

Relationship between Achievement Motivation Personality Indicator and Academic Achievement among Learners with Exceptional Potential in Public Primary Schools in Nairobi County

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ABSTRACT

Learners with Exceptional Potential have a set of personality traits that enable them to function at a level well beyond that of their classmates. However, in Nairobi County, the learning competencies of exceptional potential learners in public primary schools are below average. Thus, the purpose of this study was to determine the relationship between achievement motivation characteristics and academic achievement among learners with superior abilities in public primary schools in Nairobi County. The study used a descriptive research design and included phenomenological approaches with mixed-methods analysis. The targeted audience included 23,110 people, including 3,247 instructors and 19,863 learners in grades 6 to 8. A suitable sample size of 391 was calculated using Yamane's formula. Nairobi County's abundance of sub-counties served as the impetus for using stratified sampling to split the county into 17 groupings. Each sub-county provided 10 bright and talented learners from grades 6–8 and 13 teachers. The process produced a pool of 221 teachers and 170 top-performing learners. Observational checklists and questionnaires were two of the data collection methods used. In order to evaluate validity and reliability prior to the full deployment, forty respondents from public elementary schools in Nairobi County took part in the pilot testing. Learners with particular needs and educational psychology experts gave validity support. The reliability coefficient was estimated using the split-half approach, and the result was $r = 0.725$, which, according to Cronbach's alpha approach, indicates extremely excellent reliability. Thematic evaluation and narrative presentation of qualitative data occurred in accordance with the research's objectives. SPSS 23, a statistical programme for the social sciences, was utilised to analyse the quantitative data both descriptively (using frequencies and percentages) and inferentially (using linear regression analysis), in order to evaluate the hypotheses. The findings show that achievement motivation characteristics had a statistically significant influence on the academic achievement of learners with exceptional potential ($t = 3.714$, $p < 0.05$). These findings of this research further demonstrated that Nairobi County's public primary schools enrol a sizable number of bright and gifted learners. It was believed that the causes of these variances were differences in learners' self-worth, approach to self-driven studies, problem-solving skills, and achievement motivation. Based on these results, the research made a number of recommendations in its conclusion. Schools should develop an environment that supports learning and encourages learners with superior abilities to follow their interests while attending classes. The Ministry of Education (MOE) is to be tasked with creating a plan to finance the creation of centres of excellence tailored to the needs of learners with superior abilities as well as resource centres where these children may further develop their skills. Teachers should have access to curriculum guides created by the Kenya Institute of Curriculum Development (KICD) to better fulfil the needs of the community. As an added recommendation, KICD should create a national tool to identify these learners.

Keywords: Academic Achievement, Achievement Motivation Characteristics, Exceptional Potential Learners, Public Primary Schools

I. INTRODUCTION

Personality encompasses a composite of attributes, traits, and qualities that shape and influence an individual's academic conduct. Porter and Louse (2012) propose that personality encompasses a collection of behavioural, cognitive, and emotional patterns that develop as a result of both biological and environmental influences. According to Ackerman and Heggestad (2010), personality characteristics may be defined as different attributes that represent an individual's regular patterns of behaviour, temperament, and emotion, hence embodying their unique features. Personality traits have a crucial influence in determining the growth of cognitive, imaginative, artistic, authority, linguistic, artistic, mathematical, and scientific abilities in intelligent and talented children.

Vialle and Rogers (2010) propose that those identified as talented frequently have distinct social-emotional requirements. According to Johnsen (2012), it's possible that these kids will need educational opportunities or activities that the school does not typically provide in order to properly develop their skills to their fullest potential. Taking into consideration these claims, Gargiulo (2011) argues that individuals who are considered learners with superior abilities are those who have been identified by professionals with the necessary qualifications. These individuals possess exceptional qualities that enable them to achieve at a high level. According to Gagne (2003), giftedness may be defined as an outstanding intrinsic aptitude to achieve and a potential for high performance across several domains. According to Porter and Louse (2012), this differentiation enables individuals to encompass both those who are propelled educationally due to their circumstances and those who exhibit remarkable talents and personality traits in daily situations within the realm of the gifted population. According to Wallace and Adams (2011), the origins of the ideas of artistic ability and talentedness may be traced back to prehistoric Sparta. During this time, soldiers were highly esteemed, and their abilities in warfare were considered indicators of strength. Additionally, exceptional leadership qualities were recognised as criteria for identifying individuals with giftedness.

This is the case in countries such as the Netherlands, Germany, and the United Kingdom (Agran, 2012). Despite these postulations, many learners are still low achievers and manifest poor competencies in different tasks while at school. However, the extent to which such personality indicators or traits of learners with exceptional potential influence their academic achievement still remains fully unexplored. According to Barrick and Mount (2015), the self-concept, emotional regulation, achievement motivation, and problem-solving capabilities of learners with exceptional potential prepare them for different worldviews and, thus, for behaving differently in various social and educational settings.

In India, Wright (2013) argues that predictors of academic achievement among learners with exceptional potential often lie on a continuum with cognitive measures, intelligence, and mental abilities at one extreme and non-cognitive variables such as personality indicators and characteristics at the other. This implies that, although the results of studies trying to predict academic achievement have yielded different results, they have consistently pointed out the role of cognitive abilities and personality characteristics in academic achievement.

In many countries in Sub-Saharan Africa, Baum et al. (2015) note that, in order to meet the needs of learners with exceptional potential, there have been curriculum changes that include acceleration and enrichment and specific interventions to motivate learners from diverse groups. Baum et al. (2015) further posit that some learners who have exceptional potential are often familiar with the concepts being taught in their classrooms, or they can master the concepts in a fraction of the time that it takes their classmates. Despite these initiatives, the academic achievement of learners with exceptional potential has been low.

Despite the implementation of a competency-based curriculum in Nigerian primary schools with the goal of meeting the educational needs of learners with high levels of self-efficacy skills, self-worth, achievement motivation, and socio-emotional regulation, Ado (2011) notes that many learners with superior abilities still perform poorly on standardised tests. Adirika and Okoye (2017) found that just 35.9% of identified learners with superior abilities in Nigeria were able to earn adequate scores on national examinations in 2017, preventing them from entering high schools. This claim is based on the idea that learners with superior abilities have a higher capacity for attention and comprehension because they have developed traits like self-efficacy and the ability to self-regulate their learning.

