Evaluating Capacity-Building through Literature: A Review of Studies on the Training and Development of Cooperative Development Officers in the Philippines

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ABSTRACT

In the Philippines, the professionalization of Cooperative Development Officers (CDOs) has been institutionalized through the implementation of Republic Act No. 11535, which was signed into law on April 9, 2021, and Memorandum Circular No. 2023-12, issued by the Cooperative Development Authority (CDA). The purpose of this study is to evaluate the available research on CDO training, with a particular emphasis on adult learning principles, training evaluation systems, and the connection between demographic profiles and training

outcomes. The analysis highlights important frameworks, including Kirkpatrick's Four-Level Evaluation Model, Knowles' Adult Learning Theory, and the CIPP (Context, Input, Process, Product) Model, by using a thorough literature review process. These models are crucial resources for assessing the efficacy of training, directing ongoing development, and guaranteeing that the results apply to regional situations. This study highlights essential themes that inform the design, delivery, and evaluation of CDO capacity-building programs by employing a systematic approach to analyze scholarly works and official issuances. Other sources of information that are reviewed include government publications. The findings underscore the importance of being sensitive to demographics, implementing tailored instruction, and evaluating students based on their achievements. In conclusion, the article offers recommendations that can guide future program enhancements, aligning with the aims of inclusive competency-based development.

INTRODUCTION

The professional development of government officers has become increasingly crucial for delivering effective public services worldwide. Numerous nations are reforming public sector training programs to integrate adult learning concepts and evidence-based evaluation frameworks. In North America and Europe, there is a focus on competency-based training and continuous learning initiatives to enhance bureaucratic efficiency and adaptability in the face of rapid socio-economic changes (OECD, 2020; Illeris, 2018). In Australia, public sector capacity-building activities have concentrated on linking training modules with quantifiable performance outcomes, fostering lifelong learning among adult workers (Australian Public Service Commission, 2021).

In Africa, the African Development Bank and UNESCO Africa have implemented adult education and capacity-building initiatives tailored to community development (Oluyide & Amini, 2016; Ramaila, 2022). Similarly, in South America, countries like Brazil and Colombia have piloted cooperative training programs focused on adult learners in marginalized communities (Lagubeau et al., 2019; Sánchez Bajo et al., 2017). These regional initiatives show growing attention to localized adult education aligned with public service mandates.

Moreover, in Oceania, initiatives led by the Pacific Islands Forum and partners have increasingly emphasized skills development in governance, digital literacy, and climate resilience—key areas that intersect with sustainable public administration. These efforts not only enhance professional capacities but also

aim to address pressing environmental and social challenges unique to the region.

Furthermore, adult learning theories, such as andragogy introduced by Knowles (1980) and transformative learning formulated by Mezirow (2000), have been extensively employed to improve learning outcomes for adult learners. Although they are basic beliefs, they remain crucial in modern adult education literature and continue to influence contemporary training techniques (Merriam & Bierema, 2014; Taylor & Cranton, 2012). These frameworks prioritize self-directed learning, experiential knowledge, and learner-centered practices, which are crucial for professional skill development. Diverse training assessment techniques have been implemented globally to measure the efficacy of learning initiatives. Kirkpatrick's Four-Level Model evaluates outcomes via reaction, learning, behavior, and results (Kirkpatrick & Kirkpatrick, 2016), while the CIPP Model—Context, Input, Process, and Product—facilitates evidence-based decision-making in program evaluation (Stufflebeam & Zhang, 2017).

Governments in Southeast Asia have recognized the need to enhance the capabilities of local government officials, particularly those involved in community and economic development. Malaysia and Indonesia have implemented national training frameworks to enhance the competencies of local officials in line with national development objectives. Malaysia's National Institute of Public Administration (INTAN) offers structured educational courses for public officials, emphasizing adult learning methodologies and competency-based assessments (INTAN, 2020). In Thailand and Vietnam, decentralized governance frameworks have necessitated the establishment of training systems tailored to regional settings, where local government units (LGUs) serve as the primary executors of policy and service delivery (UNDP, 2019).

In the Philippines, Cooperative Development Officers (CDOs) serve as principal facilitators for the enhancement and sustainability of cooperatives in communities. Republic Act No. 11535 institutionalized the designation and professional development of Chief Disaster Officers (CDOs) throughout all municipalities, cities, and provinces, recognizing their critical role. In conjunction with this requirement, the Cooperative Development Authority (CDA) issued Memorandum Circular No. 2023-12 detailing the execution of a uniform Certification Training Program for CDOs. This program aims to enhance CDOs' proficiency in cooperative governance, legal compliance, and stakeholder engagement—critical domains aligned with national initiatives to promote inclusive economic growth through cooperative companies. Despite these developments, training approaches in ASEAN countries, including the Philippines, still encounter difficulties in integrating contextualized adult learning principles and creating suitable evaluation tools customized to varied

learner profiles.

The Technical Education and Skills Development Authority (TESDA) in the Philippines also implements training frameworks rooted in competency-based learning and aligned with the ASEAN Qualifications Reference Framework (TESDA, 2021). Complementary models from India and South Korea highlight innovations in micro-credentialing and blended learning approaches to upskill government staff (Kim & Park, 2019; Rao et al., 2020).

Although many studies have investigated adult learning frameworks and training evaluation methodologies in governmental and corporate environments, there is a notable lack of research that specifically focuses on these concepts in the realm of cooperative development training, particularly within the Philippine context. The current literature often generalizes training outcomes without thoroughly examining the relevance of adult learning theories in competency-based programs for CDOs. Moreover, limited research has investigated the cultural and organizational factors that affect the learning experiences and performance of officers from local government units pursuing certification.

This study aims to address that gap by evaluating the CDA Certification Training Program using principles of adult learning and training evaluation frameworks. This study, in contrast to other research, emphasizes the convergence of cooperative governance, public administration, and adult education. It aims to provide pragmatic insights that can enhance policy development and instructional design for CDO training. The researcher selected this issue due to its national importance in strengthening local communities through proficient cooperative officers and its relevance to current reforms in public sector professional development. Local government entities should ensure that cooperative development officers are not only certified but also fully prepared to operate as drivers of sustainable cooperative development when faced with challenging problems.

