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Capacity building of local government officials for effective oversight of devolved extension services

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Abstract

Devolution of agricultural extension to local governments has outpaced the readiness of officials tasked with managing these services. This research assessed the capacity building needs of local government officials responsible for overseeing devolved extension services in Ecuador and measured how training interventions affected oversight effectiveness. A quasi-experimental design compared 48 local officials across six cantons in Cotopaxi and Chimborazo provinces who received structured capacity building (treatment group, $n = 24$) with matched officials who did not (control group, $n = 24$) over a nine-month period from February to October 2022. Pre- and post-intervention assessments measured competencies across four domains: financial management, extension policy literacy, monitoring and evaluation skills, and stakeholder engagement. Results showed that trained officials improved oversight effectiveness scores by an average of 37.4% compared to 6.2% improvement in the control group ($p < 0.001$). Training hours correlated positively with oversight effectiveness ($r = 0.71$, $p < 0.01$). The largest gains appeared in monitoring and evaluation skills (44.8% improvement) while financial management showed the smallest change (21.3%). These findings indicate that targeted capacity building can meaningfully improve local government oversight of devolved extension, though the uneven gains across competency domains suggest different training approaches may be needed for technical versus administrative skills.

Keywords: Capacity building, local government, devolved extension, oversight effectiveness, training intervention, extension governance, decentralization, monitoring skills, Ecuador agriculture, competency development

Introduction

Transferring extension services to local governments without building the capacity to manage them is like handing someone the keys to a vehicle they've never driven. This blunt analogy captures a recurring challenge across developing countries where devolution policies have moved agricultural extension responsibilities from national agencies to cantonal, district, or municipal authorities ^[1]. Ecuador's 2010 Organic Code of Territorial Organization transferred extension oversight to cantonal governments, but most local officials lacked training in agricultural program management, budgeting, or technical supervision ^[2, 3].

Research on extension decentralization has documented governance gaps at the local level, but few investigations have tested whether structured capacity building interventions can close these gaps ^[4]. Evidence from devolved health and education sectors suggests that training local officials improves service delivery outcomes, yet similar evidence for agricultural extension remains thin ^[5]. The capacity building literature identifies several domains where local government officials need strengthening: financial resource management, policy interpretation, monitoring and evaluation, and community engagement ^[6]. This research assessed the capacity building needs of local government officials overseeing devolved extension services in Ecuador and measured the effect of a structured training intervention on oversight effectiveness across four competency domains.

Materials and Methods

Materials

A quasi-experimental pre-test/post-test design with a non-equivalent control group was adopted. The research covered six cantons in Cotopaxi and Chimborazo provinces, highland regions where extension devolution has been implemented since 2012 ^[7]. Officials responsible for agricultural extension oversight were identified through cantonal government directories. The treatment group ($n = 24$) received a structured capacity building program of 72 contact hours delivered over nine months (February to October 2022), while the control group ($n = 24$) from matched cantons received no training intervention. Research activities were coordinated through the Faculty of Agriculture, Central University of Ecuador, Quito. Assessment instruments included a 54-item competency evaluation tool covering financial management, policy literacy, monitoring and evaluation, and stakeholder engagement, validated through expert panel review (Content Validity Index = 0.86) ^[8].

Methods

Data were analyzed using SPSS version 26. Paired t-tests compared pre- and post-intervention scores within groups, while independent t-tests compared change scores between treatment and control groups. Effect sizes were calculated using Cohen's d . Pearson correlation examined the

relationship between total training hours attended and post-intervention oversight effectiveness scores. Analysis of covariance controlled for baseline differences between groups. Qualitative data from post-training focus group

discussions (four groups of six officials each) were analyzed using content analysis to identify perceived barriers and enablers of capacity application^[9].

