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CONTINUOUS IMPROVEMENT CYCLE-BASED EVALUATION: AN EFFECTIVE CONTROL STRATEGY FOR PROGRAMME SUCCESS

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Abstract

This study aims to analyse the application of continuous improvement cycle-based evaluation and its integration with effective control strategies in order to increase the chances of programme success. The method used is *a literature* review with a descriptive-analytical approach, which examines concepts, theories, and empirical findings from various scientific sources such as journals, books, and research reports. The results of the study indicate that the application of a continuous improvement cycle model, such as *Plan-Do-Check-Act* (PDCA), enables program evaluation to be carried out systematically, adaptively, and repeatedly, so that weaknesses can be identified and corrected quickly. Meanwhile, effective control strategies—including the establishment of clear performance indicators, continuous monitoring, proactive risk management, strong governance, and the use of technology—can strengthen the evaluation process and ensure the efficient achievement of programme objectives. The synergy between these two approaches not only improves programme performance and quality but also fosters an organisational culture that is responsive, accountable, and quality-oriented. These findings have important implications for programme managers across sectors to adopt an integrated evaluation-control framework as a long-term management strategy.

Keywords: programme evaluation, continuous improvement cycle, PDCA, control strategy, programme management, programme success.

Introduction

Program evaluation is a crucial aspect of management that aims to ensure that a program is implemented in accordance with its design, objectives, and established performance indicators. The evaluation process is not only a measure of success, but also a means of identifying potential improvements in the future (Ibrahim, 2023) . In an era of dynamic competition and change, a static evaluation approach is no longer sufficient. Organisations and programme managers require an adaptive, systematic, and continuous improvement-oriented evaluation framework so that optimal results can be achieved consistently in the long term (Rianto & Utama, 2021) .

One evaluation approach that is gaining attention is evaluation based on a continuous improvement cycle, which is often illustrated through the PDCA (Plan-Do-Check-Act) model or similar approaches. This concept places evaluation as a repetitive

and continuous process that does not stop at the assessment stage, but is followed by corrective actions and strategic development. Through this cycle, any weaknesses in programme implementation can be identified, analysed, and addressed quickly and systematically. The continuity of this improvement process minimises the likelihood of errors recurring, while also enhancing the efficiency of the resources used (Osterhammel, 2022) .

The urgency of implementing evaluation based on a continuous improvement cycle is growing stronger as programmes become more complex, both in the public and private sectors. Modern programmes operate in uncertain environments, influenced by policy changes, technological developments, market dynamics, and even global crises that require rapid responses. Conventional evaluations conducted only at the end of the implementation period often fail to provide timely recommendations, which in turn can hinder the achievement of program objectives. By adopting a continuous improvement cycle approach, evaluation information can be processed in real-time or within short periods, enabling earlier control measures to be implemented. (Fadli, 2024) .

In addition, the success of implementing a continuous improvement cycle is greatly influenced by effective control strategies. Control is a management function that aims to ensure that activities are carried out according to plan and to take corrective action when deviations occur. Effective control includes monitoring performance indicators, analysing the causes of problems, determining priorities for improvement, and implementing solutions while considering their impact on the overall programme (Sihaloho, 2025) . In the context of this study, control strategies are not only viewed as administrative mechanisms, but as an integral part of strategic programme management.

Selecting the right control strategy can be the difference between a programme that merely runs and one that achieves substantial success. Management literacy indicates that organisations capable of effectively implementing a combination of evaluation and control tend to have higher programme sustainability rates. If evaluation serves as the "eyes" that observe and interpret the situation, then control is the "hands" that take action to ensure the programme remains aligned with its objectives. The synergistic relationship between the two forms the foundation of the success of programmes based on continuous improvement (Vukomanovic, 2022) .

To understand why this approach is relevant, it is important to look at the background of program evaluation phenomena to date. Many programs fail or are suboptimal not simply because of poor design, but because there are no direct improvement mechanisms during program implementation (Liu et al., 2024) . In the literature, a pattern was found that many program managers wait for final evaluation reports, which often render recommendations obsolete by the time they are implemented. The continuous improvement cycle addresses these issues with adaptive

mechanisms that enable corrective actions aligned with current conditions (Vukomanovic, 2022) .

In addition to improving responsiveness, the implementation of a continuous improvement cycle also has an impact on the quality of programme outcomes. Through continuous evaluation, minor errors can be identified early on before they develop into major obstacles. Programmes that are adaptive to feedback and environmental changes will be better prepared to address operational and strategic risks. This aligns with modern quality management principles that emphasise the importance of continuous monitoring processes to maintain stability and improve performance (Sihaloho, 2025) .