To better visualize the scope of the reviewed literature and its alignment with the study's focus, the following table summarizes key sources, their thematic contributions, methodologies, and relevance to Cooperative Development Officer (CDO) training. This summary clarifies how past research addresses (or overlooks) adult learning, training evaluation, and demographic-responsive frameworks and highlights the existing research gaps this study intends to address. Table 1 summarizes the key literature reviewed, organized by author, focus area, methodology, and main findings, to support the conceptual framework and analysis.

Table 1

Summary of Key Literature Reviewed

Author(s)	Year	Focus Area	Method	Key Findings
Knowles, M.S.	1980	Adult Learning Theory (Andragogy)	Theoretical	Emphasized self-direction, experience-based learning, and readiness to learn
Mezirow, J.	2000	Transformative Learning	Theoretical	Highlighted critical reflection and perspective transformation
Kirkpatrick & Kirkpatrick	2016	Training Evaluation	Conceptual	Introduced Four-Level Model: Reaction, Learning, Behavior, Results
Stufflebeam & Zhang	2017	Program Evaluation	Conceptual	Proposed the CIPP Model: Context, Input, Process, Product
Nguyen, Pham, & Hoang	2019	Demographic Impact on Training	Quantitative	Older learners process slower but show higher commitment
De Lange et al.	2017	Educational Attainment & Training	Quantitative	Higher educational background = better training performance
Venkatesh, Thong, & Xu	2016	Gender Preferences in Learning	Quantitative	Women prefer collaborative learning methods
Fitriana, Satlita, & Winarni	2020	Capacity-Building Models in Civil Servants	Case Study	Advocated integrative education and training across modalities
Nchaga, A.	2025	Technology in Training Delivery	Conceptual	Advocated digital training access and self-paced, tailored modules
OECD	2020	Public Sector Professionalization	Policy Review	Emphasized competency-based development, lifelong learning, and structured training evaluation systems for government officers

Note. This table presents selected literature sources that form the foundation of the study's conceptual framework, highlighting theoretical models, methods, and insights relevant to CDO capacity-building.

As shown above, while there is a growing global and regional emphasis on structured adult education and training evaluation, few studies directly explore their application in cooperative development within the Philippine context. This underscores the need for a comprehensive framework tailored to CDO capacity-

building, as presented in the following section.

Additionally, this study contributes to a more contextualized understanding of how adult education principles can be applied in public service environments, especially in developing nations like the Philippines. It explores how instructional design, when aligned with the needs of adult learners and grounded in real-world community work, can lead to improved governance and social impact. Through a systematic review of existing literature and policy instruments, this research not only addresses existing gaps but also serves as a foundation for future empirical studies on public sector training and capacity building. It reinforces the notion that effective public service delivery starts with intentional, inclusive, and evidence-based training programs that acknowledge the diversity, roles, and learning needs of the people implementing them.

FRAMEWORK

Figure 1

Conceptual Framework for Evaluating Capacity-Building Programs for CDOs.
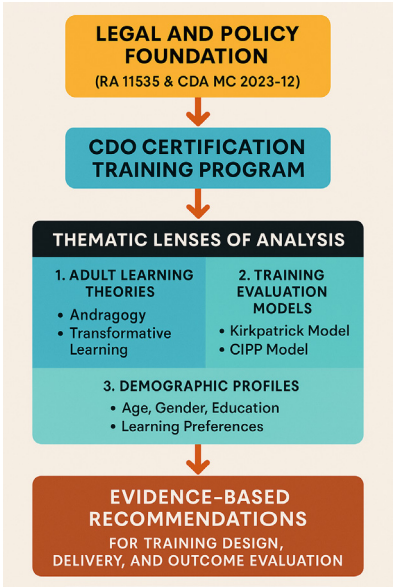
This study employs a conceptual framework that integrates adult learning theories, training evaluation models, and demographic considerations to comprehensively assess the effectiveness of training and development programs for Cooperative Development Officers (CDOs) in the Philippines. The use of adult learning theories, particularly Knowles' Theory of Andragogy and Mezirow's Transformative Learning Theory, is essential given that CDOs are adult learners who bring prior knowledge, practical experience, and context-specific needs into the training environment. These theories emphasize the importance of relevance, self-direction, and experiential learning in adult education, which are critical in designing training programs that are both engaging and effective for public sector professionals.

To evaluate the outcomes of such training, this study also draws on established training evaluation models such as Kirkpatrick's Four-Level Model and the CIPP Model (Context, Input, Process, and Product). These models provide structured approaches for assessing not only immediate learner reactions and knowledge acquisition but also long-term behavioral changes and organizational impacts—dimensions that are vital in determining the real-world value of capacity-building efforts.

Furthermore, the framework incorporates demographic considerations, recognizing that factors such as age, gender, educational background, and years of service may influence how training is received and applied. By integrating these theoretical components, the framework ensures that the literature review is guided by principles that reflect both the complexity of adult learning and the contextual realities of CDOs in the Philippine cooperative sector.

This study is grounded in a conceptual framework that integrates three core analytical pillars: adult learning theories, training evaluation models, and demographic-sensitive capacity building, all within the context of the CDA Certification Training Program for Cooperative Development Officers (CDOs) in the Philippines. Grounded in the mandates of Republic Act No. 11535 and CDA Memorandum Circular No. 2023-12, this framework provides a lens for evaluating how training programs for CDOs are designed, delivered, and assessed.

The first pillar of the framework focuses on adult learning theories, particularly Knowles' theory of *andragogy* and Mezirow's *transformative learning*. Knowles (1980) posits that adult learners are self-directed, build on prior experiences, and prefer practical, relevant instruction. Mezirow (2000) emphasizes the importance of critical reflection in transforming assumptions and perspectives. These theories collectively suggest that CDO training should be grounded in experiential, contextualized, and learner-centered methods that promote deep learning and real-world application. Their inclusion in the framework helps

ensure that the training program is aligned with the characteristics and needs of adult professionals working in local government units.

