

Mastering ICOFR: Building Effective Internal Control Systems For Compliance And Financial Reporting Accuracy

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ABSTRACT

The GNV Learning Center, acting as the community engagement partner, had difficulties enhancing the participants' competences within the context of implementing Internal Control Over Financial Reporting (ICOFR). Additionally, a significant number of trainees came from businesses that did not have sufficient documentation of their internal controls and had minimal experience recognizing risks or evaluating their effectiveness. In order to address these deficiencies, a community service program with the name "Mastering ICOFR: Building Effective Internal Control Systems for Compliance and Financial Reporting Accuracy" was developed. The program's objective is to enhance both the theoretical grasp of the COSO framework and the practical skills associated with it. The program was presented in a variety of formats, including interactive seminars, group exercises, discussions based on real-world scenarios, and simulations of internal audits. Additionally, participants were provided with access to digital modules and online mentoring support for a period of three months, in addition to the in-person training that lasted for two days. The evaluation, which consisted of pre- and post-tests, revealed that the participants' abilities had improved by an average of 33 percent. A number of significant learning outcomes were the enhancement of risk mapping, the recording of internal controls, and the capability to identify gaps in the system. This program was successful in contributing to the development of a culture that prioritizes compliance, accountability, and transparency within the organizations that made up the participants. We recommend replicating the program model in other industries facing comparable governance difficulties due to its adaptability.

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INTRODUCTION

In today's era of heightened demands for transparency and accountability in the global business landscape, internal control systems have become a foundational element for ensuring the integrity of financial reporting and compliance with regulatory requirements. One key framework that supports this is Internal Control Over Financial Reporting (ICOFR), a process designed and implemented by management to provide reasonable assurance regarding the reliability of financial statements, operational efficiency, and adherence to applicable laws (Damayanti, 2017). ICOFR plays a vital role not only in maintaining the accuracy of corporate records but also in safeguarding assets and detecting fraud (Damayanti, 2017).

High-profile financial scandals, such as Enron and WorldCom, serve as stark reminders of the catastrophic consequences of weak internal controls (Pamungkas, 2019). In Indonesia, companies like PT Telkom, which are listed on the NYSE, have adopted ICOFR principles aligned with Sections 302 and 404 of the Sarbanes-Oxley Act (SOX) to comply with global financial reporting standards (Damayanti, 2017). Local regulations, including those issued by the Audit Board of Indonesia (BPK) and the adoption of IFRS, further emphasize the urgency of implementing robust internal control systems (Damayanti, 2017).

GNV Learning Center, based in South Jakarta, has established itself as a leading provider of professional development in areas such as corporate governance, internal audit, and financial compliance. Through previous training assessments and partner feedback, the center has identified a growing need for structured and practical ICOFR training. Many participants—especially those from medium to large enterprises—face significant challenges in identifying material risks, designing effective controls, and documenting processes in accordance with frameworks like COSO (Atika & Nurhayati, 2019). A case study even revealed that a lack of role separation between financial reporting and control functions hindered internal certification efforts (Atika & Nurhayati, 2019).

Moreover, recent research highlights how internal control weaknesses can lead to managerial myopia—a tendency among executives to prioritize short-term earnings by slashing critical investments such as R&D, often at the expense of long-term growth (Ji, 2019). Thus, internal control quality influences not only reporting accuracy but also a company's strategic decisions and overall value (Pamungkas, 2019; Ji, 2019).

On the ground, structured training programs—such as those conducted at PT Lampung Jasa Utama—have proven effective in raising awareness and understanding of internal control systems among both management and employees (Idris et al., 2022). Similarly, in the nonprofit and educational sectors, targeted capacity-building efforts have shown promising results in fostering accountability and transparency in daily operations (Amyulianthy et al., 2022).

To address this growing demand, this community engagement initiative offers a training program titled Mastering ICOFR: Building Effective Internal Control Systems for Compliance and Financial Reporting Accuracy. Designed as a comprehensive and hands-on experience, the program guides participants through key topics including risk identification, control design and implementation, documentation, testing procedures, and follow-up actions. Additionally, the training introduces participants to the COSO-based Enterprise Risk Management (ERM) framework, emphasizing its value in enhancing corporate governance (Pamungkas, 2019; Hidayat & Dwiasnati, 2022).