According to Marietjie and Jeanne-Marie (2017), in the KwaZulu Natal Province of South Africa, some personality traits exhibited by learners with exceptional potential, such as achievement motivation and self-worth qualities, are considered significant factors influencing their academic performance. Marietjie and Jeanne-Marie (2017) posit that learners with superior abilities exhibit more motivation to engage in learning activities when they possess elevated levels of self-efficacy and self-worth. This finding suggests that the personality qualities exhibited by learners with exceptional potential significantly influence their motivation to excel in their academic pursuits.

1.2 Statement of the Problem

Learners with exceptional potential show signs of having the personality traits that make it possible for them to take on academic challenges beyond their chronological age group, indicating that they have the potential to excel in the classroom. Awandu (2014) posits that individuals exhibiting these characteristics demonstrate elevated levels of self-confidence, a healthy sense of self, the capacity to direct one's own development, and a strong drive for academic performance. Nairobi County is not exempt from having a significant number of elementary school learners who have exceptional abilities and talents in many academic pursuits. Nevertheless, there is a lack of evidence indicating that this has been translated into measurable improvements in their learning outcomes and abilities.

As indicated earlier, a study carried out in Nairobi County by Karimi (2020) revealed that, though there are slight improvements, learners in public primary schools have low learning outcomes and competencies in numeracy as well as literacy education programmes. Karimi (2020) noted that, despite the introduction of initiatives such as the Tusome Literacy Project, the majority of learners in public primary schools show an inability to complete tasks, an inability to identify problems and solve them, poor communicative competency, a lack of creativity, poor team-building with peers, and low leadership skills.

This lends credence to the findings of an earlier report by Uwezo (2016), which also noted that, in Nairobi County, many learners aged between 7 and 13 years manifest low competencies in basic numeracy, language, and essential life skills such as team-building with peers and leadership skills. Uwezo (2016) asserts that only 26.92% of learners aged between 7 and 13 years manifest improved literacy and communicative competency in English and Kiswahili, 18.74% can undertake basic numeracy and number work activities, and only 20.8% have mastered essential life skills such as team building and leadership competencies. Hence, this study was designed to investigate personality characteristics as predictors of the academic achievement of learners with exceptional potential in public primary schools.

1.3 Objectives of the Study

To establish the level of influence exerted by achievement motivation characteristics on the academic achievement of learners with exceptional potential in public primary schools in Nairobi County.

1.4 Research Hypotheses

H₀: There is no statistically significant relationship between achievement motivation and academic achievement characteristics among learners with exceptional potential in public primary schools in Nairobi County.

II. LITERATURE REVIEW

Achievement motivation is another personality characteristic possessed by learners with exceptional potential. According to Wail et al. (2013), achievement motivation is the consistent striving force of an individual to achieve success to a certain standard of excellence in a competitive situation. Among learners with exceptional potential, achievement motivation relates motivation to personality traits such as energy level, enthusiasm, zeal, motivational vigour, need for achievement, and perseverance. Wail et al. (2013) further assert that achievement motivational constructs and models reflect a trend from a trait approach to a focus on cognitive and affective processes underlying the achievement behaviours of learners with exceptional potential.

The impact of motivation on predicting the academic success of learners with exceptional potential has been investigated in a number of studies. For instance, Lavrijsen et al. (2021) evaluated the relationship between a variety of motivational processes and academic success in a large sample of seventh-grade Flemish students, adjusting for intellect and personality. Students' intellect and desire for cognition, i.e., their personal choice for engaging in cognitively challenging activities, have proven to be substantial indicators of academic success. Nevertheless, even after adjusting for intellect and personality, a number of motivational processes caused extra, unique variation in accomplishment, totaling roughly a quarter of the variance in school performance that was explained. Furthermore, academic self-concept, success objectives, achievement motivation, autonomous motivation, and effort beliefs each explained a distinct percentage of the variation in academic accomplishment (Lavrijsen et al., 2021). Although these results were generally similar across several operationalizations of accomplishment, motivational components explained greater variation when achievement was evaluated by school grades as opposed to standardised exams. Given that motivational dynamics are more adjustable than variations in IQ and personality, the distinctive positive connections between motivation and accomplishment imply that boosting student motivation is a worthwhile endeavour.

Separately, Meier et al. (2014) compared several motivational factors associated with learning and accomplishment to see whether forms of academic motivation influence students' attendance in a special class for the gifted in full-time ability grouping. In contrast to academic self-concepts, academic interests, or mastery and performance objectives, the desire for cognition was the strongest predictor of talented students' participation in specialised courses. Consequently, it may be important to investigate the desire for cognition as an indication of the need for advancement alternatives among students. In addition, our results may prompt a debate as to whether adolescents with high cognitive demands might benefit from participation in gifted programmes.

According to Steinmayr et al. (2019), accomplishment motivation encompasses several distinct categories, including ability self-concepts, task values, objectives, and achievement motivations. The reviewed motivational constructs are viewed as predictors of school students' academic achievement beyond students' cognitive abilities, and prior achievement demonstrated that the majority of motivational constructs predicted academic achievement beyond intelligence and that students' ability self-concepts and task values are more predictive of their achievement than goals and achievement motives. Steinmayr et al. (2019) examined whether previously reported outcomes can be repeated when ability self-concepts, task values, objectives, and achievement motivations are all measured with the same degree of detail as accomplishment metrics such as math achievement hope and math grades. The findings revealed that domain-specific ability self-concept, motivations, task values, and learning objectives, but not performance goals, predicted a considerable amount of variation in grades, with ability self-concept being the greatest predictor.

The aforementioned results are reinforced by Desmet and Pereira (2021), who report that the majority of students liked the Achievement Motivation Enhancement sessions and believed they benefitted from discussing their experiences in small groups. Students acknowledged enhanced self-perceptions and cited learning goal evaluation, goal formulation, and self-regulation skills as beneficial (Mammadov et al., 2018). It has also been observed that the accomplishment motivation of talented children tends to tie motivation to personality attributes and use phrases such as energy level, excitement, fervour, motivational vigour, desire for achievement, and persistence. In an attempt to improve performance on standardised examinations, students and teachers should better focus on the importance of motivational interventions when they are motivated (Volpe, 2016).