The second pillar draws from established training evaluation models to assess program effectiveness. Kirkpatrick's Four-Level Evaluation Model (Kirkpatrick & Kirkpatrick, 2016) offers a widely used approach that examines training outcomes across four stages: reaction, learning, behavior, and results. Complementing this is the CIPP Model (Stufflebeam & Zhang, 2017), which evaluates programs through context, input, process, and product dimensions—providing a comprehensive structure for decision-making and continuous improvement. These models are essential in reviewing how the CDA Certification Program is evaluated in existing literature and how it can be improved based on measurable outcomes.

The third and final pillar emphasizes the significance of capacity building that is sensitive to demographic factors. Studies conveyed that demographic factors, including age, gender, and educational level, substantially affect learning styles, engagement, and performance (Nguyen et al., 2019; Venkatesh et al., 2016; De Lange et al., 2017). This component of the framework recognizes that CDOs come from diverse backgrounds and that training should be designed with these differences in mind. It also advocates for the utilization of statistical techniques—such as regression analysis, t-tests, and correlation—to substantiate the influence of demographic profiles on training outcomes and to inform the personalization of subsequent training materials.

Collectively, these three interrelated elements constitute a thorough conceptual framework that underpins a critical examination of literature regarding CDO training and development. It guarantees that the study is theoretically sound while simultaneously highlighting practical, inclusive, and data-driven approaches. By applying this framework, the study aims to offer evidence-based recommendations that can inform future enhancements to the CDA Certification Training Program, making it more responsive to learner needs, more effective in achieving learning outcomes, and more aligned with broader public service development goals.

OBJECTIVES OF THE STUDY

This study aims to rigorously evaluate the current literature on the training and development of Cooperative Development Officers (CDOs) in the Philippines, extracting evidence-based insights to enhance existing capacity-building programs and inform future professional development frameworks.

Specifically, (1) it shall establish the legal mandates and developmental

rationale that underpin the need to capacitate Cooperative Development Officers in the Philippine context by analyzing national policies, such as Republic Act No. 11535 and CDA Memorandum Circular No. 2023-12. (2) It shall examine adult learning theories presented in the literature—particularly andragogy and transformative learning—to determine their applicability to the design and implementation of capacity-building initiatives for CDOs. (3) It shall assess various evaluation models used in the literature to measure the outcomes of training and development programs, focusing on their structure, relevance, and effectiveness in the context of public service training. (4) It shall analyze how demographic variables—such as age, gender, and educational attainment—affect the outcomes and effectiveness of training interventions for CDOs, as supported by empirical data from reviewed studies. (5) It shall identify the statistical and methodological tools commonly employed in evaluating training outcomes, including the use of correlation, regression, and other quantitative techniques relevant to capacity-building assessments. (6) It will consolidate the findings from the evaluated literature and produce specific, evidence-based suggestions to enhance the design, implementation, and assessment of training programs for Cooperative Development Officers.

METHODOLOGY

Research Design

This research utilized a systematic literature review as its principal methodological framework. A systematic literature review in qualitative research is a methodology employed to identify, assess, and synthesize relevant scientific and official publications in a structured and replicable manner. This design was selected to provide a comprehensive evaluation of the training and development of Cooperative Development Officers (CDOs) in the Philippines by analyzing existing literature through a conceptual framework anchored on adult learning theories, training evaluation models, and demographic-sensitive training design. The approach allowed the researchers to extract recurring themes, identify gaps, and derive evidence-based recommendations for future capacity-building programs. To ensure the quality and relevance of the literature included in the review, a literature quality evaluation tool was developed (see Table 4), grounded in the aforementioned framework. This tool guided the systematic screening, appraisal, and selection of studies, ensuring that only research with methodological rigor, theoretical alignment, and contextual applicability was included in the synthesis.

Research Site

As a document-based review, this study was conducted virtually without a physical research site. However, the research's contextual focus is the Philippines, specifically local government units (LGUs) mandated under Republic Act No. 11535 and governed by the Cooperative Development Authority's (CDA) Memorandum Circular No. 2023-12. Institutional and academic repositories accessed include Google Scholar, JSTOR, ScienceDirect, and official CDA publications.

Participants

There were no human participants involved in the primary data collection for this study, as it is a literature-based review. However, the reviewed studies included in the analysis were those that involved Cooperative Development Officers, training practitioners, and policy implementers from various governmental and academic sectors. These studies served as indirect sources of empirical insights regarding the training outcomes, demographic factors, and evaluation practices relevant to CDOs in the Philippine setting.

Instrumentation

This study utilized a systematic literature review as its primary methodological approach. As such, the instrument used was a literature matrix designed in alignment with the research objectives and conceptual framework. The matrix categorized literature based on six core themes *(see Table 2)*: (1) legal and policy mandates, (2) adult learning theories, (3) training evaluation models, (4) demographic considerations, (5) statistical tools, and (6) recommendations for improving training programs. The selection of keywords for sourcing relevant studies was guided by pre-validated descriptors from ERIC (Education Resources Information Center), JSTOR Library, APA Thesaurus of Psychological Index Terms, and CDA publications. This ensured consistency and relevance in gathering secondary data.

Since this review is based solely on secondary data—analyzing extant scholarly literature and official policy documents—reliability testing methods, such as calculating Cronbach's alpha or conducting item analysis, are not applicable at this stage. These statistical procedures are pertinent to primary research instruments, such as survey questionnaires or testing tools, used to collect original data.

Although a traditional tryout phase was not applicable to this literature-based study, provisions have been outlined for future empirical extensions. In the event of primary data collection, a researcher-made questionnaire will be

constructed and aligned with Kirkpatrick's Four-Level Training Evaluation Model and demographic profiling tools. A pilot testing phase will be conducted involving a small sample of Cooperative Development Officers from selected local government units (LGUs). The insights obtained from the pilot will be utilized to improve clarity, structure, and the alignment of questionnaire items with the study objectives. The inclusion criteria include publications dated from 2010 to 2024 to ensure the currency and the relevance of the data. In addition, only peer-reviewed journal articles, official policy documents, or government publications relevant to CDO training, capacity-building initiatives, or training evaluation systems. Sources explicitly discussing or providing insights into training evaluation methods, adult learning principles, demographics of trainees, or training outcomes in the context of public sector or cooperative development. Literature focused on or applicable to the Philippine context or with comparative regional insights. Hence, the exclusion criteria include publications prior to 2010 to maintain relevance. Furthermore, documents lack empirical or substantive information on training outcomes or evaluation methodologies and non-peer-reviewed or non-official reports with limited methodological rigor.