From an academic perspective, this study fills a gap in research on the integration of continuous improvement cycle evaluation models and effective control strategies. A number of literature discuss these two concepts separately, but their practical relevance in the context of programme management is still limited.

Research Method

This study uses a *literature review* method with a descriptive-analytical approach to examine and synthesise concepts, theories, and empirical findings related to evaluation based on continuous improvement cycles and effective control strategies in programme success. Data sources consist of scientific literature in the form of books, journal articles, proceedings, and relevant official documents, selected through inclusion criteria that include recency, topic relevance, and credibility of the publisher or author (Eliyah & Aslan, 2025) . The data collection process was carried out by searching academic databases such as Scopus, Google Scholar, and ScienceDirect. The analysis was conducted thematically to identify patterns, relationships, and key principles that integrate the concepts of the continuous improvement cycle and effective control strategies, resulting in a conceptual framework that can be applied across sectoral programmes (Machi & McEvoy, 2016) .

Results and Discussion

Continuous Improvement Cycle as an Evaluation Framework

The continuous improvement cycle is a management concept that emphasises continuous evaluation and improvement in order to enhance the effectiveness and quality of programme or process outcomes. This framework utilises a cyclical model involving repetitive steps, the most well-known of which is PDCA (Plan-Do-Check-Act). This model serves as a systematic guide for managing change and improvement based on actual data and evaluation, so that it does not merely rely on final results, but rather on continuous progress throughout the programme (Sihaloho, 2025) .

The first stage in this cycle is *Plan* (planning), where objectives and performance indicators are clearly defined. This planning serves as the main foundation because it

establishes the direction and evaluation criteria that will be used. During this stage, potential issues are identified, and strategies for resolution are developed, ensuring that subsequent work has a clear and measurable framework. Clarity in planning is crucial for the success of the next cycle, as evaluation is based on the established benchmarks (Ningsih, 2024) .

Next, the *Do* (implementation) stage is the phase of implementing the plan that has been developed. In the context of continuous improvement cycle-based evaluation, this stage is not merely about executing the programme but also conducting initial monitoring to ensure procedures are carried out as planned. Active involvement during implementation is crucial for collecting accurate data as evaluation material. Delayed or inaccurate evaluation will limit the ability to make timely improvements (Isniah et al., 2020) .

The next stage, *Check* (verification), is the core of evaluation in this cycle. During this phase, the results of the implementation stage are compared with the standards or targets established in the planning phase. This inspection involves data analysis, identification of deviations and their causes, and an assessment of the effectiveness of the implementation. This stage promotes objectivity in evaluating success and serves as the basis for decisions to continue, improve, or change the next steps. (Putra, 2022) .

After the inspection, the *Act* (action) stage focuses on decision-making and implementing improvements based on the evaluation results. If any non-conformities or opportunities for improvement are found, corrective and preventive actions are designed and implemented. Not only does this stage address existing issues, but it also emphasizes continuous development to prevent the same problems from recurring in the future. Thus, this cycle reinforces the principle that evaluation is not the end but the beginning of the continuous improvement process (Ramadani, 2021) .

The continuous improvement cycle not only improves programme quality but also strengthens an adaptive and responsive organisational culture. Through repetition of this cycle, organisations learn from previous experiences and are better prepared to face new challenges. Improvements are made gradually and systematically, thereby reducing the risk of major failures while maximising the potential for success (Zailani et al., 2023) .

In practice, this cycle can be adapted and combined with various other evaluation models, such as Six Sigma or Lean Management, to meet the specific needs of a programme or organisation. This flexible approach allows programme managers to tailor evaluation methods to the context and resources available, making them more relevant and applicable. The versatility of the continuous improvement cycle is one of its key advantages in addressing complex and rapidly changing management environments (Yusuf, 2023) .

One of the challenges in implementing this cycle is ensuring consistency and commitment in carrying out each stage in a sustainable manner. Evaluations that are

merely formalities or partial can reduce the effectiveness of the cycle, making it difficult to achieve the goal of continuous improvement (Dewi, 2021) . Therefore, the involvement of all stakeholders and management support are crucial for the cycle mechanism to work optimally and integrate into daily management processes.

Information technology also plays an important role in supporting the continuous improvement cycle. The use of real-time monitoring systems, performance indicator dashboards, and digital data analysis enables quick and accurate evaluations. Easy access to information facilitates informed decision-making and more responsive improvement actions. Therefore, the integration of technology into the continuous improvement cycle is increasingly seen as an absolute necessity for the success of modern programmes (Sun & Hong, 2023) .