Ultimately, this initiative represents a meaningful contribution from higher education to bridge the gap between academic theory and professional practice. By collaborating with GNV Learning Center, we aim to foster a resilient and sustainable internal control ecosystem in Indonesia—one that supports ethical decision-making and organizational integrity for years to come (Puspitasari et al., 2023; Mujibatun et al., 2023).

PROBLEMS AND SOLUTIONS

To address the limited practical understanding among training participants regarding the implementation of Internal Control Over Financial Reporting (ICOFR), this community engagement initiative has been designed with a structured, needs-oriented approach in collaboration with GNV Learning Center, our partner organization.

The first strategy involves a needs-based approach. Through preliminary discussions and assessments with GNV, we identified key competency gaps that participants commonly face—particularly a lack of understanding of how ICOFR supports reliable financial reporting and regulatory compliance. As a response, the training materials have been specifically tailored to focus on hands-on topics, such as risk mapping, internal control documentation, application of the COSO framework, and simulation of control effectiveness testing.

The second strategy is the use of participatory and application-based learning methods. Rather than delivering purely theoretical content, the training emphasizes active participant involvement through real-world case studies, group discussions, internal audit simulations, and practical exercises in designing control documentation. This method teaches participants not just what to do, but how to do it in their work environments. By applying these methods, we aim to foster deeper and more lasting understanding. Figure 1 illustrates one of the ICOFR training sessions delivered by the community service team, showcasing the interactive presentation format used to engage participants in understanding internal control principles.



FIGURE 1. Flow of Education Implementation Methods
Source: Personal Documentation

The third strategy centers on strengthening participants' understanding of the COSO framework and its integration with ICOFR practices. Many participants are aware of COSO in theory but struggle to apply its components in practice. This training will cover the five core components of the COSO framework—control environment, risk assessment, control activities, information and communication, and monitoring—and explain how each element plays a vital role in ensuring effective internal control over financial reporting.

Another key solution is the provision of practical tools and templates that participants can directly apply in their workplace. These include sample internal control documentation formats, risk assessment

checklists, and easy-to-follow guides for testing control effectiveness. The goal is to empower participants with ready-to-use resources that simplify implementation and encourage adoption of best practices. As depicted in Figure 2, the community service activity was actively attended by professionals from diverse organizations, reflecting strong engagement and collaboration between facilitators and participants during the training.



FIGURE 2. Flow of Education Implementation Methods
Source: Personal Documentation

An additional support mechanism introduced in this program is post-training mentoring. For a limited period after the training ends, our team will offer optional online consultation sessions where participants can seek advice on applying the concepts in their own organizations. This step is designed to ensure that the training delivers long-term impact, not just short-term insight.

By combining these strategies, the program aims to not only enhance theoretical knowledge, but also build participants' practical capabilities to design and implement an effective ICOFR system. Ultimately, the training seeks to contribute to improved financial reporting quality, stronger governance practices, and greater organizational accountability in Indonesia's corporate and public sectors.

METHOD

This community engagement program was developed through a structured, collaborative, and context-specific approach tailored to the capacity-building needs of our partner, GNV Learning Center. The aim was to strengthen participants' competencies in implementing Internal Control Over Financial Reporting (ICOFR) by following a clear process that included stakeholder engagement, interactive training, and post-program mentoring. The stages of the program are illustrated in Figure 3 and consist of the following key phases:

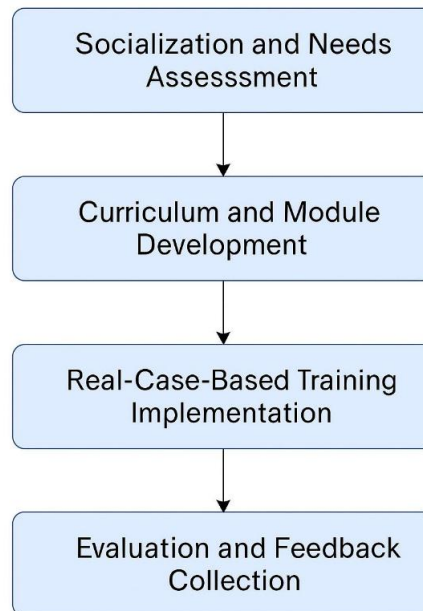


FIGURE 3. Flowchart of plan stages

a. Needs Assessment

The program commences with observations and informal conversations with the training facilitators at GNV Learning Center to gain insight into the participants' existing issues, learning requirements, and foundational understanding of internal control systems. This information constitutes the basis for creating pertinent, effective training materials.

