Teaching Creativity and its Impact on Student Academic Performance: Evidence from Secondary Schools in Garissa Township, Kenya

# Abstract

The purpose of this study was to investigate association between teaching creativity and student academic performance in secondary schools in Garissa Township Sub-County, Kenya. Thus, the study assessed whether teaching creativity determined the student academic performance in secondary schools in Garissa Township Sub-County, Kenya Anchored in the Self-Determination Theory, the research adopted a positivist paradigm and employed a correlational research design. Data were collected from 105 teachers, 9 principals, 9 deputy principals, and the Sub- County Director of Education using structured questionnaires and semi-structured interviews. Given that the population was manageable, the study used census for sampling. Quantitative data were analyzed using descriptive and inferential statistics, including Pearson product–moment correlation, while qualitative data were thematically analyzed. The study findings revealed statistically significant strong positive association between teaching creativity and student academic performance in secondary schools in Garissa Township Sub-County, Kenya (r = 0.65, p < .001). Qualitative data further supported the quantitative findings, revealing that teachers’ creativity was higher and linked to academic performance. The study concludes that teaching creativity significantly enhances academic performance, especially when teachers perceive the system as supportive rather than punitive. The study recommends that Kenyan education policymakers should design strategies for ensuring that they continuously invest in capacity building for the teachers. These strategies are essential for translating creativity into improved learning outcomes in public secondary schools.

*Keywords: Academic Performance, Creativity, Professional Development, Secondary Schools*

# 1. Introduction

Education is one of the most important socio-economic pillars for any society. Many countries are fast competing in the provision of quality education to their citizens in an effort to boost their socio-economic levels. For sustainable development to be realized, quality education is paramount. Teacher appraisal system has been adopted globally in majority of the countries as a means of providing quality education and accountability among employees (OECD, 2013). With the rapid desire to provide high quality education, there is need to introduce various effective and appropriate educational strategies for spurring student’s performance. Thus, education policy makers need to direct their efforts toward making their teachers more innovative and creative. Even though the public secondary school performance have put related strategies in place, many teachers, have unresolved concerns about such strategies and doubt thier value.

# 2. Background to the Study

In order to prepare for future goals and identify the learning institution’s developmental needs, it is also necessary to identify their shortcomings in providing high-quality education (Phillips & Phillips, 2016). Depending on their demands, the majority of nations have had various evaluation regimes. According to Muijs et al. (2014), teacher performance evaluation is crucial for both school improvement and teachers’ professional growth. Student accomplishment metrics must be included as a fundamental part of any teacher evaluation system in all 50 states in the United States. Performance reviews are conducted all year round in China (Zhang, Ng, 2015). In that case, it takes the shape of student evaluations of instructors, data gathering activities, instructional observation, teacher attendance, and task verification (Zhang & Ng, 2015).

According to Clarke and Phelan (2017), teacher creativity in Africa is a methodical, objective way to achieve the best educational results while striking a balance between constructive criticism for credible performance and raising morale and performance in the classroom. DeCenzo et al. (2016) suggest that managers in Nigeria decide how managers create goals and how well they have achieved in relation to those goals. This suggests that it deals with the sedulous evaluation of all teaching activities for teachers qualified to teach. Additionally, it has been crucial for maintaining student safety, which has aided in the implementation of the teacher evaluation system. However, in Garissa County there has been drastic drop in the number of students who proceeds to the institution of higher learning and poor performance of the students. In 2022, the mean stood at 3.1, and from the years 2010 to 2021, the average mean has been 3.5-4.0 translating to a dismal performance (Ministry of Education 2022).

# 3. Statement of the Problem

It has been established that quality education is paramount for sustainable development to be realized, (OECD, 2013). So, every institution needs to establish quality of education through various teacher related strategies (Phillips & Phillips, 2016). Despite having in place such strategies, performance of students in the Kenay education system has been deteriorating; characterised by poor performance of the students (Suter, Aremba & Syonthi, 2022). The poor students’ secondary school academic performance could be as a result of creativity of the teachers. This might culminate into collapse of the education system, chances are that the program itself will fail. However, its is still unclear, the relationship between creativity of the teacher and the wat student performs in the education system. More so, there is limited empirical evidence on creativity of teachers and student performance. Burn (2013) researched on the impact of performance appraisal on teachers’ morale he went ahead to highlight how it affects the teachers. Similarly, Cheruiyot (2021) researched on the influence of TPAD on teachers’ performance in secondary schools in Nandi County. Therefore, this research examined whether there is relationship between teachers’ performance appraisal and students’ performance.)