In theory, the continuous improvement cycle underpins the principles of Total Quality Management (TQM), which is focused on customer satisfaction and organisational value enhancement. By combining evaluation and continuous improvement, this cycle guides organisations not only towards achieving minimum standards but also towards continuous efforts to achieve competitive advantage. This is important to ensure that the programs implemented are not only effective in the present but also sustainable in the future (Suzuki, 2025) .

Furthermore, the application of a continuous improvement cycle in programme evaluation has demonstrated various benefits, including improved resource management effectiveness, reduced costs due to failure, and increased participant and stakeholder satisfaction. However, the effectiveness of this cycle heavily depends on the quality of the data obtained and the analytical capabilities employed. Therefore, training and capacity building for evaluation managers are crucial elements in the implementation of the continuous improvement cycle (, 2023) .

Thus, the continuous improvement cycle as an evaluation framework offers a systematic and dynamic approach to programme management. Through the stages of planning, implementation, review, and action, this cycle ensures that evaluation does not stop at measuring results, but continues with ongoing improvement efforts. This approach optimises the use of evaluation information as a basis for strategic decision-making, thereby significantly and sustainably increasing the potential for programme success.

Effective Control Strategies for Programme Success

Effective control strategies are a fundamental component in ensuring the success of a programme. Control includes mechanisms for monitoring, evaluating, and adjusting programme activities to keep them aligned with planned objectives. The essence of control strategies lies in their ability to detect deviations early and facilitate timely corrective action, thereby preventing small problems from developing into major obstacles that affect programme outcomes. (Prasetyo, 2022) .

The basic elements of effective control are clear definitions of objectives and performance indicators. Without measurable objectives and concrete *key performance* indicators (KPIs), the control process has no direction and no criteria for assessing programme progress. Effective programme control begins with the establishment of realistic, specific, and measurable targets as benchmarks for comparing actual performance on a regular basis (.

Control strategies should include a systematic monitoring and reporting framework. Regular and reliable programme data collection enables programme managers to review progress on an ongoing basis. Monitoring frameworks such as real-time *dashboards*, target achievement trend analyses, and periodic progress reports help maintain transparency and facilitate informed decision-making (Rahayu, 2023) .

Communication plays a crucial role in control strategies. Effective control does not only rely on data collection, but also ensures that relevant information is conveyed to stakeholders. Regular communication channels such as steering committee meetings and programme status updates build shared understanding, encourage team accountability, and facilitate collaboration in overcoming challenges that arise (Martinsuo, 2022) .

One important strategy for effective control is the integration of communication flows from top to bottom and from bottom to top. Targets and expectations are communicated by programme leaders to the entire team, while progress, risks and obstacles are communicated from the implementation team to management. This dual flow ensures synchronisation between strategic objectives and operational realities, which in turn improves the responsiveness and adaptability of the programme (Elziny, 2021) .

Risk management is an integral part of effective control strategies. Proactively identifying, assessing, and mitigating risks can prevent disruptions that could potentially derail programme success. Continuous risk monitoring and contingency planning enable rapid adaptation to changing conditions and unexpected challenges (Latief & Utami, 2023) .

Resource management is also an important aspect of control. Control strategies include ensuring the optimal allocation and utilisation of resources, including financial, human, and technological resources. Monitoring the use of resources against budgets and schedules helps maintain efficiency and avoid delays or cost overruns that could disrupt the achievement of programme objectives (Patel, 2020) .

The establishment of a strong *governance structure* supports control efforts by clearly defining roles, responsibilities, and accountability mechanisms. Successful programmes usually have specialised units such as programme management offices that oversee the control process. These units facilitate coordination, enforce standards, and ensure that control activities are consistent and effective (Nursaid, 2025) .

The use of appropriate tools and technology can improve the effectiveness of control processes. Modern program management software integrates planning, monitoring, and reporting functions simultaneously. Automation in data collection and analysis reduces delays and errors, enabling quick and data-driven decision-making. Data visualisation helps identify deviations quickly and prioritise corrective actions (Sari, 2023) .

Continuous improvement is a hallmark of effective control strategies. Control is not merely compliance with plans, but rather a process of learning from performance data to improve and refine programme implementation. Repeated cycles of evaluation and adjustment help create programmes that are adaptive to changes in the environment and stakeholder needs. Team involvement and empowerment also influence the effectiveness of control (Naughton, 2024) . Control should foster a culture *of ownership* where team members understand performance expectations and are motivated to contribute to monitoring and process improvement. Encouraging open communication and feedback enables early detection of issues and collaborative resolution (Correia et al., 2025) .