In a study carried out in Guyana, Kahyaoglu (2015) established that learners with exceptional potential usually possess a desire for or interest in success in academic activities. Kahyaoglu (2015) further established that gifted learners exhibit achievement motivation traits that create a pathway for passion that provides meaning and a clarified sense of identity that develops goal commitment, strategic intent, and a feeling of empowerment. Learners with exceptional potential and high achievement motivation are self-confident individuals who function well according to the situation. In other words, a motivated learner with exceptional potential is likely to exhibit self-assurance, a positive outlook, pragmatism, hope, and faith in a bright future, while an individual lacking in achievement motivation would feel pessimism, distrust, and despair.

In Australia, Gherasim et al. (2015) opine that learners with exceptional potential who possess achievement and motivational characteristics often register impressive academic performance in internal and national examinations. To support this assertion, Martin (2015) conducted a study in 123 elementary schools in Australia, which revealed that the most noticeable trait among learners with exceptional potential is the desire to achieve in their academic activities. Martin (2015) found that learners with exceptional potential possess achievement motivation, which enables them to excel in areas where their peers cannot. This indicates that the motivation of the learner to succeed is often considered a central factor in academic achievement.

In other words, achievement motivation traits inspire learners with exceptional potential to acquire new knowledge and skills and increase self-competence, which is highly valued in all human societies. In Africa, Al-Dhamit and Kreishan (2016) aver that achievement motivation among learners with exceptional potential is the pursuit of excellence. In a study carried out in South Africa, Sikhwari (2016) indicated that, since the need for achievement varies from one gifted learner to another, it may help in planning activities to know where learners stand, which learners have high achievement needs that are low in achievement, and which learners seem primarily motivated by a need to avoid failure. Sikhwari (2016) further revealed that learners with exceptional potential who are more highly motivated to achieve are likely to respond well to challenging assignments, strict grading, corrective feedback, new or unusual problems, and the chance to try again. These findings point to the fact that learners with exceptional potential who are oriented towards academic achievement feel in control.

Besides, being motivated keeps learners with exceptional potential dynamic and gives them self-respect; they set moderately difficult but easily achievable targets, which help them achieve their objectives. These findings were corroborated by a study conducted in Tanzania by Christina (2015), which established that achievement-motivated learners with exceptional potential prefer to work on a problem rather than leave the outcome to chance. Christina (2015) noted that achievement-motivated learners with exceptional potential seem to be more concerned with their personal achievement than the rewards of success.

In Kenya, there is recognition of achievement motivation among learners with exceptional potential as the central force behind their determined actions in academic and social life. For example, a study carried out in primary schools in Wareng District in Uasin Gishu County by Sambu et al. (2014) revealed that achievement motivation among learners who are gifted contributes to their academic performance. Sambu et al. (2014) found that learners with

exceptional potential have the potential to perform better as compared to their counterparts in terms of their age, experience, or learning environment.

In public primary schools in Nairobi County, Kipkoech et al. (2016) posit that many learners with exceptional potential are intrinsically motivated by the joy of learning. According to Kipkoech et al. (2016), learners with exceptional potential who manifest high levels of achievement motivation register impressive grades in national examinations. However, much is yet to be done since Kipkoech et al. (2016), as well as other empirical studies, have not interrogated the extent to which specific achievement motivation characteristics manifested by learners with exceptional potential predict their academic achievement in public primary schools.

2.1 Theoretical Framework

This study was guided by the theories of giftedness and academic achievement. The theory of giftedness was postulated by Renzulli (1978). This theory holds that gifted behaviour among people occurs when there is an interaction among three basic clusters of human traits: above-average general and/or specific abilities, high levels of task commitment (motivation), and high levels of creativity. This theory is further premised on the overlap and interaction between and among the three clusters of traits that create the conditions for giftedness. In other words, giftedness is not viewed as an absolute or fixed state of being, that is, 'the state of having and not having'. Rather, it is viewed as a developmental set of behaviours that can be applied to problem-solving situations. Varying kinds and degrees of gifted behaviours can be developed and displayed in certain people, at certain times, and under certain circumstances. In the education context, Renzulli (1978) holds that children with exceptional potential are those who possess or are capable of developing this composite of traits and applying them to any potentially valuable area of human performance.

According to Renzulli (1978), each characteristic plays an important role in the development of gifted behaviour. Well above-average ability is defined by Renzulli as either general ability that can be applied across all domains and/or specific ability, which consists of the ability to perform at a high level within a specific domain. Renzulli (1978) defines well-above-average ability as that possessed by those individuals performing in the top 15-20% of any domain. This view differs from the traditional view of giftedness as comprising those scoring in the top 3-5% on a standardised measure of intelligence (Marland, 1972). In his study on the applicability of the components of Renzulli's model, Delisle (1982) found that non-intellective factors are just as important for creative production as intellectual factors are.

The work of Gubbins (2010), who demonstrated through stepwise multiple regression that above-average ability is a necessary but not sufficient condition for high-level creative productivity, also lends support to the model. However, Delisle (2010) criticised Renzulli's model for not demonstrating correlations between later life achievements and the traits or experiences of children with various levels of IQ. Nonetheless, this theory fits this study due to the fact that the personality traits of learners with exceptional potential enable them to undertake different activities under different circumstances. In this study, this theory was relevant in that, as indicated by Renzulli (1978), learners in a schoolhouse are best described as test-taking or lesson-learning giftedness, which is the form of giftedness most often emphasised in school. In other words, learners with giftedness in school who display characteristics such as self-concept, problem-solving, self-regulated learning, and achievement motivation personality traits are excellent consumers of knowledge manifested through excellent performance in examinations.

The study was also guided by the academic achievement theory, whose proponent was Walberg (2012). This theory posits that the psychological characteristics of individual learners and their immediate psychological environments influence educational outcomes, that is, cognitive, behavioural, and attitudinal. Walberg (2012) identified nine key variables that influence educational outcomes: learners' prior achievement, motivation, developmental level, quantity and quality of instruction, classroom climate, parental involvement, home environment, peer group, and exposure to mass media outside of school.

Walberg (2012) further asserts that psychosocial characteristics such as self-concept, attitudes, behaviours, intrinsic motivation, and overall learner engagement in learning are useful in curriculum evaluation studies and can provide teachers with useful information to arrange more optimally functioning classrooms. In this study, to improve the academic achievement and educational productivity of students, educational process goals as well as achievement goals must be considered.

Thus, the relevance of this theory is that learning outcome goals are interpreted to include learner perceptions of the social environment, creativity, self-concept, participation in extracurricular activities, and interest in the subject matter. In other words, ignoring these perceptions and experiences in favour of traditional goals measured by test scores decreases motivation and lowers achievement.

