

THE EFFECT OF RESOURCE ALLOCATION ON EARLY CHILDHOOD DEVELOPMENT (ECD) SERVICE DELIVERY IN KAJIADO COUNTY

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ABSTRACT

The devolution process in Kenya was expected to improve the delivery of services through increasing their accessibility and tailoring the approaches in accordance to the targets. However, as with any other process, devolution process has faced a number of challenges in Kajiado. Some of the challenges include, poor funding of ECD by the county governments, lack of technical human resource within the county governments and poor policy and legislation on provision of ECD services. Teacher-to-child ratios in many centres exceed the recommended 1:25 ratio, whereby some centres have ratios as high as 1:40. This study aims to fill these gaps by investigating the effects of ECD devolution on service delivery in Kajiado County. The study aimed to determine the effect of resource allocation on ECD service delivery in Kajiado County. A descriptive research design was employed, targeting 439 respondents comprising ECD teachers, County and Sub-County ECD coordinators, and Ward administrators, with a stratified random sample of 209 respondents. Data was collected using semi-structured questionnaires and interviews, while a pilot study conducted in Machakos County ensured validity through expert review and confirmed reliability with Cronbach's alpha values above 0.7. Quantitative data was analyzed using SPSS version 26 through descriptive and inferential statistics, and qualitative data was analyzed thematically. The findings revealed that resource allocation for ECD services in Kajiado County has significantly improved since devolution, with increased funding, enhanced transparency in fund management, recruitment of qualified teachers, and better provision of teaching and digital materials alongside timely supply replenishment. Resource allocation also supported school feeding programs, co-curricular activities, and special needs education, reflecting the broad impact of devolution. Correlation and regression analysis confirmed a positive and significant influence of resource allocation on ECD service delivery. The study concluded that effective resource distribution, adequate funding, and deployment of qualified teachers, as well as support for essential programs, are crucial in strengthening the quality and accessibility of ECD services. It recommends sustained equitable allocation by ensuring consistent funding, provision of adequate teaching and digital materials, expanded support for children with special needs, strengthened teacher recruitment, and reinforced transparency in fund management to ensure efficient use of resources.

Keywords: County Governments, Early Childhood Development, Kajiado County, Resource Allocation, Service Delivery.

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BACKGROUND OF THE STUDY

Early Childhood Development (ECD) is a critical stage in human growth, encompassing physical, cognitive, social, and emotional development from infancy to about eight years (Muthoni, Ouko, & Githui, 2022). Research highlights that early experiences shape brain structures and functions, influencing future learning, health, and behavior. Global frameworks, including the Sustainable Development Goals (SDG 4.2), emphasize universal access to quality early learning, care, and pre-primary education to ensure children, especially from disadvantaged backgrounds, get a strong start in life (Neuman & Powers, 2021).

Internationally, devolution of ECD services has yielded mixed outcomes. In countries such as Sweden and Norway, decentralization has enabled local governments to deliver affordable and high-quality programs through sound policies, adequate funding, and strong accountability mechanisms (Neuman & Powers, 2021). Conversely, in nations with weak institutional frameworks and inadequate resources, devolution has created disparities in service quality. For instance, Nigeria has witnessed uneven progress in ECD due to poor funding, insufficient teacher training, and inadequate facilities (Shigali & Shitseswa, 2023; Enelamah et al., 2024). These variations underscore the importance of equipping local governments with financial and technical support to effectively manage ECD services.

In Kenya, the 2010 Constitution introduced devolution, establishing 47 county governments mandated to deliver public services, including ECD (Odundo, 2020). This governance shift aimed to address regional imbalances and enhance service delivery by bringing decision-making closer to the people (Mtana & Mange, 2020). However, challenges such as limited funding, weak institutional capacity, and lack of political will have constrained effective implementation (Amukune, 2021). In Kajiado County, these challenges are further compounded by cultural practices, geographical barriers, and limited infrastructure, which affect ECD accessibility and quality (APHRC, 2024; Mwangi, 2023). While devolution has potential to align services with community needs, the extent of its effectiveness in Kajiado remains unclear (Maina & Thinguri, 2019).

Devolution transfers authority from central to local governments, enabling them to design and deliver services responsive to community needs (Maina & Thinguri, 2019). In the context of ECD, this involves county-level decision-making on funding, coordination, and policy implementation. Local governance structures such as education departments and committees play a central role in supervising and integrating ECD programs (Odundo, 2020). Ideally, devolution enhances efficiency, accountability, and community participation. However, disparities in resource allocation present risks, particularly in resource-constrained contexts (Ali et al., 2021).

In Kenya, the devolution of ECD to county governments has exposed service gaps. Prior to devolution, ECD delivery in Kajiado was fragmented, with national policies in place but weak local implementation, resulting in inequities in access, quality, and funding (World Bank, 2020; APHRC, 2024).

In government institutions today, resource allocation is changing to keep up with new challenges and demands. More focus is being placed on digital transformation, with governments investing in technology to improve services (Cooke et al., 2022). There is also a growing move toward performance-based budgeting, where funds are allocated based on results rather than just plans. Equity and inclusivity have become important, ensuring resources reach marginalized groups. Public-private partnerships are increasingly being used to bring in extra resources and expertise, especially in education (Challoumis, 2024). According to Mahuwi and Israel (2024), decentralization has implied that more responsibility given to local governments so that resources can be directed to community needs more effectively.

Resource allocation is important in shaping the quality and accessibility of Early Childhood Development (ECD) service delivery. Adequate allocation of financial and infrastructural resources is associated with improved learning environments, availability of instructional materials, and enhanced teacher capacity. This aligns with Odundo (2020), who shows that devolved units require sufficient resources to design and

implement programs. In cases where resource allocation is limited, disparities are noted in classroom conditions, teacher-student ratios, and accessibility in marginalized areas.