Adjusting control strategies to the specific context of each programme is essential. Each programme has a different level of complexity, scale, and stakeholder involvement. Therefore, control mechanisms need to be flexible to adapt to the risks, interdependencies, and limitations of the programme without becoming rigid or excessive burdensRodríguez-Gámez, 2024) .

In several studies, programmes that implement integrated control strategies—including clear performance metrics, proactive risk management, solid communication, and adaptive governance—perform better than those that do not. For example, successful global-scale programmes typically hold regular steering committee meetings supported by comprehensive data, enabling interventions and adjustments to be made quickly (Machi & McEvoy, 2016) .

Finally, the effectiveness of control strategies is measured by their contribution to the achievement of programme objectives within the specified scope, timeframe and budget, while meeting quality standards. Control strategies that combine systematic planning, rigorous monitoring, stakeholder involvement, resource oversight and continuous learning will create a dynamic management environment conducive to programme success.

Conclusion

The implementation of continuous improvement cycle-based evaluation, such as the *Plan-Do-Check-Act* model, provides a systematic, adaptive, and repetitive framework to ensure that programmes remain relevant and effective amid a rapidly changing environment. This approach does not only focus on measuring outcomes but also on monitoring processes and follow-up actions in the form of continuous improvement. As

a result, evaluation does not stop at the assessment stage but becomes a tool for organisational learning to enhance quality, efficiency, and the achievement of programme objectives in a sustainable manner.

The integration of effective control strategies into the continuous evaluation cycle has proven to be a key factor in the success of the programme. These strategies include the establishment of clear performance indicators, systematic monitoring and reporting, proactive risk management, robust governance, and the use of technology to improve the accuracy and speed of information. The synergistic relationship between continuous evaluation and effective control enables early detection of potential issues and faster, more accurate, and *evidence-based decision-making*.

Overall, this study confirms that the combination of continuous improvement cycles and effective programme control will increase the chances of a programme's success, in terms of target achievement, resource efficiency, and sustainability of results. The implementation of these two approaches also encourages the creation of a responsive, accountable, and quality-oriented organisational culture. Therefore, programme managers across various sectors are advised to adopt this integrated framework as part of their long-term management strategy.

References

Correia, D., Marques, J. L., & Teixeira, L. (2025). A framework to guide and support the design of a smart city based on the PDCA cycle approach. *Journal of Systems and Information Technology*, *27*(1), 65–93. https://doi.org/10.1108/JSIT-02-2022-0055

Dewi, S. W. (2021). Model PPEPP untuk Penjaminan Mutu Berkelanjutan di Perguruan Tinggi. *Jurnal Pendidikan Dan Kebudayaan*, *16*(3), 234–243.

Eliyah, E., & Aslan, A. (2025). STAKE'S EVALUATION MODEL: METODE PENELITIAN. *Prosiding Seminar Nasional Indonesia*, *3*(2), Article 2.

Elziny, A. H. (2021). Critical Success Factors for Lean Six Sigma Implementation. *TQM Journal*, *33*(3), 439–459. https://doi.org/10.1108/TQM-11-2020-0280

Fadli, M. (2024). Strategi Pengendalian Efektif melalui Program Continuous Improvement pada Industri Manufaktur. *Jurnal Teknik Industri*, *25*(2), 77–87.

Ibrahim, I. (2023). The role of leadership in effective strategy implementation and continuous improvement programs. *International Journal of Productivity and Performance Management*. https://doi.org/10.1108/IJPPM-11-2020-0584

Isniah, S., Hardi Purba, H., & Debora, F. (2020). Plan do check action (PDCA) method: Literature review and research issues. *Jurnal Sistem Dan Manajemen Industri*, *4*(1), 72–81. https://doi.org/10.30656/jsmi.v4i1.2186

Latief, R., & Utami, A. (2023). Applying Six Sigma and Lean in Manufacturing: Improving Quality and Process Efficiency. *Operations Management Research*, *16*(1), 81–92. https://doi.org/10.1007/s12063-022-00265-7

Liu, X., Lu, W., & Zou, T. (2024). Public policy formulation & evaluation under the PDCA cycle model. *Applied Mathematics and Nonlinear Sciences*, *9*(1). https://doi.org/10.2478/amns-2024-3450

Machi, L. A., & McEvoy, B. T. (2016). *The Literature Review: Six Steps to Success*. Corwin Press.