III. METHODOLOGY

3.1 Research Design

In this study, a field research design was adopted to execute interpretative procedures by using quantitative and qualitative methods. This approach was suitable since it involved the collection and analysis of both quantitative and qualitative data in a single study. According to Creswell (2014), in the quantitative method, the researcher asks specific questions and collects quantifiable data from a large number of participants. In this case, data are collected using questionnaires. At the same time, qualitative data were collected by relying on the views of participants and collecting data consisting largely of words from the participants. In this case, data were collected using observation schedules.

Thus, the study adopted two research designs to address both quantitative and qualitative methods. These included descriptive surveys and phenomenological research designs. A descriptive survey research design was applied to implement the quantitative methods. This is because, according to Creswell (2014), to address the quantitative aspect, descriptive survey research design uses a quantitative research method by collecting quantifiable information to be used for statistical analysis of the sample. This design was suitable for this study since it resulted in well-validated and substantiated quantitative findings. In this case, data were collected using questionnaires. However, to implement the qualitative method, the phenomenological research design was applied, for this is an approach to qualitative research that focuses on the commonality of a lived experience within a particular group. According to Creswell (2014), the fundamental goal of the approach is to arrive at a description of the nature of the particular phenomenon. In this study, this design was relevant in that respondents had the opportunity to express their views and lived experiences with regard to the influence of personality characteristics on the academic achievement of learners with exceptional potential in primary schools. In this case, data were collected using observation schedules. The results of quantitative and qualitative methods were then merged and triangulated to provide adequate interpretations of the variables under investigation.

3.2 Location of Study

The study was carried out in Nairobi County. According to the Kenya National Bureau of Statistics (KNBS, 2019), the county has an approximate population of 4, 397, 073 persons and covers an area of 696 km², that is, a population density of 6, 318 persons per km².² The main economic activities in Nairobi County include business activities, tourism, and subsistence agriculture, among others. Nairobi County boasts a high number of primary school learners who manifest giftedness and talent while undertaking different academic activities. However, this has not reflected in their academic achievement. As indicated earlier, a study undertaken in Nairobi County by Karimi (2020) found that, despite different initiatives such as the Tusome Literacy Project, the majority of learners in public primary schools show an inability to complete tasks, an inability to identify problems and solve them, poor communicative competency, a lack of creativity, poor team-building with peers, and low leadership skills. Despite this state of affairs, few empirical studies have interrogated the extent to which personality characteristics influence the academic achievement of learners with exceptional potential in public primary schools; thus, the focus is on Nairobi County as the location of study.

3.3 Target Population

Nairobi County has 225 public primary schools, and thus, the target population will be 23,110 participants, which comprised 3247 teachers and 19,863 learners in classes VI–VIII, as shown in Table 1.

Table 1

Target Population of the Study

Categories	Target Population
Teachers	3247
Learners in Classes VI-VIII	19, 863
Total	23, 110

3.4 Sampling and Sampling Techniques

To obtain a sample size that is adequate relative to the goals of the study, the researcher adopted Yamane's formula as follows:

$$N_0 = N / (1 + N (e^2))$$

Where,

N_0 = desired sample size at 95% confidence interval

N = Target Population

e = Confidence level of 5% (decimal equivalent is 0.05)

Thus, desired sample was:

$N_0 = 23,110 / (1 + 23,110(0.05)^2)$

$N_0 = 391$ respondents

Stratified sampling was used to create 17 different strata based on the number of sub-counties in Nairobi County to ensure homogeneity during sampling. This ensured that all sub-counties were proportionately represented. From each sub-county, 13 teachers were selected using simple random sampling to avoid bias, and 10 learners with exceptional potential in classes VI–VIII were identified using an observation checklist. This sampling procedure enabled the researcher to collect a sample of 34 headteachers, 188 teachers, and 170 learners with exceptional potential in classes VI–VIII, as shown in Table 2.

Table 2

Sampling Grid

Categories	Target Population	Sample Size	Sampling Techniques
Teachers	3247	221	Simple random sampling
Learners in Classes VI–VIII	19,863	170	Purposive sampling
Total	23,110	391	

3.5 Data Collection Instruments

These are tools that were used to gather information about the specific themes of the research objectives. These included a questionnaire for teachers and an observation checklist for the researcher. The researcher also undertook a document analysis of school records to ascertain the academic achievement of the screened learners with exceptional potential among the general group of learners in public primary schools.

3.6 Pilot Study

Piloting of research instruments was conducted among 40 respondents from a sample of public primary schools in Nairobi County since, according to Kothari (2005), the pilot sample should constitute 10% of the study sample (10.0% of 391). The purpose of piloting was to check for suitability, clarity of the questions on the instruments designed, relevance of the information being sought, and appropriateness of the language used. The results of the piloting were also used to pretest the research instruments in order to validate and ascertain their reliability.

It also anticipates the problems the respondents encounter, such as interpretation while filling out the questionnaires and time management for the data collection. The observation schedules were given trial runs to ensure that questions are clearly worded and draw an appropriate range of responses, which assisted the researcher in identifying areas for revision. The respondents in the piloting were not involved in the main study.

3.6.1 Validity

In order to test the validity, items were analysed to check for content validity, and the researcher, with the help of experts in educational psychology and special needs education, went through each item and the responses given to establish whether the items generated the required information. Test items that were not adequate in terms of generating the required information were dropped, and others suggested that they were appropriate in generating the information. In this study, therefore, soon after interviewing, the researcher transcribed the observation checklist results for approval of the interpretations made.

The suggestions given thereafter were accommodated in the study on improving the validity of the conclusions to be drawn. This is because, according to Creswell (2014), researchers evaluate the validity of the content by going to a panel of experts and having them identify whether the questions are valid. Creswell (2014) further asserts that validity means that the individual's scores from an instrument make sense, are meaningful, and enable the researcher to draw good conclusions from the sample being studied about the population.

3.6.2 Reliability

The researcher, with the help of university supervisors, critically assessed the consistency of the responses on the pilot questionnaires to make a judgment on their reliability. The researcher examined the research instruments for the appropriateness of items so as to identify any ambiguous and unclear items. Such items were restated to ensure that the respondents clearly understood them. The split-half technique was used to establish the reliability of the test items. In this case, the test items were administered once to a group of respondents, and the results were divided into two equal categories known as 'halves'. The reliability coefficient, $r = 0.725$, between the two 'halves' was obtained using the Cronbach Alpha Method, which indicated high internal reliability. According to Kothari (2005), any Cronbach Alpha value between 0 and 1 implies high internal consistency.