Previous studies show how unequal distribution of resources under devolution in Kenya often exacerbates service delivery challenges in counties with unique geographic and socio-cultural barriers (Amukune, 2021; APHRC, 2024). In Kajiado, cultural practices, pastoralist lifestyles, and vast distances between settlements make ECD services resource-intensive, requiring targeted investment to ensure inclusivity. Counties with higher budgetary allocations to ECD not only have increased enrolment but also improved retention, showing that deliberate investment directly translates to better outcomes. Conversely, underfunded areas face persistent challenges, reinforcing that resource gaps perpetuate inequalities within the county.

The effectiveness of devolution in Kajiado is largely dependent on how well and fairly resources are distributed, even if it gives counties the freedom to give priority to local needs. In addition to more funding, strengthening service delivery necessitates effective resource use and oversight to avoid mismanagement. Strategic county investment combined with community involvement in resource planning could improve access to high-quality ECD services and close the gaps. Thus, in order to achieve sustainable and fair service delivery in Kajiado County, resource allocation continues to be a critical aspect. Service delivery refers to the process through which institutions provide resources and assistance to meet beneficiaries' needs (Neuman & Okengo, 2019; Zhu & Chang, 2021). In ECD, service delivery entails ensuring equitable access to quality education and care, particularly for vulnerable children (Be-ere, 2022). Barriers such as cost, distance, cultural practices, and lack of facilities must be addressed to improve enrolment and participation (Derow, 2021).

Kajiado County, located in southern Kenya, covers 21,292.7 square kilometers with a population of 1,117,840 as per the 2019 census (Kate, 2023). The county is predominantly inhabited by the Maasai, with pastoralism as the main economic activity, complemented by agriculture, horticulture, and tourism (World Bank, 2020). Demographically, it has a young population, with about 42% aged between 0–14 years, creating a strong demand for ECD services.

However, disparities in educational attainment persist across the county. Kajiado North records 49% of residents with secondary education or higher, while Kajiado South records only 10% (Derow, 2021). Similarly, Mosiro ward has 87% of residents without formal education compared to 9% in Ongata Rongai (Wanyonyi, 2019). These socio-economic and geographic inequalities highlight the urgent need for effective and equitable ECD service delivery under devolution in Kajiado County.

Problem Statement

The devolution process which began in 2013 saw the central government delegate the responsibility of service delivery to county governments (KNBS, 2020). This was expected to improve efficiency by increasing accessibility and aligning services to local needs. However, as with many devolved functions, challenges have persisted in Kajiado, particularly with regard to resource allocation and its effect on service delivery. Kate (2023) reported that only 36% of children between the ages of 3–5 years in Kajiado were enrolled in ECD centers, a figure significantly below the national average of 68%. Service quality has equally suffered, with gaps in infrastructure, teaching and learning materials, and the availability of adequately trained personnel. A clear divide also exists between urban and rural areas, and between settled and pastoralist communities (Murunga, 2022).

Among the major challenges observed is inadequate funding of ECD by the county government, which has constrained the provision of sufficient facilities, teacher recruitment, and instructional resources. The limited technical capacity within county governments further complicates effective planning and utilization of resources. In Kajiado, the situation is compounded by the pastoralist lifestyle of many communities, which makes equitable access to ECD services even more resource-intensive (Rare & Ombui, 2022). Moreover, fluctuations in household incomes driven by climate change and reliance on agriculture and pastoralism

directly affect affordability and participation in early childhood education. Teacher-to-child ratios remain far above the recommended 1:25, with some areas recording as high as 1:40 (KNBS, 2020). These disparities raise concerns about whether resource allocation under devolution has effectively addressed service delivery needs in Kajiado.

Despite these challenges, Kate (2023) studies examining the effect of resource allocation on ECD service delivery in Kajiado County have remained limited. Previous studies, such as Odundo (2020), focused on the state of school infrastructure in Siaya County and its influence on enrolment, while Kamau et al. (2021) examined policy frameworks and teacher capacity in Murang'a. Although these studies contributed to the broader discussion on ECD service delivery, they did not address the direct link between resource allocation and service outcomes in Kajiado. This study therefore sought to bridge this gap by investigating the effect of resource allocation on service delivery in Kajiado County.

LITERATURE REVIEW

Theoretical Framework

The Resource-Based View (RBV)

Barney introduced this theory in 1991. It explains how internal resources drive organizational performance and long-term competitiveness. According to this perspective, sustainable advantage arises from resources that are valuable, rare, inimitable, and non-substitutable (VRIN), such as technology, skilled personnel, and proprietary knowledge (D'Oria, Russell, & Wright, 2021). Over time, the RBV expanded to include dynamic capabilities, highlighting the need for organizations to adapt and reconfigure resources in response to changing environments (Lubis, 2022). Unlike external market-oriented strategies, the RBV emphasizes internal capacities, organizational culture, and resource integration as the basis for success (Nayak, Bhattacharyya, & Krishnamoorthy, 2023). Within Early Childhood Development (ECD), resources are categorized into tangible assets such as financial investment, infrastructure, and learning materials and intangible assets, including staff expertise, organizational culture, and community support (Mutambuki & Kabui, 2022; Chatterjee, Chaudhrib, Vrontisc, & Thrassou, 2023). The allocation and management of these resources determine the quality-of-service delivery, with modern facilities and continuous professional development (CPD) enabling environments that foster children's cognitive and socio-emotional growth (Seriki, 2023).

In Early Childhood Development (ECD), the Resource-Based View emphasizes that what matters most is not just having resources but how they are used and combined to meet specific needs (Salazar & Armando, 2017). When resource allocation is devolved, local governments and ECD centers can prioritize according to their unique community demands, such as reducing student-teacher ratios or offering targeted training for teachers (D'Oria et al., 2021). Hard-to-replicate resources like dedicated educators, creative teaching approaches, and strong community involvement build unique strengths that enhance service delivery (Sabourin, 2020; Zhu & Chang, 2021). These strengths set decentralized ECD programs apart from centrally managed ones by drawing on local knowledge and support networks. Therefore, effective resource allocation is not only about providing facilities and staff but also about integrating them in ways that create a balanced and sustainable learning environment (Lubis, 2022).

