

Influence of Teachers' Long-Term IEP Goal Development on Functional Skills Acquisition among Learners with Autism in Kenyan Special Units

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ABSTRACT

Effective implementation of Individualized Education Programme (IEPs) is critical for supporting functional skills development among learners with autism at the foundation and intermediate levels of education. This study investigated the influence of teachers' development of long-term goals within IEPs on the acquisition of functional skills among learners with autism in special units in Kenya. The study employed a mixed-methods design. Quantitative data were collected using questionnaires administered to teachers in special units and analyzed using descriptive statistics and logistic regression. Qualitative data were gathered through document analysis, interviews and observations and were analyzed thematically involving 47 teachers and 62 learners with ASD IEP files special units. Findings from both strands were integrated through triangulation. The results revealed that teacher participation in the development of long-term goals significantly influenced learners' acquisition of functional skills. Logistic regression analysis revealed that learners whose teachers developed long-term goals to a large extent were significantly more likely to acquire functional skills (OR= 2.314, $p = .037$). Findings indicate that clearly defined, measurable and learner centered long-term goals enhance the effectiveness of IEP implementation and improve learner outcomes. However, qualitative analysis revealed inadequate individualization of IEPs, as teachers frequently developed common functional skill goals for learners within the same level rather than tailoring goals to individual needs and abilities. The study concludes that the development of individualized long-term goals is a key factor in promoting functional skill acquisition among learners with autism. It recommends strengthening teachers' capacity to develop developmentally appropriate, data-driven measurable and individualized learning outcomes that address the unique needs of each learner. Enhanced professional training and support in IEP development may improve the quality of educational programming and functional outcomes for learners with autism in special units. The effectiveness of IEP implementation depends not merely on the existence of long-term goals but on the development of individualized, measurable, and functionally relevant goals that are linked to learners' present levels of performance

Keywords: Individualized Education Programme (IEP), Long-term goals, Functional skill acquisition, Special Unit, Learners with Autism

INTRODUCTION

Background of the problem

Individualized Education Programmes (IEPs) play a critical role in supporting the educational and functional development of learners with autism. Effective IEPs are grounded in a clear statement of learners' present levels of academic achievement and functional abilities, which serve as the basis for developing appropriate educational goals and objectives tailored to individual needs. These goals guide instructional planning, monitoring of learner progress, and the promotion of meaningful educational outcomes (Mitchell et al., 2020; Railey et al., 2020). Well-developed long-term goals (Annual IEP goals) are therefore essential in supporting learners with autism to acquire targeted functional skills within a defined instructional period (Fallon et al., 2019). Previous studies have

emphasized the importance of structured goal development in enhancing the quality of IEP implementation. For instance, research has shown that structured goal-building tools improve the measurability and quality of IEP goals, particularly in social-emotional learning domains (Muller et al., 2023). Similarly, studies have demonstrated that appropriately targeted goals are associated with improved learner outcomes in academic areas such as mathematics (Cox et al., 2025). However, these studies largely focus on goal quality and academic achievement, with limited attention to the extent to which teachers develop long-term goals in practice and how such goals influence functional skill acquisition.

In the African context, studies have highlighted the importance of individualized educational planning and autism support systems (Laghi & Trimarco, 2020; Kassai et al., 2019; Ola-Williams et al., 2024; Adams, 2024; Adelodun, 2019). While these studies affirm the relevance of individualized interventions, they provide limited empirical evidence on the development of measurable long-term goals and their influence on functional skills such as communication, self-care, and social interaction. Similarly, Kenyan studies have reported challenges in aligning IEP goals with learner needs and weaknesses in teacher preparation for individualized instruction (Waithaka, 2015; Kiambati et al., 2025). However, they do not adequately examine the role of annual goal development in functional skill acquisition.

Consequently, there remains limited empirical evidence in both Kenyan and broader African contexts regarding the relationship between teachers' development of annual IEP goals and learners' acquisition of functional skills. This gap necessitated the present study, which sought to examine the extent to which teachers develop long-term goals for learners with autism and how these goals influence the acquisition of functional skills in special units in Kenya.