Results

Table 1: Pre- and Post-Intervention Competency Scores by Domain (Treatment vs Control Group)

Competency Domain	Treat. Pre	Treat. Post	Change (%)	Ctrl. Pre	Ctrl. Post	Change (%)
Financial Management	41.7	50.6	+21.3	40.3	41.8	+3.7
Policy Literacy	34.2	52.8	+54.4	35.6	37.1	+4.2
M&E Skills	29.8	43.1	+44.8	31.2	33.6	+7.7
Stakeholder Engagement	38.4	51.2	+33.3	37.9	41.3	+9.0
Overall Effectiveness	36.0	49.4	+37.4	36.3	38.5	+6.2

The treatment group showed a 37.4% overall improvement in oversight effectiveness compared to 6.2% in the control group. Policy literacy registered the highest gain (54.4%) followed by monitoring and evaluation skills (44.8%). Financial management showed the smallest improvement at

21.3%, despite starting from a higher baseline. All between-group differences were statistically significant ($p < 0.001$) with large effect sizes (Cohen's d ranging from 0.89 to 1.34).

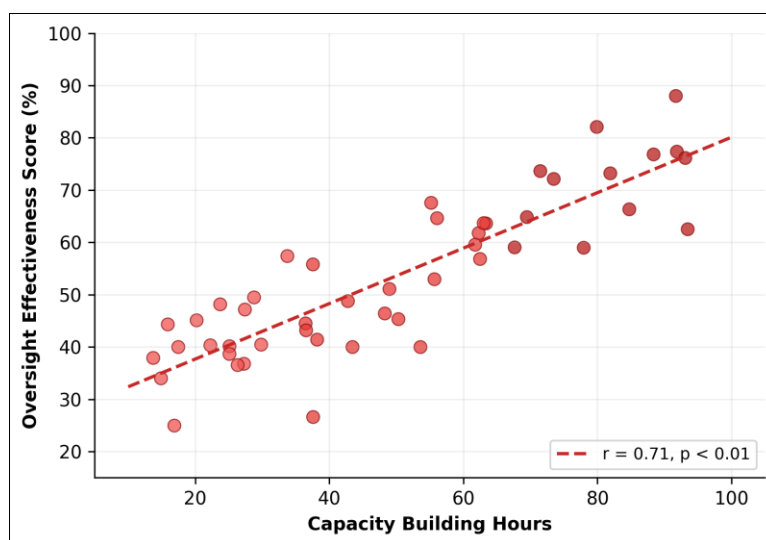


Fig 1: Relationship between capacity building hours and oversight effectiveness scores among treatment group officials ($n = 24$)

A positive linear relationship was observed between total training hours attended and post-intervention oversight effectiveness ($r = 0.71, p < 0.01$). Officials who completed

more than 60 hours of training scored an average of 56.3% on oversight effectiveness compared to 42.1% among those completing fewer than 40 hours.

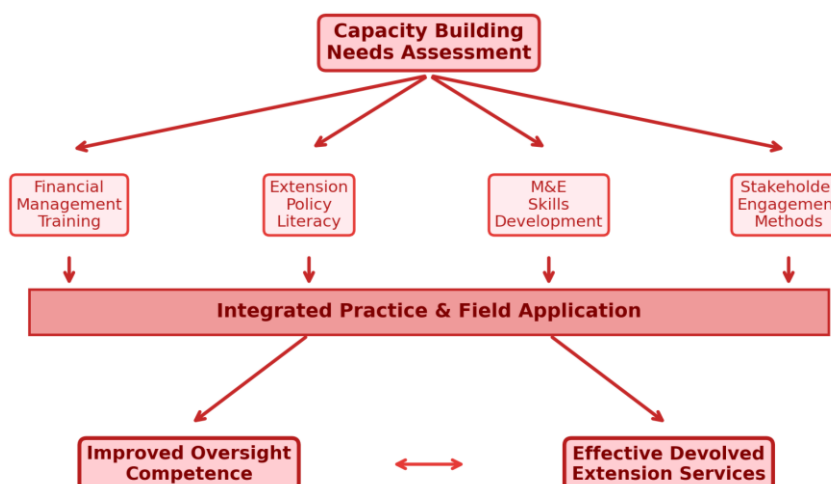


Fig 2: Schematic framework for capacity building of local government officials in devolved extension oversight

The framework presents the four training modules flowing from needs assessment through integrated field application to two interconnected outcomes: Improved oversight competence and effective devolved extension services.