3.7 Data Analysis and Presentation

Data analysis began by identifying common themes. The relevant information was broken into phrases or sentences that reflected a single, specific thought. The responses to the closed-ended items were assigned codes and labels. Frequency counts of the responses were obtained to generate information about the respondents and to illustrate the general trend of findings on the various variables that were under investigation. Qualitative data was analysed thematically along with the study objectives and presented in narrative form. Quantitative data were analysed using descriptive statistics and inferentially using regression analysis with the help of Statistical Packages for Social Science (SPSS Version 23) to test all the research hypotheses. To find out if there is no statistically significant relationship between self-concept characteristics and academic achievement among learners with exceptional potential in public primary schools in Nairobi County, statistical averages and regression analysis were used to analyse the relationships.

The same statistical methods were used to test if there is no statistically significant relationship between self-regulated learning characteristics and academic achievement among learners with exceptional potential in public primary schools in Nairobi County. The hypothesis regarding whether there is no statistically significant relationship between problem-solving and academic achievement characteristics among learners with exceptional potential in public primary schools in Nairobi County was also tested using the statistical averages and regression analysis. Finally, similar approaches were used to find out if there was no statistically significant relationship between achievement motivation and academic achievement characteristics among learners with exceptional potential in public primary schools in Nairobi County. The quantitative findings of the study were presented using tables and charts.

IV. RESEARCH & DISCUSSIONS

4.1 Response Rate

In this study, 221 questionnaires were administered to teachers in 29 public primary schools, out of which 185 were filled out and returned. At the same time, the researcher undertook observation of 150 learners in Classes VI–VIII (five per school). This yielded the response rates shown in Table 3:

Table 3

Response Rates

Respondents	Sampled Respondents	Those Who Participated	Achieved Return Rate (%)
Teachers	221	185	83.7
Learners in Classes VI-VII	170	150	88.2
Total	391	335	85.7

Table 3 shows that teachers registered a response rate of 83.7%, whereas learners in classes VI–VIII registered a response rate of 88.2%. This yielded an average response rate of 85.7%. This confirmed the findings of Creswell (2014) that a response rate above 75.0% is adequate to allow for generalization of the outcomes to the target population.

4.2 Respondents' Demographic Information

The research instruments solicited for demographic information of the respondents. These included gender and level of education.

4.2.1 Gender of Surveyed Learners and Teachers

Information about the distribution of the respondents by gender was collected and the results are shown in Figure 2:

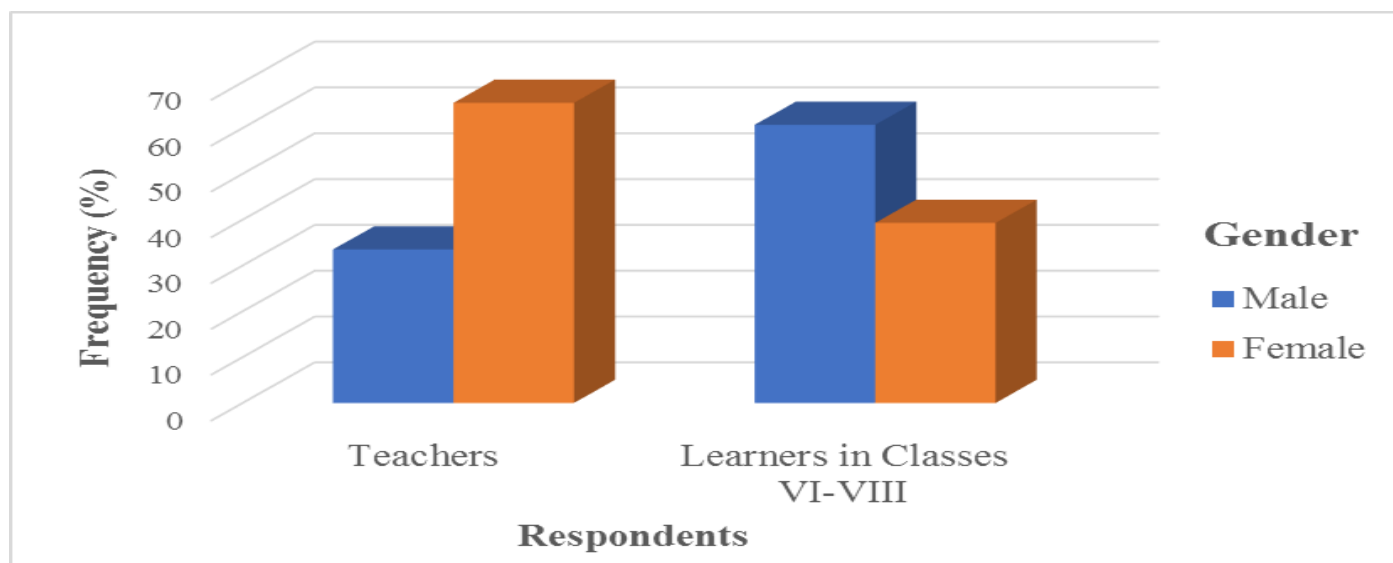


Figure 1

Distribution of the Respondents by Gender

Figure 1 indicates that the majority, 123 (66.5%), of the teachers were female, whereas their male counterparts constituted 62 (33.5%). Most, 91 (60.7%), of the learners in Classes VI–VIII were male, whereas their male counterparts constituted 59 (39.3%) of the sample. This information shows that there was adequate gender parity at all levels of the study and that the extent to which personality characteristics predict academic achievement of learners with exceptional potential in public primary schools' concerned both male and female stakeholders.