Statement of the problem

Despite the recognized importance of Individualized Education Programmes (IEPs) in supporting learners with autism, concerns remain regarding the extent to which teachers effectively develop long-term goals that translate into meaningful functional skill acquisition. Ideally, IEPs should be grounded in clearly defined present levels of performance and translated into measurable, individualized long-term goals that guide instruction and support learner progress (Yell et al., 2020; Railey et al., 2020; Fallon et al., 2019). However, evidence suggests that the effectiveness of this process may be compromised in practice.

Although previous studies have demonstrated the value of structured goal development in improving the quality and measurability of IEP outcomes (Muller et al., 2023; Cox et al., 2025), these studies largely emphasize academic or social-emotional domains rather than functional skills essential for independence among learners with autism. In addition, African and Kenyan studies highlight challenges in IEP implementation, including weak alignment between learner needs and instructional planning and inadequate teacher preparation (Waithaka, 2015; Kiambati et al., 2025). Nevertheless, limited attention has been given to how teachers develop annual IEP goals in practice and the extent to which such goals influence learners' acquisition of functional skills such as communication, self-care, and social interaction.

Consequently, there is insufficient empirical evidence within the Kenyan context regarding the relationship between teachers' development of annual IEP goals and functional skill acquisition among learners with autism. This gap is critical because without effective goal-setting practices, learners may not acquire the functional competencies necessary for independent living and meaningful participation in daily life. It is against this background that this study sought to examine the extent to which teachers develop annual IEP goals and their influence on the acquisition of functional skills among learners with autism in special units in Kenya.

Purpose of the Study

To examine the extent to which teachers develop annual Individualized Education Programme (IEP) goals and their influence on the acquisition of functional skills among learners with autism in special units in Kenya.

Objectives of the Study

1. To determine the extent to which teachers develop annual IEP goals for learners with autism.

2. To examine the influence of annual IEP goal development on the acquisition of functional skills among learners with autism.

Research Questions

1. To what extent do teachers develop annual IEP goals for learners with autism?
2. How does the development of annual IEP goals influence the acquisition of functional skills among learners with autism?

Significance of the Study

This study is significant to various stakeholders in the field of special education. To teachers of learners with autism, the findings may provide insights into effective practices for developing annual Individualized Education Programme (IEP) goals that are aligned with learners' functional needs, thereby improving instructional planning and learner outcomes. For school administrators and special education coordinators, the study may inform strategies for strengthening support systems that enhance the quality of IEP implementation in special units.

To policymakers and education authorities, the findings may contribute to evidence-based decision-making regarding teacher preparation, training, and resource allocation for learners with autism. The study may also guide curriculum developers and education stakeholders in refining IEP frameworks to ensure they adequately support functional skill development. Additionally, researchers in the field of special needs education may benefit from the study by using its findings as a reference point for further investigation into goal-setting practices and learner outcomes within inclusive and special education settings.

Scope of the Study

This study focused on the development of annual Individualized Education Programme (IEP) goals and their influence on the acquisition of functional skills among learners with autism. The study specifically examined teachers' practices in developing long-term goals or specific learning outcomes and how these practices relate to learners' functional skill development, including communication, self-care, and social interaction skills.

The study was conducted in special units within selected schools in Kenya that cater for learners with autism. The respondents were teachers responsible for implementing IEPs for learners with autism. The study was limited to the examination of annual goal development within the IEP process and did not extend to other components of IEP implementation such as transition planning or behavioral intervention strategies. Additionally, the study focused on functional skills development rather than academic achievement alone.

LITERATURE REVIEW

Annual or long-term goals are a core component of Individualized Education Programmes (IEPs), translating assessment findings into measurable learning outcomes that guide instruction and monitor learner progress (Capizzi, 2008; Goran et al., 2020). For learners with autism, such goals are essential in promoting the acquisition of functional skills, including communication, social interaction, and adaptive behaviour required for daily living (van Biljon & Kritzinger, 2019; Nthibeli et al., 2022).

Empirical evidence shows that well-structured and measurable IEP goals improve instructional planning, learner motivation, and goal attainment (Muller et al., 2023; Kan et al., 2025). However, challenges persist, including poorly defined goals, limited teacher competence, and weak differentiation across learners, which hinder meaningful learner progress (Cox et al., 2025; Muller et al., 2023). Theoretical perspectives such as Vygotsky's Zone of Proximal Development and Applied Behaviour Analysis emphasize the importance of structured, scaffolded, and measurable goal-setting in promoting skill acquisition.