b. Designing the Training Modules

Informed by the data, the team develops a tailored training curriculum. The contents address essential subjects, including comprehension of the COSO framework, identification of material risks, documentation of internal controls, evaluation of control effectiveness, and the incorporation of ICOFR into dependable financial reporting. We intend the material to be pragmatic and relevant to the participants' professional environments.

c. Participatory Training Sessions

The primary training session will occur in person at the GNV Learning Center over a duration of one to two intensive days. The courses will employ a blended learning methodology, integrating interactive lectures, practical case studies, group discussions, hands-on documentation tasks, and simulations. This approach promotes active involvement and facilitates participants' rapid connections between theory and practice.

d. Evaluation and Feedback

Participants will do a pre-test and a post-test to evaluate learning outcomes. We will distribute feedback questionnaires to obtain insights regarding the efficacy of the materials, delivery methods, and general participant satisfaction. This stage assists in enhancing subsequent sessions and guaranteeing quality.

e. Post-Training Support and Follow-Up

The curriculum offers two weeks of optional post-training support to guarantee enduring impact. Throughout this period, participants may engage in online consultation sessions with facilitators to pose inquiries, obtain help implementing the materials within their organizations, and receive supplementary mentoring as required.

This methodology seeks to augment knowledge while empowering participants with the confidence and practical tools necessary for implementing robust internal control systems. This effort enhances financial governance and fosters long-term corporate integrity and responsibility.

RESULTS AND DISCUSSION

This community engagement program, developed in collaboration with GNV Learning Center, was aimed at improving participants' practical knowledge and implementation skills related to Internal Control Over Financial Reporting (ICOFR). The program utilized a case-based and interactive approach delivered over two intensive days, combining lectures, group discussions, simulations, and structured assessments. Several critical findings emerged from the intervention:

1. Improved Understanding of ICOFR Components

A significant outcome of the program was the marked improvement in participants' comprehension of the five key components of the COSO framework: control environment, risk assessment, control activities, information and communication, and monitoring (Damayanti, 2017; Pamungkas, 2019). Prior to the intervention, many participants demonstrated a conceptual understanding without practical application. Following the training, however, they were able to map these components to actual financial reporting processes and articulate their roles in fraud prevention.

This development was reflected in a 32% average increase in comprehension, as measured through pre- and post-tests. These results are consistent with the findings of Tandayu and Rapina (2024), who concluded that strengthening internal control contributes significantly to the transparency and reliability of financial reporting across both public and private institutions.

2. Identifying Weaknesses in Internal Control Systems

During the internal audit simulations, it became evident that many participants were unfamiliar with documentation practices and lacked structured mechanisms for evaluating controls. Most were still reliant on manual bookkeeping systems without digital tracking or proper segregation of duties.

These findings are consistent with the study conducted by Putri and Harahap (2024), which analyzed the Institutional Financial Application System (SAKTI) in the Indonesian Ministry of Foreign Affairs. Their research demonstrated that manual processes increase the likelihood of human error and compromise internal oversight. This suggests that effective internal control depends not only on formal structure but also on organizational culture and discipline.

3. Fraud Cases and the Need for Stronger ICOFR Practices

Participant-led discussions revealed multiple instances of fraud in their respective workplaces, such as falsified receipts, duplicated transactions, and record manipulation. These real-world accounts highlighted the necessity for proactive and comprehensive internal control frameworks. Such findings support research by Hernat et al. (2024), which confirmed that improved financial documentation and control procedures enhance early fraud detection in mid-sized companies. Similarly, Mapuasari et al. (2024) found that even simple control practices—like separating personal and operational funds—help micro-enterprises prevent financial leakages and establish accountability.

4. Implementation Challenges and Practical Solutions

Participants reported several practical barriers to ICOFR implementation, including insufficient in-house expertise, lack of management support, and the absence of standardized templates or systems. These issues resonate with remarks made by Simatupang (2025), who noted that ICOFR

adoption in Indonesia is often hindered by complex regulatory environments, skill gaps, and resistance to change.