# 4. Research Hypotheses

H0: Teaching creativity in teaching is not significantly associated with student academic performance in secondary schools in Garissa Township Sub-County

# 5. Literature Review

## **Theoretical review**

The study was anchored on the Self-Determination Theory (SDT) Developed by Ryan and Deci (1985) and revised in the year 2020, SDT posits that human motivation is enhanced when three basic psychological needs t: autonomy, competence, and relatedness are me. In education, environments that satisfy these needs foster intrinsic motivation, leading to higher engagement and performance. SDT informs two aspects of this study: the influence of teacher appraisal perception and the role of creative instruction. When teachers perceive appraisal as developmental, or when they implement creative strategies, these practices support autonomy and competence, boosting motivation and performance. Wanjiku (2021) applied SDT to explore teacher attitudes toward the TPAD system in Kenya. Ryan and Deci (2020) and Kahveci (2023) demonstrated that SDT-aligned environments positively impact teaching and learning.

## **Empirical Review**

Opondo and Amunga (2023) examined the impact of teachers' originality and creativity on student results in public secondary schools in Hamisi Sub-County, Kenya. This research aimed to examine the impact of teachers' originality and creativity on student results in public secondary schools in Hamisi Sub-County, Kenya. The research included 8,662 participants, comprising 52 principals, 511 teachers from the Teachers Service Commission (TSC), 8,095 Form Four pupils, and 4 curriculum support officers, all reflecting the target demographic. The sample size included 368 respondents. The results highlighted the considerable influence of instructors' beliefs and attitudes on the academic performance of children in Hamisi Sub-County, Kenya. Educators who emphasized student success, positively influenced academic performance, and exhibited a dedication to enhancing results fostered a conducive learning environment. Efficient time management strategies, including comprehensive curriculum covering and judicious distribution of instructional time, profoundly impacted students' educational experiences. The study underscored the crucial importance of teachers' innovation and creativity, highlighting engaging pedagogical methods, the promotion of creative thinking, and flexible approaches. Moreover, academic clinics that offer help outside standard hours have significantly influenced academic discussions and improved student conduct.

The research by Ruth, Dick and Dimkpa (2021) investigated the impact of teachers' creativity on the academic achievement of senior secondary school pupils in Port Harcourt Metropolis. The study's population comprised 2,800 educators at public senior secondary schools within the Port Harcourt metropolitan. The study had a sample size of 480 educators. The study's findings, derived from data analysis, indicated that engaging students through enjoyable learning experiences fosters emotional development, enhances cognitive abilities, improves problem-solving skills, and increases focus and attention, all of which are crucial aspects of creativity in the classroom that positively influence students' academic performance. Educators cultivating creative capabilities impact the academic achievement of senior secondary school pupils. The inventiveness of teachers in the classroom positively influenced the academic achievement of senior secondary school pupils. Baradaran et al. (2015) examined the impact of educators' creative training on students' academic performance in secondary schools in Tehran, Iran. A total of 384 students were recruited by cluster sampling. The findings indicated that creativity education for teachers positively influenced students' academic performance

# 6. Methodology

The research was conducted in Garissa Township Sub-County, located in Garissa County, Kenya, It employed the positivist research paradigm, which assumes that reality is objective and can be measured through observable and independent variables (Comte, 1857). The research adopted a correlational research design, which enabled the investigation to examine the relationship between teacher creativity and student academic performance. The target population for this study comprised all 9 secondary school principals, 9 deputy principals, 1 Sub-County Director of Education (SCDE), and 105 teachers drawn from the 9 public secondary schools within Garissa Township Sub-County. The study employed a census sampling method, whereby all members of the target population were included in the study due to their manageable size and direct relevance to the research objectives. The research employed close-ended questionnaires to collect data from 105 teachers in public secondary schools within Garissa Township Sub-County. To supplement the data collected through questionnaires, the researcher also conducted interviews with school principals, deputy principals, and education officials.

**Results**

# **7. Questionnaire Validity and Reliability**

To ensure content validity, supervisors and curriculum specialists were engaged to critically review and refine the survey questions, ensuring that they accurately reflected the study’s objectives and covered all relevant areas. To test the reliability of the questionnaire, Cronbach’s alpha reliability coefficient was employed. The researcher selected one public secondary school from the neighboring Tana River Sub- County due to its proximity to Garissa Township Sub-County and their shared geographical and contextual characteristics. According to Oso (2016), a data collection instrument is considered reliable if it yields a Cronbach’s alpha value of 0.70 or higher. In line with this benchmark, the study aimed for an alpha value of at least 0.70. All the variables in the instrument recorded Cronbach’s alpha values exceeding this threshold, indicating acceptable internal consistency.

