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EFFECT OF COMMUNICATION ON THE PERFORMANCE OF DISABILITY EDUCATION PROGRAMMES IN MACHAKOS COUNTY, KENYA

BY

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Abstract

This article assesses how communication influences results of disability education programmes operating in Machakos County, focusing on the Inclusive Education Programme run by the Agency for Disability and Development in Africa (ADDA). Communication was examined as a project management practice that supports sharing of information, joint planning, feedback and alignment of different actors. A descriptive design was applied, using quantitative data collected from managers, coordinators, teachers, administrative staff and programme beneficiaries. The study covered ten programmes with a combined population of 1,000. From this, 278 participants were selected through stratified random sampling guided by Krejcie and Morgan (1970). Of these, 264 questionnaires were completed and returned, representing 95%. Analysis was done in SPSS version 29 using means, standard deviations, Pearson correlation and simple linear regression.

Results showed a moderate positive association between communication and programme results ($r = .448$, $p < .001$). Regression analysis indicated that communication accounted for 20.1% of changes in performance ($R2 = .201$) with $B = .424$, $p < .001$. The article concludes that strengthening timely updates and external channels can further improve performance, even though overall performance was rated positively.

Keywords: Communication, Programme Performance, Disability Education, Inclusive Education, Machakos County

1. Introduction

In disability education programmes, how information is shared influences whether teams understand goals coordinate tasks and respond to beneficiaries. Where channels are clear, feedback is encouraged and updates are timely, misunderstandings reduce and implementation becomes smoother. In Machakos County, such programmes bring together managers, coordinators, teachers, administrative personnel, parents and community partners, making consistent information flow central to daily operations (Barasa & Kimathi, 2022; Maina & Mwangi, 2024).

In this article, communication refers to systems put in place to ensure information moves efficiently among programme actors to support coordination and limit conflict. It is assessed through internal and external channel effectiveness, clarity and timeliness of updates, sharing of information, existence of feedback mechanisms, and level of coordination.

1.1 Problem Statement

Programme delivery in disability education depends on different groups working together. When messages are unclear, late or inconsistent, participants may misinterpret instructions, repeat tasks, or experience delays. Past research in

Kenya has looked at communication in broader disability projects, but limited attention has been given to how communication shapes results of the Inclusive Education Programme in Machakos County (Turner & Müller, 2019; Omondi & Waweru, 2021). This article addresses that gap.

1.2 Objectives of the Study

1.3 General Objective

To assess the effect of communication on the performance of disability education programmes in Machakos County, Kenya.

1.4 Research Question

What effect does communication have on the performance of disability education programmes in Machakos County, Kenya?

1.5 Scope of the Study

The focus is Machakos County, covering ten disability education programmes implemented by ADDA. Participants included managers, coordinators, teachers, administrative staff and beneficiaries. The independent variable was communication, while performance was viewed in terms of achievement of targets, timeliness, quality, accountability, beneficiary satisfaction and sustainability.

1.6 Limitations of the Study

Coverage was limited to Machakos County, so findings may not directly apply to other counties with different contexts. A descriptive approach was used, which shows association but does not prove causation. The model with communication alone explained 20.1% of performance variation, suggesting other factors also influence results.

2.0 Literature Review

2.1 Theoretical Review

Two lenses inform this article: Communication Theory and Systems Theory.

2.1.1 Communication Theory (Shannon-Weaver Model)

Shannon and Weaver (1949) described communication as involving a sender, message, channel, receiver and feedback, with noise potentially disrupting the process. In programme settings, effectiveness depends on how messages are formulated, which channels are used, how they are understood, and whether feedback is obtained (Turner & Müller, 2019; Barasa & Kimathi, 2022). Applied here, noise may take the form of late updates, unsuitable channels or weak feedback loops. The theory guided measurement of internal and external channel effectiveness, clarity and timing of updates, sharing of information and coordination.

2.1.2 Systems Theory

Von Bertalanffy (1968) presented organizations as systems made of connected parts that must work together. Disability education programmes include managers, coordinators, teachers, administrative staff, beneficiaries and external partners. According to this view, overall results depend on how well these parts exchange information and coordinate (Kerzner, 2021; Maina & Mwangi, 2024).

2.2 Empirical Literature Review

Chebet (2024) studied internal communication in disability support projects in Kenya, using questionnaires and group discussions. Regular meetings, written updates and feedback opportunities were linked to improved teamwork and problem-solving, with open exchanges between managers and field staff supporting coordination and accountability.

Lemiso and Wekesa (2025) examined communication flow in community-based disability initiatives with 250 officers, coordinators and volunteers. Programmes that encouraged two-way exchange reported better alignment among actors, while those relying

mainly on top-down directives faced more implementation challenges.