Despite these insights, studies in both African and Kenyan contexts reveal gaps in teachers' ability to develop individualized and measurable long-term goals due to inadequate training and limited resources (Waithaka, 2015; Kassai et al., 2019). Consequently, limited evidence exists on how teachers' development of annual IEP goals influences functional skill acquisition among learners with autism, necessitating further investigation.

METHODOLOGY

Research Design

This study adopted a mixed-methods research design. This design enabled the collection, integration, and interpretation of both quantitative and qualitative data to provide a comprehensive understanding of the research problem. Creswell and Plano Clark (2017) define mixed-methods research as an approach in which both quantitative (closed-ended) and qualitative (open-ended) data are collected, integrated, and interpreted to draw more comprehensive conclusions about a phenomenon.

The design was considered appropriate because the implementation of Individualized Education Programmes (IEPs) and their influence on the acquisition of functional skills among learners with autism is a complex phenomenon requiring multiple perspectives. The approach therefore allowed the researcher to capture both measurable outcomes and contextual experiences from teachers and learners involved in IEP implementation.

Study Population

The target population for the study comprised 60 teachers and 120 learners with autism drawn from special units. According to Kyngäs et al. (2020), collecting data from multiple categories of respondents enhances the depth and comprehensiveness of findings. In this study, teachers represented the implementers of IEPs, while learners with autism represented the beneficiaries of the educational interventions, allowing for triangulation of perspectives.

Sampling Techniques and Sample Size

The sample size for this study was determined using the Krejcie and Morgan (1970) sampling table as cited in Kasomo (2007), based on a known population of 60 teachers and 120 learners with autism. A stratified sampling technique was used to ensure proportional representation of schools across 18 counties, resulting in the selection of 30 schools. Within each county stratum, schools were selected using simple random sampling, where each school was assigned a unique identifier and randomly drawn to form the study sample. Where proportional allocation was not achieved, additional schools were selected purposively from counties with higher numbers of special units to ensure adequate coverage. From the selected schools, 52 teachers were sampled using simple random sampling, while 92 learners with autism were selected proportionately using Krejcie and Morgan guidelines. This approach ensured fairness in selection and reduced sampling bias, as each unit had an equal chance of inclusion in the study (Kothari & Garg, 2019).

Instruments for Data Collection

Data were collected using questionnaires, interview schedules, observation schedules, and an IEP document analysis guide. The use of multiple instruments is considered essential in survey research as it reduces bias and enhances the validity of findings by allowing data triangulation (Lu et al., 2021). In this study, questionnaires and interviews served as primary data sources, while document analysis and observation provided corroborative evidence.

Teacher Questionnaire

The main data collection instrument was a structured questionnaire administered to teachers of learners with autism (Appendix A). This instrument was selected because it allowed the collection of large amounts of data within a short time and enabled respondents to provide information on sensitive issues they might not freely disclose in face-to-face interviews (Mugenda & Mugenda, 2003).

The questionnaire comprised two sections. Section A captured demographic information of respondents, while Section B contained items aligned to the study objectives, including development of long-term goals and its influence on functional skills acquisition among learners with autism. Responses were measured using a Likert scale, which facilitated quantitative analysis and variable construction.

IEP Document Analysis Guide

The IEP document analysis guide was used to verify information obtained from questionnaires. It involved systematic examination of learners' IEP files, portfolios, and related records to assess the consistency between reported and actual instructional practices. This enabled triangulation and strengthened the credibility of the findings.

Teacher Interview Schedule

An interview schedule was used to collect qualitative data from teachers. The structured guide ensured consistency in questioning across respondents (Kothari, 2019), while also allowing probing for deeper insights. According to Creswell (2018), interviews provide rich qualitative data that capture participants' experiences, while Cohen et al. (2018) emphasize their flexibility in generating detailed contextual understanding.

Observation Schedule

An observation schedule was used to record actual classroom and instructional practices during IEP implementation. Observation enables researchers to collect first-hand data in natural settings, reducing reliance on self-reports and improving data accuracy (Kothari, 2019; Creswell, 2018).