The number of studies and related literature reviewed comprised 31 publications, including peer-reviewed journal articles, official policy documents, and government circulars. This dataset was selected to balance comprehensiveness with specificity, ensuring pertinent insights without overextending the review scope.

Cross-verification was done using databases such as Google Scholar, JSTOR, ScienceDirect, and institutional repositories such as the CDA publications. In a future quantitative phase, the reliability of instruments will be established through Cronbach's alpha to assess internal consistency, while content validity will be determined through evaluation by a panel of experts in adult education, public administration, and training development. The study also upholds rigorous research ethics protocols. Since no human participants were involved in this literature review, there were no ethical risks posed. Only publicly accessible and academically legitimate sources were used. However, if the study proceeds to primary data collection, it will comply with ethical standards outlined in national and institutional research guidelines. This entails acquiring informed consent from participants, guaranteeing voluntary participation, preserving data confidentiality, and submitting the research protocol for approval from an approved Ethics Review Board before data collection commences.

The screening process was conducted through an initial review of titles and abstracts to exclude clearly irrelevant sources and a detailed examination of remaining publications to confirm their relevance based on the alignment

with the conceptual framework and thematic focus. To enhance transparency in the screening process, a PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram was utilized. The diagram (see Figure 2) illustrates the number of records identified, screened, excluded (with reasons), and ultimately included in the review. This approach assures methodological rigor and reproducibility.
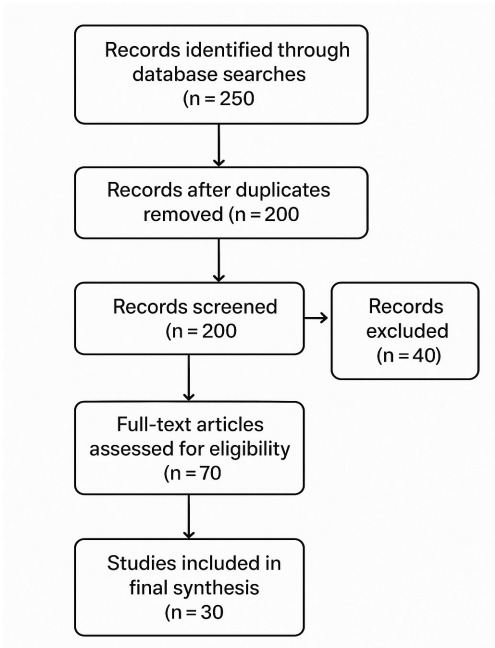
Table 2

Sample Literature Matrix

No.	Author (s)	Year	Title	Legal/ Policy Mandates	Adult Learning Theories	Training Evaluation Models	Demographic Variables	Statistical Tools	Key Insights / Notes
1	Nguyen et al.	2019	Inclusivity and Diversity in Development Training	RA 11535, CDA Circular 2023-12	Andragogy; Experiential Learning	Kirkpatrick's Four-Level Model,	Age, Gender, Education, Socioeconomic Status	Paired t-tests, Regression, Correlation	Tailoring training modules to demographics enhances engagement and effectiveness; inclusive strategies are critical
2	Venkatesh et al.	2016	Technology Adoption in Public Sector Training	RA 11535	Digital Literacy, Self-Directed Learning	CIPP Model, Kirkpatrick's Model	Age, Tech-savviness	SEM, Pearson correlation	Use of technology must consider demographic comfort levels; improves evaluation of training impact

3	De La nge et al.	2017	Demo graphic Factors Affe cting Adult Learning	CDA Circulars	Transfor mative Learning, And ragogy	Kirk patrick's Model, CIPP Model	Edu cational Back ground, Age, Gender	Regr ession, ANOVA	Demographics significantly influence training outcomes; modules must be adapted accordingly
4	Sán chez Bajo et al.	2017	Peer Mentoring in Cooperative Training	Reg ional Policies in Latin America	Partici pative, Expe riential Learning	Learning Outcome Eval uation	Socioe conomic Status	Desc riptive Stats, T-tests	Peer mentoring enhances learning retention among various demographic groups
5	Olu yide & Am ini	2016	Youth Capacity-Building in Africa	Reg ional Agre ements	Expe riential, Refle ctive Learning	Kirk patrick, CIPP Models	Age, Edu cational Attai nment	Reg ression, t-tests	Context specific; emphasizes the importance of demographic tailoring
6	OE CD	2020	Evidence-Based Public Sector Training	OECD Guide lines	Adult Learning Prin ciples	Kirk patrick's, CIPP Models	Multiple Demo graphics	SPSS, JAM OVI	Continuous evaluation using statistical tools supports program refinement

| 7 | Kra iger | 2017 | Assessment Techniques in Training | Inter national Stan dards | Adult Learning, Reflective Models | Mixed Methods Eval uation | Various Demo graphics | Surveys, Perfor mance Data Analysis | Combining qualitative and quantitative data yields comprehensive evaluation outcomes |
| 8 | Col quitt et al. | 2017 | Performance and Learning Assessment | Global Public Sector | Adult Learning & Beha vioral Change | Kirk patrick, CIPP Models | Age, Gender | Cor relation, Regr ession, Paired t-tests | Data-driven feedback mechanisms improve long-term program effectiveness |

Figure 2

The PRISMA Flow Diagram

Records identified through
database searches
(n = 250

Records after duplicates
removed (n = 200

Records screened
(n = 200

Records
excluded
(n = 40)

Full-text articles
assessed for eligibility
(n = 70

Studies included in
final synthesis
(n = 30

Informed Consent

In the current literature-based phase, informed consent was not applicable. Should the study transition to human subjects in its second phase, all participants will be required to sign an informed consent form that details the purpose of the research, procedures involved, risks, benefits, and their rights as participants, following the Data Privacy Act of 2012 (RA 10173).