Ngugi (2023) looked at information sharing in disability inclusion programmes involving 180 participants from Nairobi and Machakos. Use of email, WhatsApp groups and shared reports was associated with more efficient operations, fewer repeated efforts and stronger monitoring.

Kilonzo and Mumo (2024) focused on communication competence and team results in disability agencies, surveying 160 employees. Leaders who listened, communicated clearly and showed empathy were linked to stronger collaboration and motivation.

Mwangi (2025) investigated external communication and coordination with 210 community leaders and partners in disability empowerment projects. Consistent and transparent external communication was associated with greater trust and participation.

2.2.1 Communication and Performance of Disability Education Programmes

Across these studies, communication appears to influence results through clearer coordination, timely sharing of information, feedback and alignment of expectations. Internal channels help staff stay updated, external channels support engagement with parents and partners, and feedback allows concerns from beneficiaries to be addressed, contributing to achievement of targets, quality, timeliness, satisfaction and sustainability (Omondi & Waweru, 2021; Barasa & Kimathi, 2022).

2.3 Conceptual Framework

The framework positions communication as the independent variable and programme performance as the dependent variable. It proposes a positive link, such that improved communication is associated with better performance. The framework is drawn from the full thesis (Malonza, 2026).

Figure 1: Conceptual Framework Showing Link Between Communication and Performance

Independent Variable: Communication Management (X3)	Dependent Variable: Performance of Disability Education Programmes (Y)
Indicators: • Internal channel effectiveness • External channel effectiveness • Clarity and timeliness of updates • Information sharing • Feedback mechanisms • Coordination	Indicators: • Achievement of objectives • Timeliness of service • Quality of service • Accountability and reporting • Beneficiary satisfaction • Sustainability
Hypothesis: Communication has positive significant effect Model: Y = B0 + B3X3 + e Empirical: R=.448, R2=.201, B=.424, p<.001	Expected direction: Positive

Note: The diagram shows communication (six indicators) hypothesized to influence performance (six indicators). Results in this study supported the positive direction (r=.448, p<.001).

3.0 Research Methodology

3.1 Research Design

A descriptive design was adopted (Creswell, 2014), suitable for collecting quantitative views from different programme actors and examining association between communication and performance without manipulation.

3.2 Target Population

The study covered ten programmes run by ADDA in Machakos County, with 1,000 individuals comprising 10 managers, 40 coordinators, 400 teachers and administrative staff, and 550 beneficiaries.

3.3 Sampling and Sample Size

Stratified random sampling was used to ensure representation of each category. Sample size of 278 was determined using the table by Krejcie and Morgan (1970).

3.4 Reliability and Validity

The questionnaire was tested for reliability and validity. Overall Cronbach's alpha was .82, exceeding the .70 threshold. For communication, KMO was 0.507 and Bartlett's test was significant ($p < 0.001$), supporting factorability. Content validity was confirmed through supervisor review.

3.5 Data Collection Methodology

A structured questionnaire using a five-point Likert scale was administered. Out of 278 issued, 264 were returned complete, giving a 95% response rate, which is considered excellent (Mugenda & Mugenda, 2003).

3.6 Data Analysis

Analysis was conducted in SPSS version 29. Means and standard deviations described practices, while Pearson correlation and simple linear regression tested relationships at 95% confidence ($p < .05$). The regression model was $Y = B0 + B3X3 + e$, where Y is performance and X3 is communication.

3.7 Ethical Considerations

Clearance was obtained from NACOSTI and Management University of Africa. Participation was voluntary with informed consent, and confidentiality and anonymity were maintained.

4.0 Research Findings

4.1 Response Rate and Demographic Analysis

From 278 questionnaires distributed, 264 were completed and usable, representing 95%, which is adequate for analysis (Mugenda & Mugenda, 2003). Respondents included managers 3.8%, coordinators 14.4%, teachers and administrative staff 38.6%, and beneficiaries 43.2%. Females were 52.3% and males 47.7%. Most participants had 1-3 years of involvement (46.2%), followed by 4-6 years (31.1%), with 68.9% holding diploma or degree qualifications. During field visits in Machakos, many beneficiaries expressed appreciation for being included, which likely supported the high return rate.

Table 1: Response Rate

Category	Frequency	Percent
Administered	278	100%
Returned and usable	264	95%

4.2 Descriptive Findings on Communication

On a five-point scale, communication practices were rated moderately positively with an aggregate mean of 3.56 (SD=1.458). Conveyed messages were rated highest (M=4.09, SD=1.331), followed by coordination among stakeholders (M=3.86, SD=1.413). Lower ratings were observed for timeliness of programme updates (M=3.11, SD=1.501) and external channel effectiveness (M=3.28, SD=1.516). In discussions, several teachers noted that WhatsApp groups and regular staff meetings helped them stay updated, while communication with parents depended more on occasional meetings and was less consistent.