4.2.2 Level of Education of Teachers

The research instruments also elicited information on level of education of teachers. Results are shown in Figure 3;

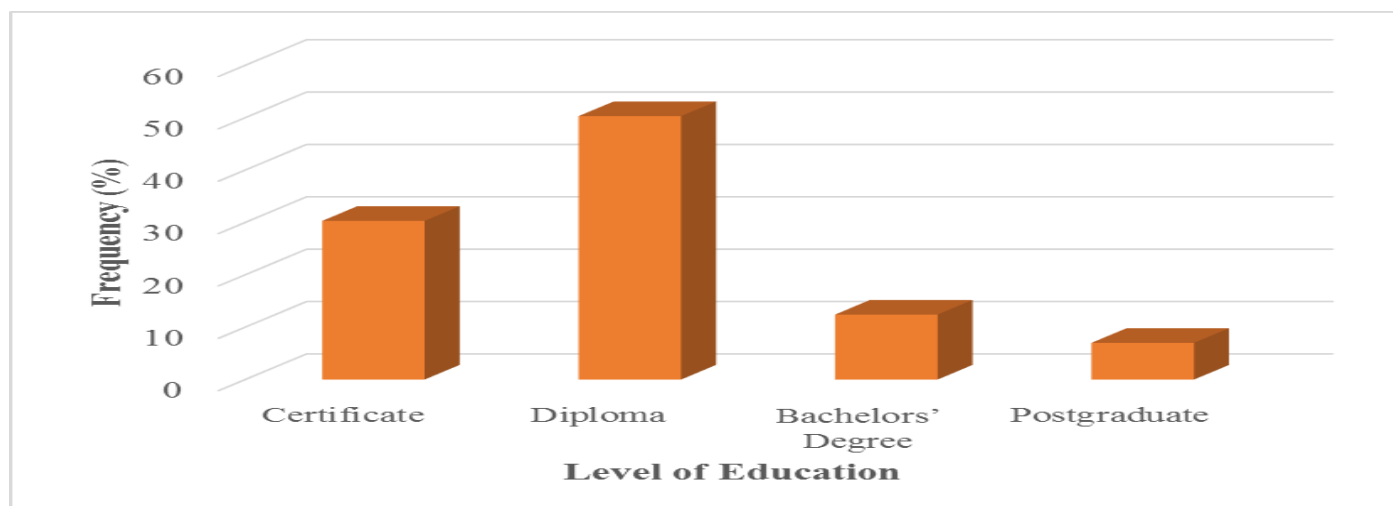


Figure 2

Level of Education of Teachers

Figure 2 shows that slightly more than half, 93 (50.3%), of the teachers had diplomas, 56 (30.3%) had certificate qualifications, 23 (12.4%) had bachelor's degrees, and 13 (7.0%) had postgraduate qualifications. This information reveals that the respondents had the required qualifications as teachers, which thus reinforced the

expectations of being competent to respond to the research questions about the extent to which personality characteristics predict the academic achievement of learners with exceptional potential in public primary schools.

4.3 Achievement Motivation Characteristics of Learners with Exceptional Potential

The study sought to determine the extent to which achievement motivation characteristics influence the academic achievement of learners with exceptional potential in public primary schools. Descriptive data were collected, and the results are shown in Table 4.

Table 4

Teachers' Views on the Learners' Achievement Motivation

Test Items	Ratings				
	SA	A	U	D	SD
	%	%	%	%	%
Gifted learners set goals to improve their competencies	52.4	9.2	4.3	21.1	4.3
Learners with exceptional potential usually experience pleasure and satisfaction in learning new concepts	60.5	7.6	7.0	22.2	2.7
On many occasions, learners with exceptional potential work hard because they consider primary education prepares them for the careers, they long for	68.1	5.9	3.2	17.8	5.0
Gifted learners are motivated to prove that they are capable of completing school	63.2	3.8	5.9	23.2	3.9
Learners with exceptional potential usually believe that when they succeed in primary school, they feel important	60.0	6.5	4.3	20.0	9.2
Gifted learners desire to learn for the satisfaction they feel when they are in the process of accomplishing difficult academic tasks	55.7	8.2	5.4	21.1	9.6
Learners with exceptional potential usually take stock of their academic results so as to improve further	51.9	8.6	4.9	30.3	4.3
In many occasions, gifted learners are motivated to learn for the pleasure that they experience in broadening their knowledge about subjects which appeal to them	50.3	9.2	3.8	21.6	15.1
Learners with exceptional potential usually desire to learn for the pleasure that they experience while they surpass their personal accomplishments	49.3	11.4	4.9	22.2	12.2
Learners with exceptional potential believe that academic achievement will enable them to obtain a more prestigious job later on	53.5	12.4	5.9	19.5	8.7

Table 4 reveals that slightly more than half, 97 (52.4%), of the teachers strongly agreed with the view that learners with exceptional potential set goals to improve their competencies, as did 17 (9.2%) who agreed. However, only a paltry 8 (4.3%) were undecided; 55 (29.7%) disagreed, whereas 8 (4.3%) strongly disagreed. The researcher also noted that, in comparison with peers, learners with exceptional potential always set goals as a way of improving their competencies in different areas of learning. The researcher observed:

Many learners with exceptional potential usually set targets to master different areas of competency within a certain period of time. Some plan to master number work problems within a day, complete reading a 100-page story book in a day, or memorise a poem within a day.

This implies that goal setting is a major predictor of academic achievement among learners with exceptional potential. This corroborates the findings of a study carried out in South Africa in which Sikhwari (2016) found that setting goals helps in planning activities to know where learners stand, which learners have high achievement needs which are low in achievement and which seems primarily motivated by a need to avoid failure. Sikhwari (2016) further revealed that learners with exceptional potential who are more highly motivated to achieve are likely to respond well to challenging assignments, strict grading, corrective feedback, new or unusual problems, and the chance to try again. These findings point to the fact that learners with exceptional potential who are oriented towards academic achievement feel in control.

The study also found that 112 (60.5%) of the teachers strongly agreed with the view that learners with exceptional potential usually experience pleasure and satisfaction in learning new concepts, with a paltry 14 (7.6%) being in agreement. However, only 41 (22.2%) disagreed, whereas 5 (2.7%) strongly disagreed. This was further supported by 103 (55.7%) of the teachers who strongly agreed that learners with exceptional potential desire to learn for the satisfaction they feel when they are in the process of accomplishing difficult academic tasks, with 15 (8.2%) in agreement. However, 39 (21.1%) disagreed, whereas 18 (9.6%) strongly disagreed. Slightly more than half, 93

(50.3%), of the teachers strongly agreed with the view that, on many occasions, learners with exceptional potential are motivated to learn for the pleasure that they experience in broadening their knowledge about subjects that appeal to them, while 17 (9.2%) agreed. However, 40 (21.6%) disagreed, whereas 28 (15.1%) strongly disagreed.