Validity and Reliability of Instruments

Validity and reliability are essential in ensuring accuracy, consistency, and trustworthiness of research findings (Poitras et al., 2019). This study ensured that all instruments met established methodological standards (Braun et al., 2021).

Validity of Instruments

Validity refers to the extent to which an instrument measures what it is intended to measure (Mugenda & Mugenda, 2003). Content and face validity were established through expert review by specialists in special needs education, who assessed clarity, relevance, and appropriateness of items. Ambiguous or irrelevant items were revised or removed (Amin, 2005). Supervisors further reviewed the instruments to ensure alignment with research objectives and conceptual clarity.

Reliability of Instruments

Reliability refers to the consistency and stability of research instruments (Poitras et al., 2019). Internal consistency was assessed using Cronbach's alpha (Schrepp, 2020). A threshold of 0.7 was adopted as acceptable reliability.

The reliability coefficients were as follows:

- Functional skills acquisition ($\alpha = 0.82$)
- Present level of performance ($\alpha = 0.79$)
- Development of long-term goals ($\alpha = 0.78$)
- Instructional strategies ($\alpha = 0.73$)
- Monitoring progress ($\alpha = 0.81$)
- Collaboration with stakeholders ($\alpha = 0.76$)

Additionally, inter-rater reliability was ensured during document analysis by having independent reviewers assess IEP files using a standardized checklist. All values exceeded the acceptable threshold, confirming that the instruments were reliable.

Data Analysis

Data analysis followed a mixed-methods approach, integrating both quantitative and qualitative techniques (Timans et al., 2019).

Quantitative Data Analysis

Quantitative data were analyzed using descriptive and inferential statistics. Descriptive statistics included frequencies, percentages, and distributions of variables. Inferential analysis was conducted using logistic regression to determine the influence of independent variables on the binary outcome of functional skill acquisition among learners with autism.

Likert-scale responses were standardized into a three-point scale (low, moderate, high extent) for analysis. The dependent variable (functional skill acquisition) was coded as 0 = low level and 1 = high level. Results were presented using tables, percentages, standard deviations, and charts where necessary.

Qualitative Data Analysis

Qualitative data were analyzed using thematic analysis following Braun and Clarke's (2014) six-step model: familiarization with data, generating codes, identifying themes, reviewing themes, defining themes, and producing the report.

Themes were derived from key IEP implementation areas, including present levels of performance, goal development, instructional strategies, progress monitoring, and collaboration. Findings from document analysis, interviews, and observations were triangulated with quantitative results to enhance validity. Qualitative findings were presented narratively.

RESULTS/FINDINGS

Extent of Development of Long-Term Goals by Teachers for Learners with Autism

The second objective of this study was to determine the extent to which teachers develop long-term goals for learners with autism and how these goals support the acquisition of functional skills. Findings were derived from questionnaire responses, supported by document analysis and qualitative interviews, and are presented using descriptive statistics and thematic interpretation.

Quantitative Findings

Table 4.1: Extent of teachers' involvement in setting long-term goal for acquisition of functional skills (N = 47)

S/N	Teachers	VLE	LE	SE	VSE	N	Mean	SD
1	I participate in formulating goals relevant to identified functional skills needs of the learner	12 (26%)	15 (32%)	7(15%)	13 (28%)	0(0%)	3.55	1.16
2	I participate in formulating a goal that is individualised to the learners' unique needs	7 (15%)	16 (34%)	15 (32%)	9 (19%)	0(0%)	3.45	0.97
3	I develop functional skills goals that learners can use in the real world.	6 (13%)	18 (38%)	7 (15%)	16 (34%)	0(0%)	3.30	1.08
4	I tailor goals to reflect the learner's present level of functional skills	5 (11%)	14 (30%)	16 (34%)	10 (21%)	2(4%)	3.21	1.04
5	I create a link between the goal and present level of performance	1(2%)	19 (40%)	15 (32%)	11 (23%)	1(2%)	3.17	0.89

