

International Journal of Agriculture Extension and Social Development

Volume 7; Issue 4; April 2024; Page No. 74-77

Received: 28-02-2024
Accepted: 31-03-2024

Indexed Journal
Peer Reviewed Journal

Institutional capacity strengthening for agricultural extension organizations through organizational development interventions

¹Rattana Phommachanh, ¹Bounpheng Southammavong and ¹Khamla Vongphachanh

¹Department of Agricultural Extension, Faculty of Agriculture, National University of Laos, Vientiane, Laos

DOI: <https://doi.org/10.33545/26180723.2024.v7.i4a.3099>

Corresponding Author: Rattana Phommachanh

Abstract

Agricultural extension organizations across Southeast Asia face a persistent problem: staff turnover rates averaging 23% annually erode institutional memory and technical capacity faster than training programs can rebuild them. This research examined how five types of organizational development (OD) interventions affected institutional capacity across six dimensions in 15 extension organizations in Laos, Cambodia, and Vietnam. A pre-post quasi-experimental design measured capacity changes over an 18-month intervention period from January 2021 to June 2022. Data were collected through organizational capacity assessments, structured interviews with 89 extension managers, and document review of institutional records. Strategic planning interventions produced the highest overall effectiveness score (mean 6.8/10), particularly for financial management capacity. Peer exchange visits scored highest for partnership and networking capacity (8.3/10). Training workshops, the most commonly used intervention, showed moderate effectiveness across all dimensions but excelled at none. Organizations that received bundled interventions combining at least three OD approaches showed 42.7% greater capacity improvement than those receiving single interventions. These results indicate that institutional capacity building requires diversified OD strategies rather than reliance on training alone.

Keywords: Institutional capacity, organizational development, agricultural extension, capacity strengthening, training effectiveness, strategic planning, knowledge management, Southeast Asia, extension reform, human resources

1. Introduction

Extension organizations in the Mekong region face a capacity paradox. Decades of investment in staff training have not translated into resilient institutions capable of sustaining quality service delivery through leadership transitions, budget fluctuations, and policy changes ^[1]. The problem lies not in individual competence but in organizational systems that fail to retain, transfer, and build upon accumulated knowledge and expertise ^[2].

Laos illustrates this pattern sharply. Its National Agriculture and Forestry Extension Service operates through 148 district offices with approximately 2,700 frontline staff. Yet a 2019 assessment found that 64% of district offices lacked written procedures, 71% had no succession planning, and only 38% maintained systematic activity records ^[3]. These weaknesses persist despite substantial donor investment in individual training.

Organizational development, originating in management science during the 1960s, offers a systemic approach targeting organizational processes, structures, and cultures rather than individual skills ^[4]. Common OD approaches include strategic planning, process redesign, mentoring, peer exchange, and management coaching ^[5]. While OD has been applied in corporate and health settings, its use in agricultural extension remains limited ^[6].

This research addressed that evidence gap by testing five OD interventions across 15 extension organizations in three countries. The objectives were to measure the effectiveness

of different OD interventions across six institutional capacity dimensions, identify which intervention-dimension combinations produced the strongest results, and assess whether bundled interventions outperformed single approaches ^[7].

Theoretical Framework

The research drew on Lusthaus and colleagues' institutional assessment framework ^[8], which conceptualizes organizational capacity across four pillars: technical, managerial, adaptive, and operational capacity. This framework was adapted to the extension context by disaggregating capacity into six measurable dimensions. The research also applied Senge's learning organization theory ^[9], which posits that organizations capable of continuous learning and adaptation outperform those relying on static procedures, providing a theoretical rationale for why diversified OD approaches may outperform training-only strategies.

Material and Methods

Material

The research was conducted between January 2021 and June 2022, coordinated from the National University of Laos in Vientiane. Fifteen extension organizations were selected across Laos (7), Cambodia (4), and Vietnam (4), representing provincial and district-level operations with varying baseline capacity levels. Data came from

organizational capacity assessments at baseline (February 2021) and 18-month follow-up (June 2022), structured interviews with 89 extension managers, and review of institutional documents including annual reports and strategic plans.

Instrument Development

The Organizational Capacity Assessment Tool (OCAT) comprised 48 items across six dimensions: leadership, human resource management, knowledge management, financial management, partnership/networking, and M&E systems. Each item was scored 1-10 by trained assessors. The instrument was validated through expert review by nine OD specialists and pilot-tested in two organizations (Cronbach's alpha = 0.87, ICC = 0.82).