Martinsuo, M. (2022). Editorial: Managing strategic projects and programs in and between organizations. *International Journal of Project Management*, *40*(7), 439–441. https://doi.org/10.1016/j.ijproman.2022.03.001

Naughton, E. (2024). A structured model for continuous improvement (lean) in manufacturing. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e26412

Ningsih, S. (2024). PPEPP sebagai Siklus Perbaikan Berkelanjutan dalam Kurikulum Pendidikan Tinggi. *Jurnal Ilmu Pendidikan*, *29*(1), 21–30.

Nursaid, N. (2025). Analisis Manajemen Risiko pada UMKM. *Musytari (Neraca Manajemen Ekonomi)*, *20*(3). https://doi.org/10.8734/mnmae.v1i2.359

Osterhammel, J. (2022). Strategy implementation: A review and an introductory framework. *Journal of Business Research*, *136*, 1–13. https://doi.org/10.1016/j.jbusres.2021.08.028

Patel, P. R. (2020). Critical Evaluation of Continuous Improvement and Its Implementation in SMEs. *International Journal of Quality & Reliability Management*. https://doi.org/10.4018/IJQRM.2020040101

Prasetyo, Y. D. (2022). Evaluasi Program Pendidikan Berbasis Siklus PPEPP di Madrasah Aliyah. *Jurnal Kependidikan*, *52*(2), 180–188.

Putra, R. A. (2022). Penerapan Metode PDCA dalam Peningkatan Kualitas Layanan Akademik. *Jurnal Administrasi Pendidikan*, *29*(2), 120–129.

Rahayu, D. N. (2023). Evaluasi Berbasis Siklus pada Program Inovasi Sekolah Dasar. *Jurnal Inovasi Pendidikan*, *10*(1), 53–62.

Ramadani, W. (2021). Penerapan Continuous Improvement untuk Meningkatkan Produktivitas UKM. *Jurnal Wirausaha Dan Bisnis*, *12*(3), 90–100.

Rianto, U. A., & Utama, A. (2021). The Effect of Total Quality Management on Company Performance with Continuous Improvement as a Mediating Variable. *Journal of Economics and Sustainable Development*, *12*(17), 98–107. https://doi.org/10.7176/JESD/12-17-12

Rodríguez-Gámez, I. F. (2024). A Continuous Improvement Instrument for the evaluation of EMS. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e26634

Sari, K. (2023). Analisis Efektivitas Implementasi PPEPP dalam Penjaminan Mutu SMK. *Jurnal Vokasi Indonesia*, *8*(3), 155–162.

Setiawan, H. (2022). Evaluasi Efektivitas Strategi Pengendalian Program Melalui Siklus PPEPP. *Jurnal Evaluasi Pendidikan*, *13*(2), 101–112.

Sihaloho, C. N. (2025). Strategi Manajemen Operasional dalam Mengoptimalkan Efisiensi Proses Produksi. *Jurnal Rumpun Manajemen Dan Ekonomi*, *2*(2), 198–209. https://doi.org/10.61722/jrme.v2i2.4228

Sun, J., & Hong, X. (2023). Management Optimisation of F City People's Hospital from the Perspective of PDCA Cycle. *Academic Journal of Business & Management*, *5*(6). https://doi.org/10.25236/AJBM.2023.050622

Suzuki, T. (2025). Kaizen and workplace safety: The role of continuous improvement in Japanese safety management. *International Journal of Safety and Security Engineering*. https://doi.org/10.18280/ijsse.110208

Vukomanovic, M. (2022). Relationship between process improvement and program effectiveness in construction projects. *Engineering, Construction and Architectural Management*, *29*(7), 2128–2147. https://doi.org/10.1108/ECAM-12-2020-1110

Wincahyo, N., Aji, A., Supriyono, B., & Shobaruddin, M. (2023). Inovasi Pelayanan Administrasi Kependudukan Melalui Anjungan Dukcapil Mandiri. *JIAP*, *9*(2). https://doi.org/10.25273/jiap.v9i2.10814

Yusuf, M. J. (2023). Optimalisasi Siklus Perbaikan Berkelanjutan untuk Mutu Rumah Sakit. *Jurnal Manajemen Mutu*, *9*(2), 45–53.

Zailani, Q. N. N., Sundram, V. P. K., Ibrahim, I., & Senathirajah, A. R. S. (2023). PDCA Cycle: A Method to Improve Customer Satisfaction at a Municipal Council in Malaysia. *International Journal of Professional Business Review*, *8*(4), e0931. https://doi.org/10.26668/businessreview/2023.v8i4.931