6	I participate in ensuring the goal has timeframe.	1(2%)	17 (36%)	16 (34%)	10 (21%)	3(6%)	3.06	0.96
7	I participate in ensuring the goal addresses the object, action verb and context	0(0%)	8 (17%)	24 (51%)	14 (30%)	1(2%)	2.83	0.73
8	I participate in writing specific defined goals for achievement of functional skills	0(0%)	10 (21%)	21 (45%)	13 (28%)	3(6%)	2.81	0.85
9	I develop clear, measurable indicators for IEP goals to track learner achievement of functional skills.	1(2%)	8 (17%)	14 (30%)	23 (49%)	1(2%)	2.68	0.86
10	I organize short-term goals to build towards realising long-term goal	1(2%)	10 (21%)	15 (32%)	14 (30%)	7 (15%)	2.66	1.05
11	I participate in writing goals that are countable and observable	1(2%)	4(9%)	17 (36%)	20 (43%)	5 (11%)	2.49	0.88
12	I review long-term goals to comply with curriculum expectations as the learner progresses	1(2%)	7 (15%)	14 (30%)	12 (26%)	13 (28%)	2.38	1.11

KEY: VLE- Very large extent, LE – Large extent, SE- Small Extent, VSE –Very Small Extent, N- Not at all

Source: Author Survey Data (2023)

Results in Table 4.1 indicate varying levels of teacher involvement in the development of long-term IEP goals. Overall, teachers reported moderate engagement in goal formulation, with a composite mean score of $M = 2.97$ ($SD = 0.97$), suggesting that while teachers participate in goal development, the quality and consistency of practice remain limited.

The highest level of participation was reported in aligning goals with identified functional skill needs ($M = 3.55$, $SD = 1.16$), where 88% of teachers indicated involvement to a large extent. Similarly, 69% of teachers reported involvement in individualizing goals to learner needs ($M = 3.45$, $SD = 0.97$), indicating recognition of learner diversity in planning, although consistency was not strong across respondents.

Moderate levels of practice were observed in linking goals to real-world functional skills ($M = 3.30$, $SD = 1.08$) and aligning goals with present levels of performance ($M = 3.21$, $SD = 1.04$). While 64–66% of teachers reported involvement in these practices, a substantial proportion still indicated limited or no engagement, suggesting inconsistency in applying foundational IEP principles.

Lower levels of implementation were observed in technical aspects of goal writing. For example, only 63% of teachers reported linking goals to present levels of performance consistently, while inclusion of timeframes ($M = 3.06$, $SD = 0.96$) and structured goal components such as object, action verb, and context ($M = 2.83$, $SD = 0.73$) showed reduced adherence. More critically, measurable indicators for tracking progress were weak ($M = 2.68$, $SD = 0.86$), with 49% of teachers reporting very small extent involvement.

The lowest levels of practice were observed in developing countable and observable goals ($M = 2.49$, $SD = 0.88$) and reviewing goals periodically for curriculum alignment ($M = 2.38$, $SD = 1.11$). Notably, 28% of teachers reported no engagement in goal review, highlighting a significant gap in monitoring and updating IEP goals.

Overall, findings suggest that while teachers demonstrate willingness to participate in IEP goal development, their practice is weak in ensuring SMART criteria particularly measurability, observability, and time-bound structuring are consistently applied.

Document Analysis Findings

Document analysis of 62 IEP files revealed substantial gaps in the quality of long-term goal formulation. A majority of goals (81%) lacked sufficient specificity, making it difficult to interpret expected learner behaviours. For example, goals such as “understand different greetings” failed to specify the type of greeting or context of demonstration, limiting instructional clarity.

Similarly, 87% of reviewed files contained goals that were not measurable, making it difficult to track learner progress. Statements such as “improve eating skills” or “become more independent” lacked observable criteria, rendering evaluation subjective. Only limited cases included measurable benchmarks, such as specifying independent task completion with frequency criteria.

In addition, 90% of goals were not fully achievable within the stated timeframe. Many were overly broad, combining multiple functional domains (e.g., dressing, toileting, and cleaning) without incremental breakdown. This reflects limited understanding of developmental progression for learners with autism.

Regarding relevance, 83% of goals were not adequately aligned with learners’ functional needs or daily environments. For example, washing routines were stated generally without operational steps, limiting their applicability to real-life skill development.

Time-bound criteria were also poorly addressed, with 65% of files lacking clear timelines. Goals such as improving social interaction did not specify whether achievement was expected within a lesson, term, or academic year.