To overcome these challenges, the program provided participants with ready-to-use templates, control evaluation checklists, and simplified documentation guides aligned with the COSO framework. It also emphasized the importance of leadership support and the strategic integration of internal audit into the reporting process.

5. Governance and Stakeholder Trust

ICOFR is not only a compliance mechanism but also a tool for reinforcing ethical governance and organizational integrity. One notable example is the state-owned enterprise Pelindo, which successfully implemented a six-stage ICOFR model—from planning to external auditing—to enhance financial transparency and stakeholder confidence (Pelindo, 2025). This case underscores the broader value of ICOFR in fostering long-term institutional resilience and building trust with internal and external stakeholders.

6. Competency Gains Based on Pre- and Post-Tests

Quantitative results demonstrated clear gains in participant competencies. Pre- and post-training assessments conducted with 30 participants showed significant improvements across all domains, including control design, documentation skills, and risk identification. This result confirms the practical effectiveness of case-based training in professional development programs.

Table 1. Competency Improvement Before and After the “MASTERING ICOFR” Training

Competency Area	Before (%)	After (%)	Improvement (%)
General Understanding of ICOFR	54%	87%	+33%
Familiarity with COSO Framework and Its Components	48%	85%	+37%
Risk Identification and Control Activity Design	52%	81%	+29%
Documentation & Evaluation of Internal Controls	46%	78%	+32%
Practical Application and Case Study Implementation	50%	84%	+34%
Average Score	50%	83%	+33%

The results summarized in Table 1 demonstrate a substantial improvement in participant competencies across all measured areas following the “Mastering ICOFR” training program. The average score increased from 50% in the pre-training assessment to 83% in the post-training assessment, indicating a 33% overall gain.

The highest improvement was observed in the participants’ familiarity with the COSO framework and its components, which rose by 37%, reflecting the program’s emphasis on translating theoretical concepts into actionable practice. Likewise, practical application and case study implementation skills showed a 34% improvement, underscoring the effectiveness of the experiential learning approach used during the training sessions.

Competencies related to documentation and evaluation of internal controls improved by 32%, while risk identification and control activity design increased by 29%. Even baseline understanding of ICOFR principles recorded a significant enhancement, improving by 33%.

These results confirm that a hands-on training model that uses real cases and tools can improve both the participants’ understanding and their ability to apply ICOFR in their organizations. The consistent upward trends across all dimensions affirm that the training addressed critical learning gaps and provided tangible outcomes aligned with the program’s objectives.



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FIGURE 4. Community Service Team and GNV Learning Center
Source: Personal Documentation

The effectiveness of the program was further reflected in participant engagement and institutional representation. As shown in Figure 4, the training session was attended by professionals from a range of organizations, including financial institutions and private corporations, who successfully completed the two-day intensive program. The photo captures the community service team alongside GNV Learning Center participants receiving certificates of completion, symbolizing both individual and organizational commitment to strengthening internal control systems.

The presence of multi-sector participants—such as IBK Bank Indonesia, Mitra Mandiri, VSMF, and EPSON—illustrates the cross-industry relevance of ICOFR training and affirms the scalability of this model to other professional domains. This engagement also reinforces the role of community-university collaboration in bridging knowledge gaps through targeted, evidence-based interventions.

CONCLUSION

The community engagement program, conducted with GNV Learning Center through the “MASTERING ICOFR” training, has proven highly impactful in improving participants’ understanding and skills in implementing Internal Control Over Financial Reporting (ICOFR). Through interactive learning methods, real-world case studies, and practical tools, participants gained a deeper grasp of the five key components of the COSO framework and how to apply them more systematically in financial reporting contexts. The pre- and post-test results showed an average competency increase of 33%, reflecting the effectiveness of the training in meeting real-world learning needs. Furthermore, the program successfully

raised awareness around fraud prevention, proper control documentation, and the essential role of management in strengthening corporate governance.

Moving forward, it is recommended that similar training initiatives be conducted on a regular basis and extended to other strategic sectors or institutions that may not yet have a well-established internal control system. GNV Learning Center is also encouraged to develop advanced follow-up programs focusing on specific areas such as control testing, integrating technology into internal control systems, and risk-based auditing. Additionally, participating organizations are advised to promote internal learning initiatives and ongoing monitoring and to embed ICOFR principles into their organizational culture—fostering integrity, accountability, and long-term sustainability.

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