Table 2: Descriptive Statistics for Communication (N=264)

Statement	N	Mean	Std. Deviation
Internal communication channels are effective	264	3.57	1.447
External communication channels are effective	264	3.28	1.516
Information flows clearly between staff and management	264	3.57	1.541
Programme updates are provided on time	264	3.11	1.501
Reports on programme activities are clear	264	3.65	1.388
Feedback mechanisms exist for stakeholders	264	3.32	1.523
Coordination among stakeholders is effective	264	3.86	1.413
Conveyed messages are satisfactory	264	4.09	1.331
Aggregate	264	3.56	1.458

4.3 Performance of Disability Education Programmes

Performance was assessed through achievement of targets, timeliness, quality, accountability, beneficiary satisfaction and sustainability. Overall performance was rated positively with aggregate mean 3.68 (SD=1.42). Achievement of objectives scored 3.82, timeliness 3.51, quality 3.75, accountability 3.64, satisfaction 3.79 and sustainability 3.58. From interactions in Machakos, beneficiaries highlighted satisfaction with learning support but mentioned occasional delays in receiving materials, which matches the relatively lower timeliness score.

Table 3: Descriptive Statistics for Performance of Disability Education Programmes (N=264)

Performance Indicator	N	Mean	Std. Deviation
Achievement of objectives and targets	264	3.82	1.38
Timeliness of service delivery	264	3.51	1.44
Quality of services	264	3.75	1.39

Accountability and reporting	264	3.64	1.41
Beneficiary satisfaction	264	3.79	1.36
Sustainability	264	3.58	1.47
Aggregate Performance	264	3.68	1.42

4.4 Performance Correlation

Pearson correlation was computed to assess association between communication and performance. The result showed a moderate positive and statistically significant link: r = .448, p < .001, N = 264. Higher scores on communication tended to correspond with higher performance scores, consistent with previous work by Chebet (2024), Lemiso and Wekesa (2025) and Ngugi (2023).

Table 4: Pearson Correlation between Communication and Performance

Variables	Pearson's r	Significance	N
Communication and performance of disability education programmes	.448**	p < .001	264

4.5 Regression Analysis

4.5.1 Regression for Communication and Performance of the Programmes

Simple linear regression was used to test whether communication predicts performance, using Y = B0 + B3X3 + e. Field observations had suggested that centres with clearer information flow experienced smoother coordination, supporting the need for this test.

Table 5: ANOVA Results for Communication and Performance

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	100.414	1	100.414	65.788	.000
Residual	399.899	262	1.526		
Total	500.313	263			

The ANOVA was significant, F(1, 262) = 65.788, p < .001, indicating the model with communication as predictor significantly explained performance.

Table 6: Model Summary for Communication and Performance

R	R Square	Adjusted R Square	Std. Error of Estimate
.448	.201	.198	1.235

R was .448 and R2 .201, meaning communication explained 20.1% of variation in performance, with the rest linked to other factors. Adjusted R2 was .198 and standard error 1.235.

Table 7: Regression Coefficients for Communication and Performance

Variable	B	Std. Error	Standardized Beta	t	Sig.
Constant	1.911	.201		9.504	.000
Communication	0.424	.052	.448	8.111	.000

The equation was Y = 1.911 + 0.424X3, where Y is performance and X3 is communication. The coefficient was positive and significant (B = .424, Beta = .448, p < .001), implying a unit improvement in communication is associated with 0.424 increase in performance.

5.0 Conclusion and Recommendations

5.1 Conclusion

Communication showed a moderate, positive and significant link with performance (r=.448, p<.001). It significantly predicted performance, accounting for 20.1% of variation (R2=.201, B=.424, p<.001). While overall ratings for communication (M=3.56) and performance (M=3.68) were positive, timeliness of updates and external channels were rated lower. Field experience in Machakos confirmed that timely and inclusive information encouraged more active engagement from teachers and beneficiaries, supporting the statistical results.

5.2 Recommendations

ADDA should work on improving timeliness of updates and strengthening external communication with parents and community partners. Training on inclusive communication that considers needs of persons with disabilities should be provided. Feedback channels should allow stakeholders to raise concerns with timely responses. The County Government of Machakos could incorporate clear communication standards into guidelines for disability education to support accountability, quality and sustainability.

5.3 Suggestions for Further Studies

Future work could examine similar programmes in other counties, explore how technology and accessibility of communication channels influence participation and satisfaction, and adopt longitudinal designs to track changes over time.

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