These findings indicate weak adherence to SMART goal-setting principles, particularly in ensuring specificity, measurability, achievability, relevance, and time-bound structure. More so, teachers tend to develop generalized goals for groups of learners rather than individualized, data-driven goals linked to each learner's present level of performance and functional needs.

Qualitative Findings (Interviews and Open Responses)

Qualitative findings confirmed that teachers attempted to formulate both long-term and short-term goals; however, implementation was limited by workload, inadequate training, and reliance on general curriculum expectations at foundation and intermediate levels. Teachers reported that IEP goals were often generalized across learners due to time constraints and lack of detailed training in individualized planning.

One teacher noted that goals are often “generalized for a set of learners,” while another indicated that short-term objectives are not always clearly broken down due to limited time and lack of creativity in generating suitable varied activities. These responses suggest that although teachers recognize the importance of individualized planning, practical constraints limit implementation fidelity.

Furthermore, collaboration in the IEP development process appeared to be limited. An urban teacher, acknowledged that parental and multidisciplinary involvement in goal development was rarely sought because of time constraints, large class sizes and the perception that many parents lacked an understanding of IEP goals. This finding suggests that opportunities for collaborative goal setting, which are fundamental to effective individualized planning are often missed.

Similarly, a rural teacher reported limited administrative oversight and support regarding IEP implementation, stating that while school administrators routinely checked professional records, they rarely reviewed IEP files or provided constructive feedback for improvement. This indicates that monitoring and instructional leadership related to IEP development and implementation may be insufficient in some schools.

Thence, these findings reveal that while teachers demonstrate awareness of the importance of individualized educational planning, challenges such as heavy workloads, inadequate training, limited collaboration with parents

and service providers and weak administrative support constrain the quality and effectiveness of IEP goal development for learners with autism at foundation and intermediate education levels.

Integration of Findings and Discussion

The integrated findings indicate that teachers demonstrate partial engagement in developing long-term IEP goals, particularly in identifying functional skill needs and acknowledging learner diversity. However, this engagement is weakened by limited capacity to develop SMART-compliant goals.

These findings align with Karal and Wolfe (2018), who reported that IEP implementation is often constrained by generalized goal-setting practices that limit individualization. Similarly, Müller et al. (2023) emphasize that effective long-term goals must be individualized and based on learner strengths and present levels of performance.

The study further reveals that weak goal formulation undermines the acquisition of functional skills. As noted by Ruble and McGrew (2013), poorly developed IEP goals are associated with weak learner outcomes. In addition, Kobayashi et al. (2024) argue that irrelevant or vague goals may reduce learner motivation and hinder skill acquisition.

The findings also support Boavida et al. (2014) and Moretti (2021), who emphasize that high-quality IEP goals must be measurable, time-bound, and clearly defined. The absence of short-term benchmarks further limits progress monitoring, as noted by Bailey and Weingarten (2019), who argue that effective IEP development requires baseline assessment, measurable targets, and structured progression.

In addition, the findings revealed limited collaboration in the IEP development process. Teachers reported that parental and multidisciplinary involvement in goal setting was often constrained by large class sizes, time pressures and limited parental understanding of IEPs. This is inconsistent with research emphasizing that collaborative partnerships among teachers, families and specialists are essential for developing meaningful and individualized goals for learners with autism (Kurth et al. 2019; UNESCO, 2020; UNICEF, 2021). Given that learners with autism frequently require coordinated support across home, school and therapeutic environments inadequate stakeholder involvement may compromise the individualization and relevance of IEP goals.

Furthermore, limited administrative oversight of IEP implementation was reported with school leaders rarely reviewing IEP files or providing feedback to improve practice. This finding supports the previous studies highlighting the importance of instructional leadership and ongoing monitoring in promoting high-quality individualized planning and inclusive education (Billingsley et al., 2020; Ainscow, 2020; Kiambati et al., 2025). The absence of collaborative support and administrative guidance may hinder effective implementation of IEPs and reduce opportunities for learners with autism to receive individualized educational support at the crucial foundational level.

Overall, the study suggests that while teachers show positive intentions in developing long-term goals, there are persistent gaps in technical competence, particularly in applying SMART principles and linking goals to functional skill acquisition. These gaps are further influenced by difficulties in establishing accurate present levels of performance, which affect the quality of goal formulation.