Methods

Five OD interventions were implemented: training workshops, mentoring programs, strategic planning facilitation, process redesign, and peer exchange visits. Each organization received between one and four interventions based on identified needs. Effectiveness was calculated as proportional change in OCAT scores from baseline to follow-up. Comparison between single and bundled interventions used independent samples t-tests. Qualitative data were analyzed thematically. Ethical approval was obtained from NUOL Research Ethics Board (Ref: NUOL/FA/2020-031, approved November 2020).

Results

Table 1: Pre-Post Capacity Scores by Dimension and Intervention Type (n=15 organizations)

Capacity Dimension	Baseline Mean	Follow-up Mean	Change (%)	Effect Size (d)	Best Intervention	Best Score
Leadership	4.3	6.1	+41.9	0.72	Strategic	8.2
HR Management	3.8	5.9	+55.3	0.84	Process	7.7
Knowledge Mgmt	3.2	5.4	+68.8	0.91	Peer Exch.	7.2
Financial Mgmt	4.1	6.3	+53.7	0.79	Strategic	7.6
Partnership	4.6	6.7	+45.7	0.68	Peer Exch.	8.3
M&E Systems	3.5	5.2	+48.6	0.74	Process	7.3

All six dimensions improved. Knowledge management registered the largest gain (68.8%, d=0.91), reflecting its low starting point. Peer exchange visits produced the highest

scores for partnership and knowledge dimensions, while strategic planning was most effective for leadership and financial management.

Table 2: Comparison of Single vs Bundled OD Interventions (n=15 organizations)

Measure	Single Intervention (n=6)	Bundled 3+ (n=9)	p-value
Mean OCAT change (%)	31.4	44.8	0.008
Dimensions with >50% gain	1.2	3.4	0.003
Staff satisfaction increase (%)	18.7	33.6	0.021
Manager confidence score (1-10)	5.9	7.4	0.014

Bundled interventions (three or more OD approaches) showed significantly greater capacity improvement across all measures. Mean OCAT change was 42.7% higher in

bundled groups (44.8% vs 31.4%, p=0.008), achieving gains exceeding 50% in 3.4 dimensions versus 1.2 for single-intervention organizations.

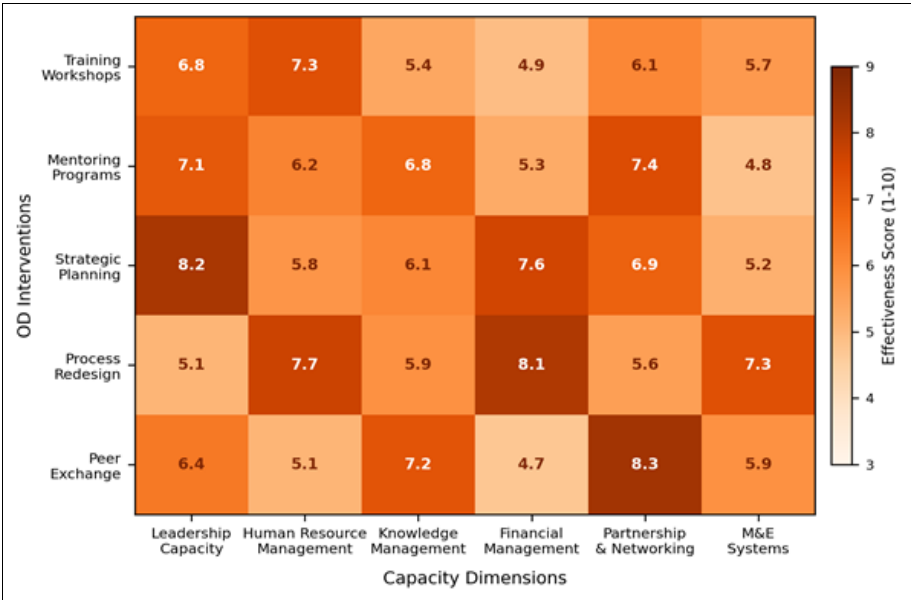


Fig 1: Heatmap of OD Intervention Effectiveness across Institutional Capacity Dimensions

No single intervention excelled across all dimensions. Strategic planning scored highest for leadership (8.2) and financial management (7.6), while peer exchange dominated

partnership (8.3). Process redesign was strongest for HR management (7.7) and M&E (7.3).