Empirical Review

Resource Allocation and Service Delivery

In the United States, Moore, Quassaunee and Sherretz (2019) found that community-based ECD programs that had enough resources to involve parents and other caregivers in the preparations and delivery of services achieved better outcomes for children. Programs that provided funds to train parents, for parenting education, and to support community collaborations experienced higher family participation levels in ECD services.

Besides improving the quality of the service delivery, this partnership between families and ECD programmes also strengthens the child support systems.

According to Zhu and Chang (2021) efficient distribution of resources has an effect on education, quality of teachers, structures, participation from the community and the well-being of little children. Furthermore, according to Mtana and Mange (2020), there was a positive correlation between resource deployment and learning outcomes in ECD facilities. They observed that when resources like qualified teachers, teaching aids, and physical structures are invested in, better education for the children is achieved. Shigali and Shitseswa (2023) argue that kindergartens with higher funding have better cognitive and socio-emotional development among children. Researchers saw a direct correlation between the amount of resources given out to quality of educational experiences given to children. This calls for proper funding to effectively deliver educational services through ECD programs.

Geelhoed, et al., (2022) showed that disparities in resource allocation resulted into a lot of differences in academic performance by children in a comparative analysis of ECD programs in South Africa (Clark, Holness, Nyamadzawo & Moogi, 2024). Consequently, well-financed projects managed to adopt high standards curricula; provide specific courses for educators and offer a wide range of learning materials (Clark et al., 2024). Conversely, lower development outcomes for children were registered due to lack of enough support leading to ineffective pedagogies being applied by under-resourced programs. This means that equal distribution of resources is vital if quality education is to be achieved across various ECD settings.

Another important aspect of effective ECD service delivery as established by Barrett et al. (2019) is community involvement whose realization or otherwise can be facilitated through the use of appropriate resource allocation. Research was conducted to determine whether allocating resources towards empowering communities has any positive effect on ECD outcomes. On the other hand, failure to invest in resources led to alienation from the community (Barrett, et al., 2019). According to Jumanne, Njoroge and Moi (2023) in a study of resource allocation practice and devolved administrative structures in selected semi-arid Counties in Kenya found out there was a significant effect of resources allocation on the devolved administrative structure.

Murunga (2022) from East Africa noted that ECD programmes, which fail to engage the community and families, are difficult to enrol families into. When families are discouraged from being associated with ECD services, they are less likely to enrol their child or participate in the program (Murunga, 2022). These factors highlighted the need to provide for the purpose of constructing relationships with the families, and therefore the community, in order to enhance service delivery by ensuring that the Early Childhood Development programs met the needs of those they served themselves. According to Mutambuki and Kabui (2022), resource management is central to service delivery. Sources of funding are critical in the use of evidence-based curricula and teaching and learning practices (Geelhoed, et al., 2022).

METHODOLOGY

Research Design

The study adopted a descriptive research design to capture the effect of devolution on early childhood development (ECD) service delivery in Kajiado County. This design was appropriate as it provides a clear picture of the current state of ECD services and the relationship between variables within the study context (Siedlecki, 2020).

Target Population

The target population comprised 439 respondents, including 400 ECD teachers, 8 County ECD coordinators, 6 Sub-County administrators, and 25 Ward administrators. This group was selected due to their direct

involvement in ECD service delivery, making them suitable for achieving the study objectives (Einola & Alvesson, 2021).

Sampling Design and Size

The study employed stratified random sampling to ensure representation of all sub-groups, followed by simple random sampling within each stratum. This approach minimized sampling error and guaranteed inclusivity of different stakeholders (Taber, 2018). Using Yamane's (1967) formula with a 5% margin of error, the sample size was determined as 209 respondents, representing 47.6% of the population.

Data Collection Instruments

Data was collected using semi-structured questionnaires and interviews. Questionnaires were administered to teachers and ward administrators to capture quantitative and qualitative responses on service delivery and devolution experiences. Semi-structured interviews were conducted with County ECD coordinators, Sub-County, and Ward administrators to gain deeper insights into the impact of devolution on ECD service delivery.

Pilot Study

A pilot study involving 20 respondents from Machakos County was conducted to assess the clarity, comprehensiveness, and appropriateness of the instruments. Feedback from the pilot helped identify ambiguities, logistical challenges, and time requirements for interviews. Based on the results, revisions were made to improve accuracy and usability of the instruments while avoiding contamination of the main sample.

Validity of Research Instruments

Validity was ensured through an extensive literature review and theoretical frameworks related to ECD service delivery (Mishra et al., 2019). Instrument development was guided by supervisor reviews, which helped refine the clarity, relevance, and appropriateness of items (Mohajan, 2017). The pilot study further confirmed the feasibility of the instruments, and adjustments were made based on participant feedback to ensure the tools accurately captured stakeholder perceptions and experiences.

Reliability of the Research Instruments

Reliability was tested through the pilot study and statistical analysis. Cronbach's alpha was used to measure internal consistency, with values above 0.70 considered acceptable (Taber, 2018). Results, indicated alpha values ranging from 0.722 to 0.865 across the variables, demonstrating good reliability. Thus, the instruments consistently measured the constructs of infrastructure development, resource allocation, capacity building, and ECD service delivery.

Data Collection Procedure

The data collection process began with obtaining ethical clearance from the postgraduate coordination office and research authorization from NACOSTI. The researcher then approached ECD centers and schools to recruit participants. Informational sessions were held to explain the study objectives, roles of participants, and their right to withdraw without penalty, thus building trust and encouraging participation. Questionnaires were distributed to teachers and ward administrators either physically or online, while interviews were conducted with coordinators and administrators. Assistance was provided to ensure participants clearly understood the questions.