Recent evidence by Kan et al. (2025) further demonstrates that well-developed and individualized IEP goals are associated with improved goal attainment among autistic adolescents. This reinforces the importance of ensuring the Long-term goals are not only documented but are also individualized, measurable and aligned with learner needs. The findings of current study suggest that weaknesses in goal formulation may reduce the likelihood of learners attaining intended functional outcomes.

Summary of Findings

The findings indicate that teachers participate moderately in developing long-term goals for learners with autism. However, most goals are not fully SMART-compliant, particularly in terms of measurability, specificity,

relevance, and time structuring. Document analysis confirms widespread inconsistencies in goal quality, while qualitative findings highlight constraints such as limited training, time pressure, weak administrative supervision and reliance on generalized curriculum expectations. Consequently, the effectiveness of long-term IEP goals in supporting functional skill acquisition remains limited at the very basic educational levels.

Logistic Regression Results on Development of Long-Term Goals and Functional Skills Acquisition

Predictor Variable	Response	Beta	Std. Error	Odds ratio	P-value
Setting Annual Long-Term Goals					
	(Small Extent)				
	Moderate	1.449	0.945	1.257	0.125
	Large extent	3.271	1.570	2.341	0.037

Reference category in parentheses.

Source: Author Survey Data (2023)

The logistic regression analysis revealed that the extent to which teachers develop annual long-term goals significantly influences the acquisition of functional skills among learners with autism. The results indicate that setting annual long-term goals to a large extent was a statistically significant predictor of functional skills acquisition (Odds Ratio = 2.341, $p = 0.037$). This implies that learners whose teachers actively and consistently engage in the development of structured long-term goals are more than twice as likely to acquire functional skills compared to those whose teachers demonstrate limited engagement in goal formulation.

This finding suggests that well-developed long-term goals play a critical role in guiding instructional planning, structuring learning experiences, and enhancing progress monitoring. When effectively formulated, such goals support learners with autism in developing essential functional competencies, including effective communication of needs, social interaction with peers, execution of daily self-care activities, and application of academic knowledge to real-life contexts.

In contrast, participation in goal setting to a moderate extent was not a statistically significant predictor of functional skills acquisition ($p = 0.125$). This indicates that partial or inconsistent engagement in goal development is insufficient to produce meaningful improvements in functional outcomes. Rather, impact is realized when teachers demonstrate sustained and intentional involvement in developing clearly defined, measurable, and structured long-term goals.

Overall, the findings demonstrate that the likelihood of learners acquiring functional skills increases with the level of teacher engagement in long-term goal formulation. This underscores the importance of precise, measurable, and well-structured long-term goals in improving learner outcomes. Goal-driven instruction therefore provides direction for teaching, enhances consistency in instructional delivery, and strengthens progress monitoring mechanisms.

In the Kenyan context, these findings align with the Competency-Based Curriculum (CBC) framework promoted by the Kenya Institute of Curriculum Development, which emphasizes outcome-based instruction and measurable learning progression. The results therefore reinforce the need for strengthened teacher capacity in developing SMART-compliant IEP goals to improve functional learning outcomes for learners with autism. This finding is consistent with Ruble and McGrew (2013), who found that the quality of IEP goals is associated with improved learner outcome among learners with autism. Similarly, Müller et al. (2023) reported that structured goal-development approaches enhance the quality and measurability of IEP goals, thereby improving educational planning and learner progress. The present study extends this evidence by demonstrating that active teacher participation in developing long-term goals significantly predicts functional skill acquisition among learners with autism in the Kenyan context.

Summary of Findings on Development of Long-Term Goals and Functional Skills Acquisition

The study examined the extent to which teachers develop annual long-term goals for learners with autism and

how this influences the acquisition of functional skills. Quantitative findings indicated that teachers participated moderately in developing long-term goals, particularly in identifying functional skill needs and individualizing goals to learners' needs. However, lower levels of participation were reported in developing measurable indicators, writing observable and countable goals, organizing short-term objectives, and reviewing goals periodically. The overall findings suggest that many teachers experience challenges in formulating SMART goals that effectively support functional skill development.