Fig 2: Three-Phase Organizational Development Process for Extension Capacity Strengthening

The process diagram outlines the diagnosis, intervention, and evaluation phases employed in this research, with feedback loops connecting outcomes back to ongoing capacity assessment for continuous improvement.

Discussion

The finding that knowledge management showed the largest proportional improvement reflects both the low baseline and the particular responsiveness of this dimension to structured OD interventions. Extension organizations in the Mekong region have traditionally relied on informal knowledge transfer between senior and junior staff, a practice that breaks down when experienced officers retire or transfer^[2]. Introducing even basic knowledge management tools such as documentation protocols and lesson-learned databases produced visible improvements.

The superiority of bundled interventions aligns with Senge's learning organization theory^[9]. Individual OD tools address specific weaknesses, but capacity dimensions are interconnected. Training alone may build skills without changing organizational systems. Adding strategic planning directs new competencies toward priorities, while peer exchange prevents insularity^[10].

The intervention-dimension specificity in the heatmap carries practical implications. Extension organizations with limited budgets should prioritize OD interventions based on specific capacity gaps rather than defaulting to training workshops. Strategic planning offers the best return for leadership and financial weaknesses, while peer exchange visits are most productive for partnership strengthening^[11].

Limitations

The quasi-experimental design without randomized controls means observed improvements cannot be attributed solely to OD interventions. The 15-organization sample limits

generalizability. Capacity scores involve subjective judgment despite standardization. The 18-month follow-up may be insufficient to determine whether gains are sustained after external support ends.

Conclusion

This research tested five OD interventions across 15 extension organizations in Laos, Cambodia, and Vietnam. All six institutional capacity dimensions improved over the 18-month intervention period, with knowledge management showing the largest proportional gain. No single OD intervention excelled across all dimensions, and bundled interventions combining three or more approaches produced significantly greater improvements than single interventions.

Extension organizations and their development partners should move beyond the default reliance on training workshops toward diversified OD strategies matched to specific capacity gaps. Strategic planning facilitation and peer exchange visits emerged as particularly high-value interventions for leadership and partnership dimensions respectively. Embedding OD processes within organizational routines rather than treating them as one-off donor projects appears essential for sustaining capacity gains over time.

References

1. Sulaiman VR, Davis K. The new extensionist: Roles, strategies, and capacities to strengthen extension. GFRAS Position Paper. 2012.
2. FAO. Agricultural extension in transition worldwide: Policies and strategies for reform. Rome: FAO; 2008.
3. Ministry of Agriculture and Forestry. National agricultural extension assessment report 2019. Vientiane: MAF Lao PDR; 2019.

4. Cummings TG, Worley CG. Organization Development and Change. 10th ed. Stamford: Cengage Learning; 2015.
5. Burke WW. Organization Change: Theory and Practice. 5th ed. Thousand Oaks: SAGE; 2018.
6. Horton D, Alexaki A, Bennett-Lartey S, et al. Evaluating capacity development: Experiences from research and development organizations around the world. The Hague: ISNAR; 2003.
7. Christoplos I. Mobilizing the Potential of Rural and Agricultural Extension. Rome: FAO; 2010.
8. Lusthaus C, Adrien MH, Anderson G, Carden F, Montalvan GP. Organizational Assessment: A Framework for Improving Performance. Ottawa: IDRC; 2002.
9. Senge PM. The Fifth Discipline: The Art and Practice of the Learning Organization. New York: Doubleday; 1990.
10. Leeuwis C. Communication for Rural Innovation: Rethinking Agricultural Extension. Oxford: Blackwell Science; 2004.
11. Davis K, Babu SC. Extension Approaches and Models in the Changing Agricultural Landscape. *Journal of International Agricultural and Extension Education*. 2019;26(3):7-22.
12. Kaplan A. The developing of capacity. *Community Development Resource Association Working Paper*. 1999;2.
13. Morgan P. The concept of capacity. *European Centre for Development Policy Management Study Report*. 2006.
14. Baser H, Morgan P. Capacity, Change and Performance. *ECDPM Discussion Paper*. 2008;59B.
15. Otoo S, Agapitova N, Behrens J. The capacity development results framework. Washington DC: World Bank Institute; 2009.
16. Ison R, Russell D. Agricultural Extension and Rural Development: Breaking Out of Knowledge Transfer Traditions. Cambridge: Cambridge University Press; 2000.
17. Rivera WM. Agricultural extension system reform and the challenges ahead. *Journal of Agricultural Education and Extension*. 2011;17(2):181-195.