Clearance from the Ethics Review Board, Data Collection, Statistical Technique

For this literature-based phase of the study, secondary data were systematically gathered from academic databases, including Google Scholar, JSTOR, ScienceDirect, and institutional repositories such as those of the Cooperative Development Authority (CDA). The literature selection was guided by thematic relevance, alignment with the research objectives, and publication quality (peer-reviewed and published between 2010 and 2024). A combination of thematic analysis and narrative synthesis was employed to extract and interpret key findings across six central domains: legal mandates, adult learning theories, evaluation models, demographic variables, statistical tools, and policy recommendations.

Although this phase involved no direct interaction with human participants, the researchers reaffirmed their commitment to upholding the ethical standards prescribed by the Polytechnic University of the Philippines – Research Ethics Review Board (PUP-RERB). Should the study progress to an empirical stage involving primary data collection, an application for ethics clearance will be submitted to the PUP Research Ethics Review Board (RERB). The application will include the finalized research instruments, informed consent forms, and detailed data protection protocols in adherence with the Data Privacy Act of 2012 (RA 10173) and relevant national ethical standards.

If implemented, data collection for the empirical phase will involve surveys or interviews administered either online (via Google Forms) or face-to-face, depending on logistical feasibility. A stratified purposive sampling method will be utilized to ensure representative participation from active Cooperative Development Officers (CDOs) across selected local government units (LGUs). All respondents will be asked to sign an informed consent form and will be briefed on the voluntary nature of participation and their right to withdraw at any time without consequence.

To analyze potential primary data, the study proposes the use of appropriate statistical techniques, particularly in evaluating training outcomes and the influence of demographic variables. These include:

Paired t-tests to assess knowledge or performance gains pre- and post-training, Pearson correlation coefficients to explore relationships between

demographic factors (e.g., age, gender, education) and training effectiveness, Regression analysis to identify predictive variables affecting training success.

All quantitative analyses will be conducted using reliable statistical software such as SPSS or JAMOVI, with initial data cleaning and preprocessing performed using Microsoft Excel to ensure accuracy, consistency, and completeness. This process enhances the transparency and replicability of results.

RESULTS AND DISCUSSION

The review of existing literature reveals a robust framework for enhancing capacity-building programs for Cooperative Development Officers (CDOs) in the Philippines, grounded in both legal mandates and pedagogical best practices.

The professionalization of CDOs in the Philippines is strongly supported by a clear legal and institutional framework. Republic Act No. 11535 mandates the presence of qualified CDOs across all local government units (LGUs), while CDA Memorandum Circular No. 2023-12 meticulously outlines the certification process and essential training modules. These directives underscore a national commitment to fortifying cooperative governance at the local level. This aligns with regional initiatives in Southeast Asia, such as Malaysia's INTAN programs and Indonesia's local governance training schemes, which similarly emphasize standardized training for community-based officers (INTAN, 2020; UNDP, 2019). Globally, countries like Australia and Canada have institutionalized public sector learning frameworks that explicitly link legal mandates with competency development (OECD, 2020; Australian Public Service Commission, 2021), demonstrating a universal recognition of the importance of legally underpinned professional development.

Furthermore, the applicability of adult learning theories is paramount in optimizing CDO training. Principles of andragogy (Knowles, 1980) highlight the importance of self-directed and experience-based learning, while Mezirow's (2000) transformative learning theory emphasizes the critical role of reflection and perspective shifts in fostering meaningful development. These theoretical underpinnings are consistently supported by studies from North America and Europe, with Illeris (2018) underscoring the significance of contextual and experiential learning in adult education, and Merriam and Bierema (2014) affirming the enduring relevance of learner-centered approaches. Within the ASEAN region, training programs for LGUs in countries like Thailand and Vietnam are increasingly incorporating these theories into their designs (UNDP, 2019). Consequently, integrating methods such as simulations, role-playing,

and contextual case discussions into the CDA Certification Training Program is crucial for aligning with established adult learning literature and subsequently enhancing learning outcomes for CDOs.

The use of robust training evaluation models is also a critical component of effective capacity building. Kirkpatrick's Four-Level Evaluation Model (Kirkpatrick & Kirkpatrick, 2016) remains a widely cited approach for assessing training outcomes across four dimensions: learner reaction, knowledge acquisition, behavioral change, and organizational results. Complementing this, the CIPP Model (Stufflebeam & Zhang, 2017) provides a comprehensive evaluation by considering contextual relevance, resource inputs, process fidelity, and ultimate program outcomes. These models have seen widespread adoption globally by public training institutions in Europe and Australia (OECD, 2020), and regionally by institutions such as Malaysia's INTAN and Singapore's Civil Service College for their internal assessment processes (INTAN, 2020). The literature reveals an increasing tendency towards employing mixed methods—integrating surveys, observations, and performance tracking—to provide comprehensive feedback (Colquitt et al., 2017; Kraiger, 2017). Implementing these thorough assessment techniques within the CDA framework will guarantee accountability and promote ongoing program enhancement.

Building on these models, a comparison of the Kirkpatrick and CIPP frameworks is shown in Table 3 to highlight their evaluative focus, strengths, and relevance to CDO training programs.

Table 3

Comparison of Key Evaluation Models in Training Programs

Model	Focus Areas	Strengths	Limitations
Kirkpatrick's Four Levels	Reaction, Learning, Behavior, Results	Widely used; simple to implement	May overlook context; post-hoc in nature
CIPP Model	Context, Input, Process, Product	Emphasizes planning, implementation, outcomes	Can be complex and time-consuming
Fitriana Integrative Model	Formal, Informal, Experiential Modes	Holistic development; real-world adaptability	Requires cross-sectoral coordination
Nchaga's Tech Integration	Remote and Digital Training Delivery	Enhances accessibility and customization	Cost and tech-readiness challenges

Note. This table compares widely referenced evaluation and training models found in the literature to assess relevance for CDO capacity-building programs.

While the reviewed literature offers a variety of robust training models, a predominant reliance on quantitative methods was observed. Many studies measured training outcomes through pre- and post-assessment scores, surveys, and statistical correlations, with limited integration of qualitative data such as narrative feedback or learner reflections. This methodological dominance restricts the depth of understanding regarding learner experience, contextual challenges, and long-term behavior change. The limited use of mixed-method approaches also reduces opportunities to triangulate findings and capture nuanced insights. Future studies should incorporate qualitative tools—such as interviews, focus group discussions, and case narratives—to complement quantitative analysis and deepen the understanding of training effectiveness, especially in culturally and organizationally complex settings like local Philippine government units.