Table 4 shows that 92 (49.3%) of the teachers strongly agreed with the view that learners with exceptional potential usually desire to learn for the pleasure that they experience while surpassing their personal accomplishments, while 21 (11.4%) agreed. Slightly more than a third, 41 (22.2%) disagreed, whereas 22 (12.2%) strongly disagreed. The study also revealed that 126 (68.1%) of the teachers strongly agreed with the view that, on many occasions, learners with exceptional potential work hard because they consider primary education prepares them for the careers they long for, while 11 (5.9%) agreed. Only 33 (17.8%) disagreed, whereas 9 (5.0%) strongly disagreed.

The majority, 117 (63.2%), of the teachers strongly agreed with the view that learners with exceptional potential are motivated to prove that they are capable of completing school, while 7 (3.8%) agreed. Though only a paltry 43 (23.2%) disagreed, 7 (3.9%) strongly disagreed. The majority, 111 (60.0%), of the teachers strongly agreed with the view that learners with exceptional potential usually believe that when they succeed in primary school, they feel important, while 12 (6.5%) agreed. Only 37 (20.0%) disagreed, whereas 17 (9.2%) strongly disagreed.

During the observation sessions, the researcher noted that learners with exceptional potential feel motivated to learn new ideas. It was observed.

Learners with exceptional potential always felt satisfied and happy whenever they were taught new concepts and had accomplished certain assignments and tasks drawn from the new concepts they learned. They feel good when they try out new ideas, master new skills, and apply unique and new approaches to accomplish tasks.

This indicates that pleasure and motivation to learn new concepts play a crucial role in pushing learners with exceptional potential to achieve in their academic activities. This supports the findings of a study carried out in Tanzania by Christina (2015), which established that achievement-motivated learners with exceptional potential prefer to work on a problem rather than leave the outcome to chance. Christina (2015) noted that achievement-motivated learners with exceptional potential seem to be more concerned with their personal achievement than the rewards of success.

These findings further lend credence to the assertions of Kipkoech et al. (2016), who posit that many learners with exceptional potential are intrinsically motivated by the joy of learning. This indicates that, compared to their peers, learners with exceptional potential possess a desire for or interest in success in academic activities. Besides, they exhibit achievement motivation traits that create a pathway for passion that provides meaning and a clarified sense of identity that develops goal commitment, strategic intent, and a feeling of empowerment.

This attests to the fact that learners with exceptional potential and high achievement motivation are self-confident individuals who function well according to the situation. In other words, a motivated learner with exceptional potential is likely to exhibit self-assurance, a positive outlook, pragmatism, hope, and faith in a bright future, while an individual lacking in achievement motivation would feel pessimism, distrust, and despair. Slightly more than half, 96 (51.9%) of the teachers, were in strong agreement that learners with exceptional potential usually take stock of their academic results so as to improve further, while 16 (8.6%) agreed. However, a small proportion, 56 (30.3%), disagreed, whereas 8 (4.3%) strongly disagreed. The study also found that 99 (53.5%) of the teachers strongly agreed with the view that learners with exceptional potential believe that academic achievement will enable them to obtain a more prestigious job later on, while 23 (12.4%) agreed. However, 36 (19.5%) of them disagreed, whereas 16 (8.7%) strongly disagreed. It was noted that the learners with exceptional potential understood the progress of their mastery of competencies. The researcher observed:

Most of the learners with exceptional potential were able to remember that, at some point, they could read storybooks, understand certain vocabularies, solve basic number work tasks, and give an account of the steps they have undertaken to improve. Most of these students appreciate corrective feedback from their teachers and work towards achieving the desired goals, such as securing a prestigious job in the future.

This further supports the assertions of Sikhwari (2016) that learners with exceptional potential who are more highly motivated to achieve are likely to respond well to challenging assignments, strict grading, corrective feedback, new or unusual problems, and the chance to try again. In summary, these findings underscore the vitality of the ability of learners with exceptional potential to appreciate the value of academic achievement and corrective feedback.

4.4 Inferential Findings on Influence of Achievement Motivation on Academic Achievement of Learners with exceptional potential in Public Primary Schools

To test the null hypothesis, H_{01} : There is a lack of statistical significance in the association between achievement motivation and academic success characteristics among children with exceptional potential in public primary schools in Nairobi County - Information was gathered using a single skilled and exceptional student from each learning institution, resulting in a total of 29 participants. The participants were selected from a sample of public primary schools. The data obtained pertained to the frequency with which these learners engaged in certain activities (often = 3, rarely = 2, and never = 1). The learners exhibit traits of success motivation, which include setting academic objectives and analysing their results in order to make improvements. Additionally, their academic capabilities and achievements are measured at various levels. Scores range from 4 (excellent) through 2 (good) to 1 (below average). Table 5 displays the findings:

Table 5

Frequency of Manifest of Achievement Motivation Characteristics

How Often Learners with exceptional potential Manifest Achievement Motivation Characteristics (X4)	Levels of Academic Competencies (Y)	How Often Learners with exceptional potential Manifest Achievement Motivation Characteristics (X4)	Levels of Academic Competencies (Y)
1	1	3	3
1	3	1	2
1	1	3	4
2	2	2	3
3	3	3	3
3	2	1	2
2	3	1	3
3	4	1	2
2	2	2	2
1	3	2	4
2	2	1	1
1	2	2	3
2	2	1	2
1	2	2	2
3	4		

According to the data shown in Table 5, there is a strong correlation between the presence of success motivation traits in learners with exceptional potential and their exceptional academic skills and achievements. This statement confirms the notion that intellectually gifted learners with superior abilities Learners, who often establish academic objectives and evaluate their progress to make enhancements, have exceptional proficiency in numerical operations, language proficiency, and critical life competencies. The data obtained from the experiment underwent linear regression analysis, and the corresponding outcomes are presented in Table 6.

Table 6

Achievement Motivation Characteristics and Academic Achievement

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.333	.337		3.950	.001
	Achievement Motivation Characteristics	.629	.169	.581	3.714	.001

a. Dependent Variable: Academic Achievement of Learners with exceptional potential

Table 6 shows a linear regression analysis that generated a linear model of the form: *Academic Achievement of Learners with Exceptional Potential in Public Primary Schools* = $1.333 + 0.581$ *Achievement Motivation Characteristics*. These results from the linear regression equation indicate that the coefficient for academic achievement of learners with exceptional potential in public primary attributed to their achievement motivation characteristics is 0.581 (positive). This implies that for every positive manifestation n of achievement motivation traits

and characteristics by learners who are learners with superior abilities, the academic achievement of these learners is expected to improve by a factor of 0.581 (positive coefficient).