Document analysis corroborated these findings, revealing that most IEP goals lacked specificity, measurability, achievability, relevance, and clear timelines. In many cases, teachers developed generalized goals for learners within the same class rather than individualized goals tailored to each learner's unique needs and functional abilities. Interview responses further indicated that limited training, heavy workload, and reliance on general curriculum expectations constrained effective goal development.

The logistic regression results established that teacher participation in developing annual long-term goals significantly influenced learners' acquisition of functional skills ($OR = 2.341$, $p = 0.037$). Learners whose teachers actively engaged in formulating structured long-term goals were more likely to acquire functional skills than those whose teachers demonstrated limited involvement. The findings therefore demonstrate that clearly defined, individualized, and measurable long-term goals are critical in promoting functional skill acquisition among learners with autism. Strengthening teachers' competencies in SMART goal development may enhance the effectiveness of IEP implementation and improve learner outcomes.

CONCLUSION AND RECOMMENDATIONS

Setting Annual Long-Term Goals

The study concludes that the development of long-term IEP goals is a significant predictor of functional skill acquisition among learners with autism. Although teachers reported moderate participation in goal development, document analysis and interview findings revealed that many goals lacked essential SMART characteristics, including specificity, measurability, relevance and alignment with learners' present levels of performance. Logistic regression results further established that learners whose teachers developed Long-term IEP goals to a large extent were significantly more likely to acquire functional skills ($OR = 2.341$, $p = 0.037$). These findings suggest that effective IEP implementation depends not only on teacher participation in goal setting but also on the quality of the goals developed. Therefore, individualized, measurable and functionally relevant long-term IEP goals provide a critical foundation for instructional planning, progress monitoring and the development of functional skills among learners with autism. This finding highlights, the importance of moving beyond procedural IEP compliance toward learner-centered data-driven goal setting that supports meaningful educational outcomes.

Recommendation on Setting Annual Long-Term Goals

The study recommends that teachers be provided with continuous professional development on the formulation of SMART long-term goals that are individualized, measurable, achievable, relevant, and time-bound. This recommendation is supported by Boavida et al. (2014), who found that targeted training in goal development significantly improved the quality, specificity and measurability of educational goals. Strengthening teachers' competencies in assessment-based and data-driven goal formulation may therefore enhance the effectiveness of IEP implementation and improve functional outcomes for learners with autism. Training should emphasize linking goals to learners' present levels of performance, developing measurable indicators of progress, and organizing short-term objectives that support long-term outcomes. In addition, school administrators and curriculum support officers should strengthen monitoring and technical support for IEP development to ensure that long-term goals are functional, learner-centered, and aligned with competency-based educational expectations. Such measures are likely to enhance the effectiveness of IEP implementation and improve functional skill acquisition among learners with autism. Furthermore, to be in tandem with the global practices special schools/units and teacher training institutions should adopt a learner-centered and data-driven approach to IEP goal development in which long-term goals are derived from comprehensive assessment findings, linked to learners' present levels of performance and focused on meaningful functional outcomes. Teachers should be

supported to use evidence-based goal setting frameworks that emphasize individualization, measurable progress indicators, family collaborations and regular review of learner progress. When this is practiced in autism education it is likely to enhance the acquisition, generalization and maintenance of functional skills across school home and community settings.

CONTRIBUTION TO KNOWLEDGE

This study contributes to existing knowledge by demonstrating that effectiveness of long-term IEP goals depends not only on their presence but also on the extent to which they are individualized, measurable and aligned with learners' functional needs. The study provides empirical evidence from the Kenyan context that teachers' active participation in developing high-quality long-term goals significantly increases the likelihood of functional skill acquisition among learners with autism. The findings further establish that individualized, measurable and functionally relevant goals are stronger predictors of positive learner outcomes than generalized goal-setting practices, thereby highlighting the importance of quality goal development in effective IEP implementation.

RECOMMENDATION FOR FUTURE RESEARCH

Future studies could enhance the robustness of the findings by including a larger and more diverse sample from different regions and educational settings. Longitudinal studies would be particularly valuable in examining how individualized long-term goals influence functional skill development over extended periods. Researchers should also investigate contextual factors that affect IEP implementation, including teacher workload, professional training on use of data-driven IEP goals, instructional leadership, parental participation and institutional support.

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