Beyond evaluation models, demographic variables also play a critical role in training effectiveness. Factors including age, gender, educational background, and professional experience significantly influence the engagement of adult learners with training materials. Research by Nguyen et al. (2019) indicates that older learners may process information at a slower pace but exhibit stronger commitment, while Venkatesh et al. (2016) observed a preference among females for collaborative learning methods. Furthermore, De Lange et al. (2017) noted a positive correlation between higher educational attainment and improved training performance. In the ASEAN region, similar findings have emerged from Indonesia's village officer training, where younger participants demonstrated greater responsiveness to technology-based modules (UNDP, 2019). These insights strongly advocate against a one-size-fits-all approach to CDA's training delivery, emphasizing instead the need for flexibility to accommodate the inherent diversity among learners. Other distinct but complementary models provide robust conceptual foundations for enhancing CDO training programs in the Philippines. The "Model of Capacity Building for Civil Servants Through Integrative Education and Training" by Fitriana et al. (2020) offers a valuable comparative framework, emphasizing the holistic development of CDOs through the combination of diverse learning modalities, including formal, experiential, and informal approaches. This integrative perspective directly supports the nuanced needs of CDOs. Parallel to this, Nchaga's (2025) concept champions the integration of technology into public administration training as a crucial optimization strategy for CDO programs. This technological approach directly addresses the imperative for widespread accessibility across diverse Local Government Units (LGUs) and facilitates remote, interactive learning, which resonates deeply with adult learning principles of self-direction (Knowles, 1980) and experiential engagement (Mezirow, 2000; Illeris, 2018;

Merriam & Bierema, 2014). Further synthesizing the findings, the integration of technology and diverse learning modalities emerges as critical for modern CDO capacity building. Nchaga's (2025) framework comprehensively illustrates how technology can precisely tailor content to varied CDO demographics (Nguyen et al., 2019; Venkatesh et al., 2016; De Lange et al., 2017), thereby ensuring inclusivity and effective knowledge transfer through remote and interactive learning. This technological advancement is powerfully complemented by the "Model of Capacity Building for Civil Servants Through Integrative Education and Training" by Fitriana et al. (2020), which underscores the necessity of a holistic developmental approach achieved through a combination of formal, experiential, and informal learning. While Nchaga's work acknowledges practical challenges like cost and resistance, its strategic guidance, coupled with the integrative model, provides robust pathways for implementation. Together, these frameworks highlight how the strategic fusion of pedagogical diversity and technological innovation can facilitate more efficient data collection for program evaluation, aligning seamlessly with established models like Kirkpatrick's (Kirkpatrick & Kirkpatrick, 2016) and CIPP (Stufflebeam & Zhang, 2017), and thereby validating the multifaceted and adaptive approach essential for truly effective CDO professional development.

It is also essential to recognize the cultural and institutional nuances that may affect the transferability of international training models to the Philippine context. While models like Kirkpatrick and CIPP are widely used in Western public administration settings, their assumptions may not fully align with the hierarchical structures, resource limitations, and socio-political dynamics within Philippine LGUs. For instance, cultural attitudes toward authority, learner autonomy, or feedback may influence how adult learning strategies are received. Therefore, any adaptation of these global models must be critically contextualized, considering local governance realities, learner diversity, and institutional culture. This reinforces the value of region-specific approaches that reflect the lived experiences of Cooperative Development Officers (CDOs) and other public sector practitioners in the Philippines.

Similar to the Philippine context, Latin American cooperative training programs emphasize the socio-cultural context of learning and leverage peer mentoring as a key instructional strategy (Sánchez Bajo et al., 2017). African initiatives, including the African Development Bank's youth training programs, have significantly improved learning outcomes for adult participants by utilizing learner profiling and flexible delivery methods (Oluyide & Amini, 2016; UNESCO Africa, 2020). These observations reinforce the necessity for localized and data-informed capacity-building frameworks.

The reviewed literature also highlights the consistent application of statistical and methodological tools for analyzing training outcomes. Paired t-tests and regression analysis are commonly utilized to evaluate pre- and post-training scores, whereas correlation analysis assesses the association between demographic characteristics and learning performance (Field, 2018; Kirkpatrick & Kirkpatrick, 2016). These tools are indispensable for identifying patterns in training effectiveness and subsequently refining instructional methods. Globally, studies from Canada, Australia, and Singapore utilize these tools to support evidence-based modifications to training programs (OECD, 2020). Adopting these same tools within the Philippine setting will enable the CDA to conduct longitudinal tracking and make strategic adjustments to its CDO certification programs.

In synthesis and recommendations drawn from this comprehensive literature review, three consistent themes emerge across international and regional studies: effective training must be firmly grounded in adult learning principles, rigorously measured through structured evaluation models, and demonstrably responsive to learner demographics. A singular, undifferentiated approach is no longer adequate to satisfy the requirements of a progressively diverse public service. Therefore, training providers, including the CDA, must embrace experiential and adaptive designs that are supported by robust, evidence-based evaluation. Given these results, the CDA should definitely establish consistent post-training feedback loops, incorporate formative assessments all over the program, and institutionalize pre-training profiles. Simultaneously, modules have to be constantly updated to fit changing patterns of adult education. Capacity-building should have as its ultimate aim transforming learning that enables CDOs to really act as community development enablers, transcending simple compliance-based certification.

CONCLUSION

The comprehensive literature evaluation indicates that the professionalization and capacity-building of Cooperative Development Officers (CDOs) in the Philippines must be grounded in a multidimensional framework integrating legal mandates, adult learning theories, robust evaluation models, and demographic-responsive strategies. Republic Act No. 11535 and CDA Memorandum Circular No. 2023-12 provide a strong policy foundation for the institutionalization of CDO certification and training. These instruments reflect a national commitment to strengthening cooperative governance through skilled local personnel.