Data Analysis and Presentation

Quantitative data from the questionnaires were coded and analyzed using SPSS. Descriptive statistics such as means, counts, and standard deviations provided a general profile of respondents, while correlation and regression analyses tested relationships between variables. The regression model used was:

$$Y = \beta + \beta X + \epsilon$$

Where Y represents service delivery and X represents resource allocation. Qualitative data from interviews were analyzed thematically to identify recurring patterns and insights. Results were presented in tables and narratives to provide comprehensive interpretation.

Operationalization of Variables

Table 1: Operationalization of Variables

Objective	Variable Type	Indicators	Scale	Data Collection	Data Analysis
To determine the effect of resource allocation on service delivery in Kajiado County Service delivery	Independent variable	Financial resources	5	Questionnaire	Descriptive Regression
		Human resources	Point		
		Learning & teaching materials	Likert Scale		
	Dependent variable	Affordability	5	Questionnaire	Descriptive Regression
		Accessibility & inclusivity	Point		
		Quality of caregiving	Likert		
		Teacher-child ratio	Scale		
		Enrolment rates			
		Attendance rates			
		Learning outcomes			

FINDINGS

Demographic Results of Respondents

Table 2: Demographic Results of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	61	37.65%
	Female	101	62.35%
Education Level	Certificate	31	19.13%
	Diploma	106	65.43%
	Bachelor's Degree	20	12.34%
	Master's Degree	1	0.61%
Years of Service	Below 5 years	23	14.20%
	5–10 years	31	19.14%
	11–15 years	50	30.86%
	15–20 years	37	22.84%
	Over 20 years	21	12.96%
Total		162	100%

The demographic results in Table 2 show that the majority of ECD teachers were female (62.35%), while males accounted for 37.65%, indicating that the profession is predominantly female. Regarding education, most teachers held a diploma (65.43%), followed by those with certificates (19.13%) and bachelor's degrees (12.34%), while only a small fraction (0.61%) had attained a master's degree, reflecting the standard qualification level for the sector. In terms of years of service, the largest group had between 11-15 years of experience (30.86%), followed by those with 15-20 years (22.84%), while smaller proportions had 5-10 years (19.14%), below 5 years (14.20%), and over 20 years (12.96%). This indicates that most respondents were not only professionally trained but also fairly experienced, providing reliable perspectives for the study.

Descriptive Results

Descriptive Results for Resource Allocation

The aim for this research was to determine the effect of resource allocation on service delivery in Kajiado County. The researcher sought to find out the perception of the participants regarding adequacy of resource allocation for ECD services in pre and post devolution. The outcomes are exhibited in Table 3.

Table 3: ECD Resource Allocation before and After Devolution

	Before Devolution	After Devolution
Excellent	8.64%	10.49%
Good	12.35%	44.44%
Fair	40.74%	24.69%
Poor	38.27%	20.37%
Total	100	100

Source: Field Data (2025)

From the findings, the proportion of respondents rating resource allocation as “Good” significantly increased from 12.35% to 44.44%, while those rating it as “Fair” declined from 40.74% to 24.69%. Similarly, the percentage of respondents who perceived allocation as “Poor” dropped from 38.27% to 20.37%. Meanwhile, those rating it as “Excellent” saw a slight increase from 8.64% to 10.49%. These findings mirror a noteworthy enhancement in resource allocation for ECD services following devolution. However, the substantial “poor” and “fair” responses show that while resource allocation may have generally improved, there are still some gaps in the execution.

The responses were further asked to indicate their level of concurrence with some statements provided on Resource Allocation since devolution. The different perspectives are illustrated in Table 4.

Table 4: Resource Allocation

	SD	D	N	A	SA	Mean	SD
The allocation of financial resources towards ECD has increased since devolution.	1.85%	6.79%	18.52%	30.25%	42.59%	4.05	1.03
The financial resources provided post-devolution are sufficient to meet the needs of ECD centers.	3.09%	8.64%	19.75%	55.56%	12.96%	3.67	0.92
There is transparency in the allocation and use of financial resources for ECD services after devolution.	4.32%	6.79%	8.02%	46.91%	33.95%	3.99	1.04
More qualified teachers have been hired since devolution.	1.23%	7.41%	9.26%	58.02%	24.07%	3.96	0.86
The availability of learning and teaching materials in ECD centers has improved since devolution.	2.47%	11.11%	15.43%	23.46%	47.53%	4.02	1.14
More digital teaching and learning resources have been allocated in ECD centres.	1.85%	9.26%	16.05%	38.89%	33.95%	3.94	1.02
Devolution has ensured timely provision and replenishment of learning and teaching materials in ECD centers.	0.00%	11.30%	10.30%	38.27%	40.12%	4.19	0.77
Agg. Mean						3.97	0.97

Source: Field Data (2025)

From the analysis, majority of the teachers (72.84%) agreed that financial resource allocation for ECD has increased since devolution, while 18.52% were neutral and 8.64% disagreed (mean=4.05, SD = 1.03). This proposes an improvement in ECD fundings since devolution. The sufficiency of financial resources received 68.52% agreement, 19.75% neutrality, and 11.73% disagreement. A mean of 3.67 (SD = 0.92) reflects positive progress since devolution. The results resonate with the sentiments from the key informants. One of them informed that:

“Before devolution, ECD centres struggled with very little funding, making it hard to even pay teachers. After devolution, the county has allocated more funds but there are still cases where funds are not enough to meet all the needs of ECD centres”. (Key Informant 6)

Transparency in financial resource management was acknowledged by 80.86% of the respondents, with 8.02% neutral and 11.11% disagreeing. A mean of 3.99 (SD = 1.04) signifies growing confidence in accountability. It shows that there is transparency in the allocation and use of financial resources for ECD services after devolution. Furthermore, 82.09% of the participants did concur that more qualified teachers have been hired since devolution, while 9.26% were impartial and 8.64% rejected. The mean of 3.96 (SD = 0.86) shows a positive shift in ECD staffing since devolution. However, the impartial and disagree responses indicate the need for intervention.

Moreover, a large percentage of the respondents (70.99%) consented that the availability of learning and teaching materials in ECD centers has improved since devolution with 15.43% being neutral and 13.58% disagreeing. The mean of 4.02 (SD = 1.14) reflects progress, while neutrality proposes a room for improvement.

