions at this level are strongly influenced by tangible operational benefits and the sustainability of improvements.

In contrast, administrative-level Kaizens are evaluated using a different set of considerations. These Kaizens primarily aim to remove productivity constraints, improve system or infrastructure performance, and enable smoother workflow execution. The benefits are often indirect and realized over a longer period. As a result, evaluation relies more on the quality of problem analysis, documentation strength, and contribution to functional efficiency, rather than immediately measurable output. Approvals at this level place greater emphasis on long-term value creation, scalability, and alignment with future organizational needs.

The findings also indicate a difference in performance visibility. Operational-level Kaizens tend to produce results that are easily observable and verifiable, whereas administrative-level Kaizens require interpretive judgment to assess impact. This difference increases the risk of evaluation bias when uniform scoring or reward criteria are applied across levels.

Overall, the findings suggest that while standardization of Kaizen formats ensures consistency, standardization of evaluation criteria without role sensitivity may not accurately reflect the value

created by different types of work. The organization's existing practices implicitly recognize these differences during approval, even though formal evaluation frameworks remain uniform.

### **Implications for HR and Performance Management**

The findings of this study have important implications for how organizations design and implement Kaizen-based performance evaluation systems. While the use of a standardized Kaizen format ensures consistency and control, the evidence indicates that uniform evaluation criteria may not adequately capture the value created at different organizational levels.

For HR practitioners, the results highlight the need to move beyond one-dimensional Kaizen scoring systems. At the operational level, Kaizen evaluation can continue to rely on quantifiable outcomes such as time savings, quality improvement, and process stability. These metrics are well suited to the nature of execution-based work and align closely with existing operational performance indicators.

However, at the administrative level, HR evaluation frameworks must account for indirect and enabling contributions. Administrative Kaizens often improve system performance, coordination efficiency, and future readiness, which may not produce immediate measurable output. Evaluating such contributions using purely tangible metrics risks undervaluing analytical effort and innovation. HR systems should therefore incorporate documentation quality, problem-solving depth, and productivity enablement indicators into Kaizen assessment criteria for administrative roles.

From a People Analytics perspective, the study emphasizes the importance of context-sensitive interpretation of Kaizen data. Aggregating Kaizen scores without adjusting for role-specific characteristics can lead to biased analytics outcomes and misinformed reward decisions. Differentiated evaluation logic improves the reliability of Kaizen data as an evidence source for performance appraisal, recognition, and career progression.

Managerially, the findings suggest that Kaizen approval workflows already reflect an implicit understanding of these differences, as seen in varied emphasis during operational and administrative approvals. Formalizing this understanding through HR policy can enhance transparency, perceived fairness, and employee engagement in continuous improvement initiatives.

Overall, aligning Kaizen evaluation with the nature of work performed at different organizational levels strengthens the role of Kaizen as both an operational improvement tool and a credible mechanism within evidence-based HR and performance management systems.

### **Recommendations**

Based on the findings and discussion, several practical recommendations can be proposed for organizations implementing Kaizen as part of their performance management and continuous improvement systems.

First, organizations should formalize role-sensitive Kaizen evaluation criteria. While maintaining a standardized Kaizen format for governance and consistency, evaluation metrics should be differentiated for operational and administrative levels. Operational-level Kaizens can continue to be assessed using direct indicators such as time savings, quality improvement, error reduction, and process stability. In contrast, administrative-level Kaizens should be evaluated using indicators that capture productivity enablement, system performance improvement, analytical depth, and long-term value creation.

Second, HR functions should integrate People Analytics frameworks that recognize contextual differences in Kaizen data. Rather than aggregating Kaizen scores uniformly, analytics dashboards

should classify Kaizens by role level and function, allowing more accurate interpretation of contribution and impact. This approach reduces evaluation bias and strengthens the use of Kaizen data in evidence-based HR decision-making.

Third, organizations should strengthen documentation and standardization practices for administrative-level Kaizens. Since outcomes at this level are often indirect, clear documentation of problem analysis, rationale for action, and expected productivity impact becomes critical. Linking administrative Kaizens to process guidelines, system documentation, or workflow standards enhances their visibility and credibility during evaluation.

Fourth, training programs for managers and evaluators should emphasize differentiated Kaizen assessment logic. Sensitizing approvers to the distinct nature of operational and administrative improvements can improve consistency in evaluation and reinforce fairness in recognition and reward mechanisms.

Finally, organizations should periodically review Kaizen evaluation outcomes to ensure alignment with strategic objectives. Such reviews can help refine metrics, improve participation across levels, and sustain employee engagement in continuous improvement initiatives.

### **Conclusion**

This study highlights that while organizations use a standardized Kaizen format, the calculation and evaluation of Kaizen differ in practice across operational and administrative levels. Operational-level Kaizens are largely assessed through direct and measurable process improvements, whereas administrative-level Kaizens focus on enabling productivity, system performance, and long-term efficiency.

Applying uniform evaluation criteria across these levels may lead to unequal assessment of contributions. The findings emphasize the need for role-sensitive Kaizen evaluation within evidence-based HR systems to ensure fairness, accuracy, and meaningful recognition of continuous improvement efforts.

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