Key insights from the literature affirm the relevance of adult learning theories, particularly Knowles' Andragogy and Mezirow's Transformative

Learning, which underscore the importance of experiential, reflective, and learner-centered approaches. These frameworks are especially relevant for adult professionals in public service who bring diverse experiences and learning needs to the training environment. This perspective is significantly enhanced by the "Model of Capacity Building for Civil Servants Through Integrative Education and Training" (Fitriana et al., 2020). This model's emphasis on combining diverse learning modalities (e.g., formal, experiential, informal) directly supports the holistic development needed for CDOs. Its successful application in a regional context (Yogyakarta, Indonesia) offers empirical insights for professionalizing CDOs under Philippine mandates (RA 11535, CDA MC 2023-12).

Furthermore, Nchaga's concept of integrating technology into public administration training offers a crucial framework for optimizing CDO training programs in the Philippines (Nchaga, 2025). This approach directly addresses the need for widespread accessibility across diverse LGUs, facilitating remote and interactive learning that aligns with adult learning principles of self-direction (Knowles, 1980) and experiential engagement (Mezirow, 2000; Illeris, 2018; Merriam & Bierema, 2014). Technology can tailor content to varied CDO demographics (Nguyen et al., 2019; Venkatesh et al., 2016; De Lange et al., 2017), ensuring inclusivity and effective knowledge transfer. While Nchaga's work highlights challenges like cost and resistance, it provides guidance for strategic implementation, ultimately enabling more efficient data collection for program evaluation, aligning with models like Kirkpatrick's (Kirkpatrick & Kirkpatrick, 2016) and CIPP (Stufflebeam & Zhang, 2017). Adopting these technology linkages, CDO training mandated by RA 11535 and CDA MC 2023-12 can move from simple compliance to a really transforming professional development experience, therefore equipping CDOs to be more effective enablers of community development.

In parallel, evaluation models such as Kirkpatrick's Four-Level Model and the CIPP Model present structured mechanisms for measuring training effectiveness across reaction, learning, behavior, and results, while also guiding strategic improvements in training design and implementation. The literature further emphasizes that demographic factors—such as age, gender, and educational background—significantly influence learning styles and training outcomes. Consequently, training programs must be flexible, data-driven, and tailored to the diversity of learners. The application of statistical techniques such as paired t-tests, Pearson correlation, and regression analysis was found effective in quantifying training outcomes and demographic impacts, thereby enabling evidence-based decision-making.

To sustain effectiveness and ensure continuous improvement, a national-

level monitoring and evaluation system must be institutionalized to track training outcomes longitudinally, assess long-term impact, and inform evidence-based policy refinements in cooperative development.

Insights for Policy and Practice

The literature reviewed in this study highlights critical insights that can inform more strategic and inclusive policies in the professional development of Cooperative Development Officers (CDOs). First, capacity-building initiatives must shift from compliance-driven certification models to learner-centered approaches grounded in adult learning theories such as Knowles' andragogy and Mezirow's transformative learning. Training modules should be tailored to individual learner profiles and real-world cooperative challenges, enabling CDOs to apply knowledge contextually and effectively.

Second, consistent use of structured evaluation models—such as Kirkpatrick's Four-Level Evaluation and the CIPP framework—should be embedded into program design. These models can support continuous program improvement, stakeholder accountability, and alignment with broader development outcomes. Evaluation systems should not be limited to end-of-program assessments but should include formative feedback loops and follow-up assessments to track behavioral and organizational change.

Third, demographic responsiveness is essential. Training programs must adapt to the varied educational levels, age groups, and gender identities of participating officers. Instructional designs that leverage simulations, technology, and collaborative tasks can bridge generational and experiential gaps. These strategies align with best practices observed in comparable regional and global training programs.

Lastly, a **national-level monitoring and tracking system** is urgently needed to evaluate the longitudinal impact of CDO training. Such a system would enable the Cooperative Development Authority (CDA) and related institutions to collect baseline data, monitor post-training performance, and assess outcomes over time, ultimately ensuring that CDO training not only meets compliance requirements but delivers sustainable development impacts on the ground.

RECOMMENDATIONS

The findings indicate a requisite paradigm shift: First, transitioning from a compliance-oriented certification system to a transformative learning model that empowers CDOs as proactive facilitators of collaborative development. This transformation necessitates comprehensive and flexible training methodologies

that address the intricacies of adult education and the specific requirements of grassroots cooperative governance. Based on these findings, the study proposes the following recommendations: Initially, establish pre-training profile methods to evaluate the demographics, prior knowledge, and learning preferences of CDOs, facilitating differentiated instruction. Second, adopt pedagogies grounded in adult learning theories, including experiential and reflective learning tools like simulations and case-based activities. Third, implement multi-level evaluation systems by embedding Kirkpatrick's and CIPP models across the training life cycle, ensuring not only terminal evaluation but also formative and post-training assessments. Fourth, employ mixed-method approaches, integrating surveys, interviews, and performance data—to capture both quantitative outcomes and contextual learning experiences. Fifth, apply statistical tools such as paired t-tests, correlation, and regression analyses to measure training impacts and align revisions to participant profiles. Sixth, ensure ethical governance by obtaining clearance from a recognized ethics review board prior to any empirical phase, and secure informed consent in compliance with the Data Privacy Act of 2012 or RA 10173. Seventh, shift toward transformative certification models that focus on empowerment and developmental impact rather than compliance alone. Eighth, continuously update training modules to reflect emerging challenges and recent research in cooperative development. Ninth, promote collaboration with higher education institutions and local government units to co-create training content, develop localized case studies, and test innovative approaches. Lastly, establish a monitoring and feedback loop to evaluate long-term training outcomes and inform future program development, thereby ensuring continuous improvement and accountability.

Through these integrated strategies, the CDA can optimize its certification programs, empowering CDOs not only as trained professionals but as genuine catalysts of inclusive, sustainable, and community-based cooperative growth in the Philippines.

TRANSLATIONAL RESEARCH

To translate the findings of this research into formats accessible to both practitioners and community stakeholders, a combination of innovative and popular media is recommended. Given the practical and community-oriented nature of CDO work, key insights from the study, particularly those related to adult learning strategies, demographic responsiveness, and evaluation practices, can be disseminated through policy briefs, infographics, and localized storytelling formats. Policy briefs summarizing the relevance of Republic Act No. 11535

and CDA Memorandum Circular No. 2023-12 may be distributed to local government units (LGUs) and development councils to reinforce compliance and advocacy. Furthermore, visual brochures and posters produced in Filipino or local dialects can highlight the need for experiential learning and community involvement as fundamental skills of qualified CDOs.