This finding was backed by a key informant who averred that:

“Things have improved after devolution because now there are more classrooms, better learning materials, and more teachers. But some areas are still struggling because not all schools get the same amount of support at the same time”. (Key informant, 28)

Another ECD coordinator informed that:

“Devolution has really helped ECD centres grow. More classrooms have been built, teachers have been hired, and children now have better learning materials, making these institutions much reliable” (Key informant, 32)

Results further illustrated that the majority acknowledged an improvement in the allocation of digital teaching resources, as indicated by 72.84% agreement, 16.05% neutrality, and 11.11% disagreement. The mean of 3.94 and SD of 1.02 indicates that most of teachers consented to the statement. However, the presence of neutral and disagreement responses is an indicator that the allocation of digital teaching resources has not been fully enhanced in some centres.

In addition, 78.39% acceded that devolution has ensured timely provision and replenishment of learning and teaching materials in ECD centers. About 11% of the respondents were neutral while disagreement was at 10.30%. The mean score was 4.19 with a SD of 0.77 which implies that most of the respondents were in agreement. The aggregate mean of the responses was 3.97 which indicates that most the statements were agreed to. This is however, accompanied by a SD of 0.97 which implies that the responses slightly varied. The presence of neutral stances in response and disagreement reflects that while resources allocation for ECD may have improved since devolution, there are still some gaps in full execution, and more intervention could be required in some ECD centres.

The above findings corroborate Zhu and Chang (2021) that sufficient funding in learning centres enables the timely recruitment and remuneration of trained teachers to ensure that children receive quality education from competent educators. Shigali and Shitseswa (2023) also found that the provision of digital learning resources

further enriches the teaching experience, exposing young learners to interactive and engaging educational content. Further, according to Mtana and Mange (2020), adequate allocation of resources facilitates access to clean water, proper nutrition, and safe play areas, promoting the holistic well-being of children.

Further, the respondents were requested to mention other resource allocation changes that have taken place since devolution. The themed results are indicated in Table 5.

Table 5: Resource allocation changes since devolution

	count	%
Increased Funding for School Feeding Programs	64	39.50%
Provision of More Teaching Aids	46	28.40%
Increased Funding for Co-Curricular Activities	30	18.52%
Increased resources for children with special needs	21	12.96%

From the findings, 39.5% of the respondents indicated that had been an increase in funding for school feeding programs since devolution. Additionally, 28.4% mentioned that there was improved provision of teaching aids. Furthermore, 18.52% of the respondents acknowledged increased funding for co-curricular activities in the ECD centres. Notably, 12.96% pointed to improvement in resource allocation for teaching children with special needs. The findings were echoed by a ward administrator who said that:

“We have seen great improvements in ECD learning materials. In the past, teachers had to rely on outdated or inadequate teaching aids, but now the county government provides more charts, toys, and books that make learning fun and interactive for the children.” (Key informant, 17)

Another key informant further mentioned that:

“Since the government started giving more money for school meals, more parents are sending their young children to school. Before, some parents kept their kids at home because they were afraid, they would go hungry at school. Now, they feel safe knowing their children will get at least some Uji while at school” (Key informant, 26)

Descriptive Results for ECD Service Delivery

This section presents the descriptive results on Early Childhood Development (ECD) service delivery, showing key patterns observed in the data. The ECD teachers were asked to indicate their rating on the status of ECD service delivery before and during devolution. Table 6 illustrates what was observed:

Table 6: ECD Service Delivery before and after Devolution

	Before	After
Excellent	10.49%	24.69%
Good	22.22%	41.36%
Fair	46.30%	25.31%
Poor	20.99%	7.41%
Total	100.00%	100.00%

Source: Field Data (2025)

Findings exposed that 24.69% of the respondents rated ECD service delivery as excellent after devolution, compared to 10.49% before devolution. Additionally, 41.36% rated it as good post-devolution, an increase from 22.22% before. The proportion of respondents who rated service delivery as fair declined from 46.30% before devolution to 25.31% after, while those who rated it as poor dropped significantly from 20.99% to 7.41%. These results mirrors that that post devolution, there have been distinguished improvements in ECD service delivery.

The researcher further required the participants to show their magnitude of assent or dissent with statements provided on ECD service delivery. Table 7 portrayed the outcomes.

Table 7: ECD Service Delivery

	SD	D	N	A	SA	Mean	SD
ECD services have become more affordable for parents.	0.62%	10.49%	4.32%	67.90%	16.67%	3.9	0.82
The inclusivity of ECD services for children with special needs has improved since devolution	3.70%	0.62%	3.09%	79.01%	13.58%	3.98	0.73
The pupils' attendance rate in ECD centers have improved	4.32%	1.85%	6.79%	73.46%	13.58%	3.90	0.81
The quality of teaching and caregiving in ECD centers has improved since devolution.	1.23%	8.64%	9.26%	70.37%	10.49%	3.80	0.79
Enrolment rates in ECD centers have increased since devolution.	5.56%	4.32%	3.09%	70.37%	16.67%	3.88	0.93
The teacher-pupil ratio has improved since devolution	0.62%	6.79%	6.62%	74.86%	11.11%	3.95	0.67
Learning outcomes for children in ECD centers have improved since devolution.	4.94%	7.56%	10.49%	37.12%	38.89%	4.02	1.08
Agg. Mean						3.90	0.79

Source: Field Data (2025)

As table 7 illustrates, 84.57% of the teachers did assent that ECD services have become more affordable for parents since devolution, while 11.11% disagreed, and 4.32% remained neutral (Mean = 3.90, SD = 0.82). The results propose that devolution has contributed to making ECD services more financially accessible. Notably, 92.59% of them confirmed that the inclusivity of ECD services for children with special needs has improved since devolution. Approximately 4.32% disagreed, and 3.09% were neutral (Mean = 3.98, SD = 0.73). The high approval rate implies that efforts to integrate children with special needs into ECD programs have been largely present post devolution. Similarly, 87.04% of the study contributors indicated that pupils' attendance rates in ECD centers had improved post-devolution, with 6.17% disagreeing and 6.79% remained impartial (Mean = 3.90, SD = 0.81). This proposes that school attendance rates in ECD centers had gone up since devolution. This result is reflected in KII responses where it was mentioned that:

“Attendance in ECD centres has improved because classrooms are now better built, more comfortable, and well-equipped. Parents see the value of sending their children every day, unlike before when poor facilities discouraged regular attendance. (Key informant, 22)

Correspondingly, 80.86% of the ECD teachers who participated were in confirmation that the quality of teaching and caregiving in ECD centers had improved after the devolved governance. Nearly 9.87% disagreed, and 9.26% were neither agreeing nor disagreeing (Mean = 3.80, SD = 0.79). The findings imply that devolution has enhanced the standards of ECD education and caregiving. The observation is reflected in the KII where it was mentioned that:

“In the past, because there were too few teachers, children would be left on their own most of the time, and learning was slow. Now, with more teachers in place, children get the attention they need, and they learn faster. Teachers can now divide the class into smaller groups and use better teaching methods, which has really improved the quality of education” (Key informant, 19)

It was as well observed that 87.04% of the respondents acknowledged an increase in enrollment rates since devolution, while 9.88% confuted, and 3.09% remained neutral (Mean = 3.88, SD = 0.93). It shows an

increase in demand for the schools since devolution. This is echoed by the responses from the key informants whereby a sub county administrator mentioned that:

“In the past, only parents who could afford private schools had access to good ECD services. Now, public ECD centres are well equipped, and many parents can comfortably take their children” (Key informant, 23)

Moreover, around 85.97% of respondents agreed that the teacher-pupil ratio had improved post-devolution, 7.41% disagreed and 6.62% were neutral (Mean = 3.95, SD = 0.67). This finding proposes that efforts to recruit and deploy more ECD teachers have been effective post devolution. This is in line with KII responses where upon probing, the county education coordinator averred that:

“Before devolution, one ECD teacher would handle a large number of children, sometimes up to 50 or more in one class. This made it very difficult to give each child proper attention. Since devolution, the county government has recruited more teachers and it is now easy to manage the learners” (Key informant, 21)

Notably, 76.01% of the respondents upheld that learning outcomes for children in ECD centers had improved post devolution, while 12.50% disagreed, and 10.49% remained neutral (Mean = 4.02, SD = 1.08). This highlights a general perception that devolution has enhanced ECD educational outcomes in Kajiado county. The aggregate mean of 3.90 shows high level of concurrence with the statements, though with slightly varied perceptions as shown by SD of 0.79.

On the question of mentioning other ECD service delivery aspects that have been enhanced since devolution, Table 8 shows the findings from the ECD teachers.

Table 8: ECD service delivery aspects since devolution

	Count	%
Transition rate to primary school has improved	57	35.19
Parental engagement has improved	43	26.54
Literacy has improved	24	14.81
Governance has improved	17	10.49

Source: Field Data (2025)

From the findings, 35.19% of the respondents indicated that the transition rate to primary school had improved since devolution. Additionally, 26.54% of them indicated that parental engagement in ECD activities had increased, implying that devolution may have facilitated greater community involvement in early childhood education. Moreover, 14.81% of the respondents reported that literacy levels among ECD learners had improved. Furthermore, 10.49% of the participants acknowledged improvements in governance, insinuating that administrative structures and policies in ECD institutions had become more organized and effective post devolution.

Regression Analysis

This analysis was adopted to test the influence of resource allocation on ECD service delivery. Table 9 contains the model summary while Table 10 explains its fitness (ANOVA) and Table 11 gives the regression coefficients.

Table 9: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.775	0.601	0.599	0.17773

a Predictors: (Constant), resource_allocation

As shown in Table 8, the model summary depicts a strong explanatory power of the resource allocation on the ECD service delivery. The R squared was 0.601 depicting that 60.1% of the variations in ECD service delivery in Kajiado county was attributed to resource allocation. It therefore follows that 39.9% of the

variations in ECD service delivery in Kajiado county is determined by other factors not included in the model.

Table 10: ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	7.6112	1	7.6112	240.97	.000
Residual	5.0528	160	0.03158		
Total	12.664	161			

a Dependent Variable: service_delivery

b Predictors: (Constant), resource_allocation

The ANOVA results in Table 10 portray that the model explaining the influence of resource allocation on ECD service delivery was fit. This conclusion is supported by the calculated F statistic of 240.97 which was above the critical F value of 2.60 ($F_{cal}=240.97 > F_{crit}=2.60$). The F statistic is used to test whether the independent variable significantly affect the dependent variable. A higher F calculated value exceeding the critical value means that the variables in the model explain most of the variation in ECD service delivery rather than random chance. Additionally, the p-value of 0.000, which is below 0.05, confirmed that the relationship between the variables was statistically significant, meaning the influence of resource allocation on ECD service delivery was not due to chance

Table 11: Regression Coefficients

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	0.220	0.063		8.25	.000
Resource allocation	0.850	0.115	0.775	7.45	.000

a Dependent Variable: service delivery

From the findings in Table 11, constant ($\alpha = 0.220$) represents the level of ECD service delivery when all predictors are held at zero, indicating a baseline level of service provision. The coefficient for resource allocation ($\beta = 0.850$, $p = 0.000 < 0.05$) means that infrastructure development has a positive and significance effect on service delivery in ECD centres in Kajiado County. It then follows that for every unit improvement in resource allocation, ECD service delivery improves by 0.850 units. This result is in alignment with that of Moore et al. (2019) that increased financial investment in ECD centres improves teacher effectiveness and overall learning experiences. Zhu and Chang (2021) also established that well-funded ECD programs significantly enhance school retention rates and early literacy skills among learners. Similarly, Mtana and Mange (2020) reported that strategic allocation of resources to infrastructure and teaching materials influenced service delivery and child development in early learning institutions.