# 8. Presentation of Data Analysis for Each Hypothesis

Data analysis is the procedure for summarizing large amounts of data on variables in a way that they answer research questions (Kothari, 2004). Quantitative data were analyzed using descriptive statistics, including means and standard deviations, to summarize trends and patterns within the dataset. Inferential statistics were applied through Pearson’s product-moment correlation analysis to determine the strength and direction of relationships between variables. The analysis produced correlation coefficients (r) and p-values, with statistical significance tested at the 5% level (α = 0.05). In addition, qualitative data from interviews were analyzed thematically, allowing for the identification of recurring patterns and insights that enriched the interpretation of quantitative findings

The study examined the influence of creativity in teaching on student academic performance in secondary schools within Garissa Township Sub-County, Kenya. To assess this, the respondents’ perceptions of various creative teaching practices were measured using a Likert- type ordinal scale, which allowed respondents to rate the extent to which they perceived creativity in teaching. The scale ranged from 1 (Very Low) to 5 (Very High. The study explored various components of creativity in teaching to better understand how different creative practices in the classroom are rated and their possible contribution to academic performance to produce Table 1.

Table 1: Components of Creativity in Teaching

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Components  | N | Minimum | Maximum | Mean | STD Deviation |
| Application of new skills and techniques | 96 | 2 | 5 | 3.3646 | 0.60035 |
| Preparation of teaching/learning aids | 96 | 2 | 5 | 3.5625 | 0.77883 |
| Use of ICT to access Online Educational Resources | 96 | 2 | 5 | 3.0625 | 0.53925 |

As shown in Table 1, the component welcoming new challenges received the highest rating, with a mean score of 3.6. This suggests that teachers are relatively open to new challenges in their teaching methods, which is a key aspect of creativity, fostering dynamic and engaging learning environments. The component preparation of teaching/learning aids received a moderate rating of 3.3, indicating that while teachers apply new strategies and skills in their preparation of teaching aids, there is still room for further enhancement in this area. The component use of ICT to access online educational resources received the lowest rating, with a mean score of 3.1, suggesting that while teachers do show some level of use of ICT to access online educational resources, they may face challenges in accessing online educational resources for teaching and learning. The ratings indicate a modest view of creativity in teaching in Garissa Township Sub- County, Kenya. The teachers’ ability to embrace new challenges is relatively strong, but areas such as the preparation of teaching aids and accessing online educational resources could be further developed. These moderate ratings may, in part, explain the moderate academic performance observed in the region, as more creative and adaptive teaching methods could lead to improved student outcomes.

To assess the relationship between creativity in teaching and student secondary school academic performance in Garissa Township Sub-County, Kenya, the study tested the Hypothesis ;

*H0: Teaching creativity in teaching is not significantly associated with student academic performance in secondary schools in Garissa Township Sub-County*

A Pearson product–moment correlation was performed to investigate the association between teachers’ creativity in teaching and students’ academic performance in secondary schools to produced Table 2.

Table 2: Pearson’s Correlation Analysis of the Creativity in Teaching and Student Academic Performance

|  |  |  |
| --- | --- | --- |
|   |   | Creativity in Teaching |
| Student Academic Performance | Pearson Correlation | .651\*\* |
|  | Sig. (2-tailed)  | 0.000 |
|   | N  | 96 |

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The analysis revealed a moderate-to-strong positive relationship, r(94) = .65, p < .001 (two-tailed).¹ This finding indicates that higher levels of instructional creativity are linked to higher student achievement. The coefficient of determination (r² = .42) shows that approximately 42 % of the variance in academic performance can be accounted for by differences in teachers’ creative teaching practices, highlighting the educational value of fostering creativity in classroom instruction.

From the interview schedule, all deputy principals emphasized the significant role that performance appraisal plays in improving secondary school academic performance. They pointed out that performance appraisal scores directly influence the quality of teaching and, consequently, student outcomes. However, it was reported that teachers exhibited reluctance to undergo the appraisal process. Four deputy principals and four principals partially attributed teachers’ reluctance to undergo the appraisal process to the inflexibility of teachers, whereas five deputy

principals and three principals reported that teachers felt uneasy when faced with new challenges that required them to adopt new teaching methods. One principal said that ‘teachers were more comfortable with established methods and were hesitant to change their approaches when required to do so’ while another principal responded that ‘teachers felt evaluation on creativity in teaching as inherently subjective leading to perceptions of unfair or inconsistent evaluations for the sake of improving performance’.

To address these concerns, the deputy principals and principals collectively proposed that there should be continued support for teachers to adapt to changing environments. This support would include providing the necessary resources, Professional development opportunities, and reassurance to help teachers embrace new techniques and strategies. By offering this assistance, the leaders believed that teachers would be better equipped to navigate the evolving demands of the education system, ultimately leading to improved performance appraisal scores and better academic performance in secondary schools.