To engage a wider and more grassroots audience, illustrative booklets and comics that narrate the journey of a CDO, from appointment to certification, can be developed for use during training orientation or barangay assemblies. These tools can help humanize the policy framework and make the capacity-building process more relatable to trainees and community leaders. Moreover, training courses could be supplemented with video explainers and demo-teaching recordings simulating real-life events, such as cooperative governance difficulties or stakeholder engagements, helping visual and auditory learners to acquire technical ideas better.

To incorporate cultural engagement, the research can also be translated into community theatre performances or radio dramas that portray the challenges and successes of CDOs in the field. These performances can be staged during Cooperative Month celebrations or at local government unit (LGU) public forums. Likewise, a thematic advocacy jingle or educational song on the role of CDOs in nation-building may be introduced in CDA training sessions or shared through social media platforms to promote awareness among younger audiences. Using various media channels helps the scientific findings become ingrained in formats that are not only interesting but also powerful, ensuring that the research helps create capacity at both institutional and grassroots levels.

LITERATURE CITED

Australian Public Service Commission. (2021). *Learning and development strategy: Building capability for the future.* https://www.apsc.gov.au/

Cooperative Development Authority. (2023). *CDA Memorandum Circular No. 2023-12: Framework for evaluating training programs for CDOs.* https://www.cda.gov.ph

Colquitt, J. A., LePine, J. A., & Wesson, M. J. (2017). Organizational behavior: Improving performance and commitment in the workplace (5th ed.). McGraw-Hill Education.

De Lange, A. H., Van Yperen, N. W., Van der Heijden, B. I., & Bal, P. M. (2017). Dominant achievement goals of older workers and their relationship with motivation-related outcomes. Journal of Vocational Behavior, 100, 20–34.

Field, A. (2018). Discovering statistics using IBM SPSS statistics (5th ed.). SAGE Publications.

Fitriana, K. N., Satlita, L., & Winarni, F. (2020). Model of Capacity Building for Civil Servants through Integrative Education and Training (Case Study: In the Yogyakarta Provincial Education and Training Agency). *International Journal of Multidisciplinary Educational Research and Innovation*, *1*(2), 161-171.

Illeris, K. (2018). Contemporary theories of learning: Learning theorists … in their own words (2nd ed.). Routledge.

INTAN. (2020). Annual report: Public sector transformation through training. National Institute of Public Administration, Malaysia.

Kim, S., & Park, S. M. (2019). Determinants of innovative behavior and performance of public employees: Evidence from South Korea. International Review of Administrative Sciences, 85(4), 806–825. https://doi.org/10.1177/0020852317700938

Kirkpatrick, J., & Kirkpatrick, W. (2016). Kirkpatrick's four levels of training evaluation. ATD Press.

Knowles, M. S. (1980). The modern practice of adult education: From pedagogy to andragogy (Revised and Updated). Cambridge Books.

Kraiger, K. (2017). Designing effective training: Lessons from the science of learning. In J. L. Farr & N. T. Tippins (Eds.), Handbook of employee selection (2nd ed., pp. 403–427). Routledge.

Lagubeau, S., Gollier, C., & Pouget, S. (2019). Collective investment and the common good: Exploring cooperative behavior in investment decision-making. Journal of Economic Behavior & Organization, 157, 710–727. https://doi.org/10.1016/j.jebo.2018.11.001

Mezirow, J. (2000). Learning as transformation: Critical perspectives on a theory in progress. Jossey-Bass.

Merriam, S. B., & Bierema, L. L. (2014). Adult learning: Linking theory and practice. Jossey-Bass.

Nchaga, A. M. (2025). Integrating Technology in Public Administration Training. *IDOSR Journal of Arts and Management*, *10*(1), 15–19.

Nguyen, T. M., Pham, L. D., & Hoang, H. T. (2019). Age diversity in the workplace: Empirical evidence from training responsiveness. Asia Pacific Journal of Human Resources, 57(3), 304–328.

OECD. (2020). Public service leadership and capability: OECD public governance reviews. https://doi.org/10.1787/1dff0f8e-en

Oluyide, E. O., & Amini, M. (2016). Challenges of capacity building for local government staff in Nigeria: Evidence from selected local governments in Ogun State. International Journal of Public Administration and Management Research, 3(4), 45–53.

Ramaila, S. (2022). Capacity building of educators for effective curriculum delivery in rural South Africa: A policy and practice perspective. South African Journal of Education, 42(1), 1–10. https://doi.org/10.15700/saje.v42n1a1912

Rao, S., Narain, G., & Jain, R. (2020). A framework for assessing human capital development through training interventions in public sector organizations. Human Resource Development International, 23(1), 56–77. https://doi.org /10.1080/13678868.2019.1686601

Republic Act No. 11535. (2021). An Act institutionalizing the position of a Cooperative Development Officer in all municipalities, cities and provinces.

Sánchez Bajo, C., Álvarez, M., & Roelants, B. (2017). Capital and the Debt Trap: Learning from Cooperatives in the Global Crisis. Palgrave Macmillan. https://doi.org/10.1057/9780230308520

Stufflebeam, D. L., & Zhang, G. (2017). The CIPP evaluation model: How to evaluate for improvement and accountability. Guilford Press.

Taylor, E. W., & Cranton, P. (2012). The handbook of transformative learning: Theory, research, and practice. Jossey-Bass.

Technical Education and Skills Development Authority. (2021). *Competency-based training and the ASEAN Qualifications Reference Framework.* https:// www.tesda.gov.ph

UNDP. (2019). Strengthening local governance in Southeast Asia: Lessons from Indonesia and Thailand. United Nations Development Programme.

UNESCO Africa. (2020). *Impact of learner profiling and flexible delivery in African youth training programs.* UNESCO Africa Report

UNESCO. (2020). *Digital learning in Africa: Bridging the gap in low-resource contexts.* UNESCO.

Venkatesh, V., Thong, J. Y., & Xu, X. (2016). Unified theory of acceptance and use of technology: A synthesis and the road ahead. Journal of the Association for Information Systems, 17(5), 328–376.