The regression model output was formulated as:

$$\text{Service delivery} = 0.220 + 0.850 (\text{resource allocation}) + \varepsilon$$

CONCLUSION

It was concluded that resource allocation plays a critical role in shaping the quality and accessibility of Early Childhood Development (ECD) service delivery in Kajiado County. Increased funding, coupled with the deployment of qualified teachers, was found to enhance teaching effectiveness and learning outcomes, while the provision of adequate teaching and learning materials ensured that children had access to the necessary tools for holistic development. In addition, the expansion of essential programs such as school feeding and special needs education was shown to address equity gaps, improve attendance, and promote inclusivity in

early learning. The study further showed a positive and significant relationship between resource allocation and service delivery, underscoring the importance of efficient distribution and management of resources in achieving sustainable improvements in ECD services. This highlights that strengthening resource allocation mechanisms is central to advancing the overall quality of education, ensuring that young learners benefit from equitable and comprehensive early childhood programs in the post-devolution era.

RECOMMENDATIONS

Recommendations for Policy and Practices

From the study findings, it was recommended that the county government of Kajiado should increase ECD funding to address existing financial gaps, ensuring all centers receive adequate resources for infrastructure, teacher salaries, and learning materials. The county government should ensure equitable resource distribution by adopting a needs-based funding model that prioritizes underfunded ECD centers based on enrollment, infrastructure conditions, and staffing shortages. Additionally, the Ministry of Education should integrate ECD data management systems by developing a centralized digital platform where counties report real-time data on teacher recruitment, financial allocations, infrastructure progress, and learning outcomes. This will enhance transparency and data-driven decision-making. Moreover, education stakeholders should foster public-private partnerships to fund and implement teacher training and leadership development programs. Increased investment from private organizations and NGOs will expand capacity-building opportunities, leading to more competent educators and improved ECD service delivery.

Recommendations for Further Research

The inferential data analysis showed that resource allocation explains 60.1% of the variations in ECD service delivery in Kajiado county. It therefore follows that 39.9% of the variations in ECD service delivery in Kajiado county is determined by other factors not included in the current study. Further studies could explore the effect of school factors on ECD service delivery. They could also consider the effect of administration styles on ECD service delivery. Additionally, further studies could seek to find out the variables that moderate the relationship between resource allocation and ECD service delivery. Further studies could also be conducted in other counties for comparison of findings.

REFERENCES

- Ali, S., Nchaga, A., & Wepukhulu, J. (2021). Devolution And Service Delivery In The Public Service In Kenya, A Case Study Of Marsabit County Government. *Journal of Human Resource and Leadership*, 6(1), 30 – 51.
- Amukune, S. (2021). Preschool education in Finland and Kenya: A comparison within perspectives of Educational quality. *International Journal of Early Childhood Learning*, 28(2), 51-67.
- APHRC. (2024). *Co-creation and benchmarking can accelerate ECD policy development and implementation processes: Lessons from Kajiado County in Kenya*. Nairobi: African Population and Health Research Center.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99-120.
- Barrett, P., Treves, A., Shmis, T., Ambasz, D., & Ustinova, M. (2019). *The impact of school infrastructure on learning: A synthesis of the evidence*. Washington, DC.: The World Bank.
- Be-ere, S. (2022). Devolution reforms in developing countries. Designed to champion the interests of central politicians and not grassroots development. *Journal of Developing Societies*, 38 (1), 27-49.

- Bourke, M., Haddara, A., Loh, A., Saravanamuttoo, K., Bruijns, B., & Tucker, A. (2024). Effect of capacity building interventions on classroom teacher and early childhood educator perceived capabilities, knowledge, and attitudes relating to physical activity and fundamental movement skills: a systematic review and meta-analysis. *BMC Public Health*, 24: 1409.
- Challoumis, C. (2024, October). Building a sustainable economy-how ai can optimize resource allocation. In *XVI International Scientific Conference* (pp. 190-224). <https://conference-w.com/wp-content/uploads/2024/10/USA.P-0304102024.pdf#page=191>
- Chatterjeea, S., Chaudhurib, R., Vrontisc, D., & Thrassou, A. (2023). Revisiting The Resource-Based View (RBV) Theory: From Cross-Functional Capabilities Perspective In Post Covid-19 Period. *Journal of Strategic Marketing*, 1-15.
- Clark, B., Holness, W., Nyamadzawo, R., & Moogi, D. (2024). Implementing early childhood education for children with disabilities in South Africa and Kenya. *African Journal of Disability*, 13(0), a1326. <https://doi.org/10.4102/ajod.v13i0.1326>.
- Cooke, F. L., Dickmann, M., & Parry, E. (2022). Building sustainable societies through human-centred human resource management: Emerging issues and research opportunities. *The InTernaTional Journal of human resource managemenT*, 33(1), 1-15. <https://doi.org/10.1080/09585192.2021.2021732>
- D'Oria, L., Russell, T. C., & Wright, M. (2021). The Evolution of Resource-Based Inquiry: A Review and Meta-Analytic Integration of the Strategic Resources–Actions–Performance Pathway. *Journal of Management*, 47(6), <https://doi.org/10.1177/0149206321994182>.
- Derow, H. (2021). Assessing Devolution and Service Delivery for Residents of Mandera County, Kenya. *Journal of African Interdisciplinary Studies (JAIS)*, 5(5), 99 – 117.
- Einola, K., & Alvesson, M. (2021). Behind the numbers: questioning questionnaires. *Journal of Management Inquiry*, 30(1), 102-114.
- Enelamah, N., Rao, S., Lombe, M., Yu, M., Newransky, C., Villodas, M., . . . Nebbitt, V. (2024). Examining the Utility of the Early Childhood Development Index (ECDI) among Children in the Nigeria Context. *Children*, 11(3), 361; <https://doi.org/10.3390/children11030361>.
- Geelhoed, E., Bloom, D., Bock, C., Flatau, P., Mandzufas, J., Li, I., & Cross, D. (2022). Informing Resource Allocation for Investment in Early Childhood: A Review of the International Peer-Reviewed Evidence. *The Australian Economic Review*, 55(2), 215–231.
- Jumanne A S, Njoroge J, and Moi EJ (2023) Resource Allocation Practice and Devolved Administrative Structures in Selected Semi-Arid Counties in Kenya. *American Journal of Public Policy and Administration* ISSN 2520-4696 (Online) Vol.8, Issue 1, pp 1 – 24, 2023
- Kamau, J., Ong'ang'a, H., & Kimamo, G. (2021). County Government Support And Quality Of Service Delivery In Pre-Primary Schools In Murang'A County, Kenya. *Journal of Environmental Sustainability Advancement Research*, 7:63-72.
- Kate, M. O. (2023). Impact of Devolution on Local Governance and Service Delivery in Kenya. *International Journal of Humanity and Social Sciences*, 1(1), 41–51. <https://doi.org/10.47941/ijhss.1431>.
- KNBS. (2020). *Kenya Demographic and Health Survey 2020*. Nairobi: Kenya National Bureau of Statistics.
- Lubis, N. (2022). Resource Based View (RBV) in Improving Company Strategic Capacity. *Research Horizon*, 2(6), 587–596.