# 10. **Discussions**

The finding of a moderate to strong positive correlation between teacher creativity in teaching and student academic performance (r = .65, p < .001) reinforces growing empirical evidence that creative instructional strategies significantly enhance learning outcomes. Studies in various educational contexts have echoed this association. For example, Willerson et al. (2016) observed that classrooms where teachers employed innovative pedagogical methods recorded not only improved academic performance but also higher levels of student engagement and self-efficacy. Similarly, a large-scale study in Australia found that teacher creativity predicted students’ performance in standardized literacy and numeracy assessments, even after controlling for personality traits and prior academic ability (Tan et al., 2025). These findings suggest that creative teaching fosters deeper understanding and sustained motivation, both of which are critical for academic success. Theoretically, this relationship is well-grounded in Self-Determination Theory (SDT), which posits that learning environments that support autonomy, competence, and relatedness enhance intrinsic motivation (Ryan & Deci, 2020). Creative teaching often provides opportunities for open-ended thinking, student choice, and real-world application of knowledge, elements that satisfy these psychological needs. When students are intrinsically motivated, they are more likely to exert effort and persist in learning tasks, which ultimately boosts academic achievement. Additionally, the Componential Model of Creativity (Amabile, 2022) emphasizes the importance of domain-relevant skills, creative thinking processes, and intrinsic task motivation. Teachers who exhibit creative instruction bring all three components into the classroom, enabling students to learn in more stimulating and cognitively demanding environments.

However, the relationship between creativity and student performance is not uniformly positive in all contexts. Some recent studies have identified limitations and nuances. A study by Liu et al. (2023) found that while teacher creativity enhanced students’ engagement and emotional well- being, its direct impact on academic performance was moderated by factors such as curriculum rigidity and assessment demands. Similarly, research conducted in China using PISA data (Wang

& Zhang, 2025) indicated that excessive teacher workload could inhibit the consistent application of creative practices, thereby weakening their effect on student outcomes. This suggests that for creativity to be effective, teachers must be supported by flexible curricula and manageable work conditions.

Furthermore, content knowledge remains a foundational requirement for effective instruction. A study by Opondo and Amunga, (2023) showed that while creativity in teaching contributed positively to student learning, it could not compensate for gaps in teachers’ subject matter expertise. This highlights the importance of balancing innovative teaching strategies with strong curriculum knowledge to maximize instructional effectiveness. So, the current study’s findings are supported by a robust body of recent research and are consistent with motivational and creativity theories. The evidence suggests that teacher creativity is a key contributor to student academic performance, particularly when it is implemented within supportive school structures. However, its effectiveness may depend on contextual factors such as teacher workload, curriculum flexibility, and content expertise. Educational stakeholders should therefore consider fostering teacher creativity not in isolation, but as part of a broader strategy that includes professional development, workload management, and curriculum reform

# 11. **Summary and Conclusions**

The findings of this study demonstrate that teacher creativity in instruction significantly enhances student academic performance, explaining 42% of the variance in outcomes. Creative teaching strategies, such as problem-based learning, integration of technology, and open-ended questioning, have been shown to stimulate student motivation, engagement, and deeper understanding. Grounded in Self-Determination Theory and the Componential Model of Creativity, this study confirms that innovative pedagogical approaches support autonomy, competence, and intrinsic motivation. Nevertheless, creativity alone cannot guarantee success if it is not supported by content knowledge, flexible curricula, and manageable workloads. As such, fostering teacher creativity requires more than isolated training; it necessitates systemic support, curriculum reform, and reduction of administrative demands. Education leaders must view creativity as part of a broader instructional improvement framework. When teachers are empowered with both the tools and time to innovate, their creativity can be harnessed to drive meaningful, long-term academic gains for learners

# 12. **Recommendations and Further Research**

The study recommends that for improving creativity in teaching and enhance student academic performance in Garissa Township Sub-County, Kenya, given the moderate ratings for the application of new skills and flexibility in unfamiliar situations, it is essential to provide teachers with ongoing training and workshops focused on innovative and creative teaching methods. Further, schools should promote a culture that encourages teachers to embrace new challenges and view them as opportunities for growth. This can be achieved by providing support and resources for teachers to experiment with new teaching techniques, fostering a sense of professional autonomy and confidence in their ability to adapt to new situations. Creativity in teaching was found to influence student performance in this study. Future research could explore the role of collaborative teaching practices such as team-teaching and peer observations in fostering creativity. Investigating how teachers collaborate to innovate and share creative strategies could provide additional insights into enhancing teaching effectiveness and student outcomes.

**Disclaimer (Artificial intelligence)**

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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