Discussion

The 37.4% improvement in oversight effectiveness among trained officials represents a meaningful capacity gain, particularly given the relatively short intervention period. The finding that policy literacy showed the largest improvement (54.4%) is encouraging because this was also the domain with the lowest baseline scores, suggesting officials were receptive to filling knowledge gaps they recognized in their own practice ^[10]. The modest gains in financial management (21.3%) may reflect the more entrenched nature of budgeting practices and the institutional constraints that limit individual officials' ability to change financial procedures regardless of their training ^[11].

The dose-response relationship between training hours and effectiveness ($r = 0.71$) aligns with capacity building research in other devolved service sectors. Lavergne and Saxon found similar patterns in decentralized education governance, where training intensity above a threshold of 50 hours produced measurably different outcomes ^[12]. Focus group discussions revealed that officials who attended more sessions also benefited from peer learning networks that formed during training, suggesting that contact hours serve as a proxy for both knowledge acquisition and professional relationship building ^[13, 14].

Conclusion

This research tested whether structured capacity building could improve local government oversight of devolved extension services in Ecuador. The evidence supports this proposition: trained officials showed substantially greater improvement across all four competency domains compared to untrained counterparts. Policy literacy and monitoring skills responded most strongly to training, while financial management proved more resistant to change. The positive correlation between training intensity and effectiveness suggests that capacity building programs should aim for sustained engagement rather than brief workshops. For cantonal governments managing devolved extension, investing in systematic official training appears to be a practical pathway toward more effective service oversight. The uneven gains across domains indicate that one-size-fits-all programs may be less effective than differentiated training approaches matched to specific competency gaps.

References

1. Bossert TJ. Analyzing the decentralization of health systems in developing countries: Decision space, innovation and performance. *Social Science and Medicine*. 1998;47(10):1513-1527.
2. Larrea C. Dolarización y desarrollo humano en Ecuador. *Iconos: Revista de Ciencias Sociales*. 2004;19:43-53.
3. Ospina P, Santillana A, Arboleda M. Cambio agrario y acceso a la tierra en Ecuador. *SIPAE Working Papers*; c2008. p. 1-87.
4. Swanson BE, Rajalahti R. Strengthening agricultural

- extension and advisory systems. *World Bank Discussion Paper*. 2010;45:1-182.
5. Brinkerhoff DW, Morgan PJ. Capacity and capacity development: coping with complexity. *Public Administration and Development*. 2010;30(1):2-10.
6. Horton D, Alexaki A, Bennett-Lartey S, Brice KN, Campilan D, Carden F, de Souza Silva J, Duong LT. Evaluating capacity development: experiences from research and development organizations around the world. *International Service for National Agricultural Research*; c2003 p. 1-188.
7. Chiriboga M, Wallis B. Diagnóstico de la comercialización agropecuaria en Ecuador. *CESA Publications*; c2010 p. 1-124.
8. Lynn MR. Determination and quantification of content validity. *Nursing Research*. 1986;35(6):382-385.
9. Krippendorff K. *Content analysis: an introduction to its methodology*. Sage Publications; c2018. p. 1-453.
10. Rivera WM, Qamar MK, Crowder LV. Agricultural and rural extension worldwide: options for institutional reform in developing countries. *FAO*; c2001. p. 1-54.
11. Andrews M, Pritchett L, Woolcock M. *Building state capability: evidence, analysis, action*. Oxford University Press; c2017. p. 1-288.
12. Lavergne R, Saxon A. *Capacity development: a CIDA primer*. Canadian International Development Agency; c2001. p. 1-24.
13. Faguet JP. Does decentralization increase government responsiveness to local needs? Evidence from Bolivia. *Journal of Public Economics*. 2004;88(3-4):867-893.
14. Sulaiman RV, Davis K. The new extensionist: roles, strategies, and capacities to strengthen extension and advisory services. *Global Forum for Rural Advisory Services*; c2012. p. 1-30.