- Mahuwi, L., & Israel, B. (2024). Promoting transparency and accountability towards anti-corruption in pharmaceutical procurement system: does e-procurement play a significant role?. *Management Matters*, 21(1), 20-37. <https://doi.org/10.1108/MANM-07-2023-0027>
- Maina, G., & Thinguri, R. (2019). A Critical Analysis of the County Governments' Capacity to Handle Devolved Educational Services in Kenya. *Middle East Journal of Applied Science & Technology (MEJAST)*, 2(1), 43-53.
- Mishra, P., Pandey, C. M., Singh, U., Keshri, A., & Sabaretnam, M. (2019). Selection of appropriate statistical methods for data analysis. *Annals of cardiac anaesthesia*.
- Mohajan, H. K. (2017). Two criteria for good measurements in research: Validity and reliability. *Annals of Spiru Haret University. Economic Series*, 17(4), 59-82.
- Moore, L., Qaissaunee, H., & Sherretz, K. (2019). *Delaware's early childhood system & the economy: Benefits & barriers to high-quality early childhood education and childcare*. Delaware: Institute for Public Administration.
- Mtana, G., & Mange, D. (2020). Determinants Of Administration Of Early Childhood Education (Ece) In Kilifi South Sub County, Kenya. *International Academic Journal of Social Sciences and Education*, 2(2), 209-225.
- Murunga, J. (2022). Devolving Early Childhood Development Education In Kenya: Policy Challenges And Opportunities. *International Journal of Education and Research*, 3(2), 611-620.
- Mutambuki, D., & Kabui, A. C. (2022). Effect of resource allocation on service delivery by Water Works Development Agencies in Kenya. *African Journal of Business Management*, 16(7), 147-156.
- Muthoni, K., Ouko, O., & Githui, K. (2022). ECD Policy Framework and Pre-Primary School Teachers' Capacity in Quality Service Delivery in Muranga County Kenya. *Open Journal of Social Sciences*, 10(9), 493-509.
- Mwangi, C. (2023). *Influence Of Devolution Support To Early Childhood I Development Education On Retention Of Pupils In Public Pre-Primary Schools In Wareng Sub County, Kenya*. Eldoret: Thesis, University of Eldoret.
- Nayak, B., Bhattacharyya, S., & Krishnamoorthy, B. (2023). Integrating The Dialectic Perspectives Of Resource-Based View And Industrial Organization Theory For Competitive Advantage, A Review And Research Agenda. *Journal of Business & Industrial Marketing*, 38(3), 656-679.
- Neuman, M., & Okengo, L. (2019). Early childhood policies in low- and middle-income countries. *Early Years: Int. Res. J.*, 39(3), 1-6.
- Neuman, M., & Powers, S. (2021). Political prioritization of early childhood education in low- and middle-income countries. *International Journal of Educational Development*, 86, 102458.
- Odundo, P. (2020). Devolution of Early Childhood Development and Education in Kenya: Improvement in the Status of Infrastructural Facilities and Its Influence on Enrolment in Siaya County. *Journal of Education and Training*, 5(2):221.
- Rare, H., & Ombui, K. (2022). Effects of Devolution in Improving Living Standards of Marsabit County, Kenya. *International Journal of Social Science and Humanities Research*, 5(2), 465-471.
- Sabourin, V. (2020). The Resources-Based View And Innovation: Some Research Propositions. *International Journal of Business Management and Economic Review*, 3(3), 83-93 .

- Salazar, L., & Armando, L. (2017). The Resource-Based View and the Concept of Value The Role of Emergence in Value Creation. *Strategic Management Journal*, 5, 27-38.
- Seriki, O. (2023). Resource-Based View. *Encyclopedia of Sustainable Management*, 2776–2778.
- Shigali, S., & Shitseswa, A. (2023). Effect of Physical Resource Allocation Strategies on Public Service Delivery: A Case of Vihiga County Government, Kenya. *African Journal of Empirical Research*, 4(1), 256–264.
- Siedlecki, S. L. (2020). Understanding descriptive research designs and methods. *Clinical Nurse Specialist*, 34(1), 8-12.
- Sileyew, K. J. (2020). Research Design and Methodology. IntechOpen, doi: 10.5772/intechopen.85731.
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in science education*, 48, 1273-1296.
- Wanyonyi, C. (2019). *Effect Of Devolution On The Implementation Of Preprimary Education: A Case Of Bungoma County, Kenya*. Nairobi : Thesis, Kenyatta University .
- Zhu, W., & Chang, A. (2021). Allocating Resources Equitably and Efficiently in Enhancing Learning Outcomes: A Case Study of Early Education in Zhejiang Province. *Docens Series in Education*, 1, 55-72.