The numerical value of 1.333 signifies that achievement by Learners among the brilliant and outstanding within government funded elementary learning centres is influenced by other factors outside their demonstration of achievement motivation traits, which were not included as variables in the study. Table 6 further shows the p-value, 0.001 is less than 0.05, that is, a low p-value ($0.001 < 0.05$). Thus, hypothesis, H01 is rejected because $P < 0.05$. Therefore, the study provides evidence that learners with exceptional potential, who frequently establish academic objectives and engage in result analysis for self-improvement, have higher proficiency in numerical operations, language proficiency, and critical life skills compared to others.

Research has shown that accomplishment and individuality are what drive bright and talented learners, particularly in situations like competition. Motivation is defined as an enduring drive within an individual to attain a level of accomplishment that aligns with a predetermined standard of excellence, particularly in situations including competition. In the context of learners with exceptional potential, accomplishment motivation is associated with personality attributes such as energy, excitement, passion, desires, the drive to succeed, and persistence.

The present study's results support the existing body of literature about the influence associated with motivation depending on how well they did in school for intellectually gifted learners. Numerous studies have examined the correlation between desire and the ability to predict the academic achievements of learners with superior abilities. Lavrijsen et al. (2021) conducted a study to examine the association between various motivational processes and academic achievement in a sizable cohort of seventh-grade children from Flanders. The researchers made adjustments for factors such as IQ and personality. The intellectual capacity and inclination towards cognitive engagement among learners have been found to be significant predictors of academic achievement.

However, even controlling for intelligence and personality, other motivational factors contributed additional and distinct variability in achievement, accounting for around 25% of the explained variance in academic success. Educational confidence, accomplishment aspirations, desire for success, intrinsic drive, and faith in one's own ability to succeed accounted for separate proportions of the variance in academic achievement. The results showed a consistent pattern across different measures of achievement. When academic performance was measured by school grades instead of standardised tests, motivating factors explained a larger portion of the variation.

The propensity towards cognition is more important than conceptions of one's own academic worth, academic pursuits, or educational ability and accomplishment goals. The presence of motivation resulting from achievement serves as a catalyst for enhancing the performance of talented learners. Previous research has shown that a significant number of motivational constructs can predict academic achievement, even when intelligence is taken into account.

Desmet and Pereira's (2021) findings indicate that a significant proportion of learners had positive attitudes towards the Achievement Motivation Enhancement sessions and perceived them as advantageous for engaging in small group discussions on their experiences. Mammadov et al. (2018) noted that learners recognised an improvement in their self-perceptions and identified the advantages of engaging in the monitoring of educational goals, the design of goals, and the practice of self-control abilities.

The research suggests that intrinsic motivation is the primary catalyst for talented learners to exert effort and achieve higher academic performance. Kahyaoglu's (2015) study demonstrates that brilliant and talented learners typically have a propensity for and inclination towards achieving success in academic pursuits. These traits contribute to the development of a sense of purpose and a clear understanding of one's identity, which fosters dedication to goals, strategic thinking, and a sense of empowerment. Skilled individuals with higher standards of accomplishment exhibit self-confidence and demonstrate adaptability in many situations.

Gherasim et al. (2015) suggest that learners with superior abilities who exhibit traits of success motivation tend to demonstrate exceptional educational achievement both in school and nation-wide assessments. Martin (2015) conducted research including 123 primary schools located throughout Australia, indicating that the predominant characteristic observed within the population of individuals with exceptional abilities and talents is their intrinsic motivation to excel in their academic pursuits. This observation suggests that the learner's desire to excel is frequently seen as a pivotal element in academic performance.

Al-Dhamit and Kreishan (2016) argue that achievement motivation among learners with exceptional potential is characterised by a strong desire to attain greatness. Sikhwari (2016) emphasises the importance of understanding the individual standing of learners in terms of their achievement needs, including those with high achievement needs, those with low achievement needs, and those primarily motivated by a fear of failure. Sikhwari (2016) suggests that smart and talented individuals who prioritise academic success exhibit a sense of control. The presence of motivation

serves to maintain the dynamism and self-esteem of learners with exceptional potential. They establish goals that are relatively challenging yet attainable, facilitating the realisation of their objectives.

A study conducted within Kenya demonstrated that learners with exceptional potential and a motivation for accomplishment prefer actively engaging in problem-solving rather than relying on random chance for the outcome. Christina (2015) confirms that learners with exceptional potential who are driven by performance tend to prioritise personal accomplishment over external benefits.

Sambu et al. (2014) demonstrated that the presence of success motivation in talented learners had a positive impact on their academic performance. Sambu et al. (2014) found that those identified as learners with superior abilities had a higher capacity for achieving superior performance compared to others of similar age, background, or educational setting. Kipkoech et al. (2016) found that learners with exceptional potential who exhibit elevated levels of achievement motivation have exceptional academic performance in national assessments. In conclusion, the aforementioned findings provide confirmation that distinct attributes of success motivation are exhibited by learners with superior abilities. Learners serve as predictors of their academic performance within the context of public elementary education.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

According to the study findings, learners with exceptional potential in public primary schools exhibit achievement and motivational characteristics that influence their academic achievement. The study revealed that learners with exceptional potential set goals to improve their competencies. This indicates that the goals that the learners set immensely predict their academic achievement. This implies that learners with exceptional potential who set academic goals and analyse results for improvement register improved academic competencies in primary schools.

5.2 Recommendations

The study recommends that teachers and parents should create an appropriate learning environment for learners with Exceptional potential in public schools to create a positive self-concept to improve their academic achievement. Public school teachers in Nairobi Country should encourage gifted learners to self-regulate their learning environment to facilitate excellent academic achievement among learners with exceptional potential. Finally, the Ministry of Education should provide resource centres where learners with exceptional potential can nurture their competencies and formulate a policy for setting up centres of excellence for placement of learners who have exceptional potential, while the Teachers' Service Commission should undertake capacity building and retraining of teachers on how to handle learners with different forms of giftedness. The Kenya Institute of Curriculum Development should also provide curriculum guides to teachers on how to differentiate the content to meet the needs of learners who have exceptional potential.

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