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Effect of Peer Learning Strategies on Students' Academic Performance at Public Senior Secondary Schools in Hodan District, Mogadishu, Somalia

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Abstract

The paper investigated effect of peer learning strategies on academic performance of students at public senior secondary schools in Hodan District, Mogadishu, Somalia. The objective of the study was to determine the effect of peer-learning strategies on students' academic performance at public senior secondary schools in Hodan district, Mogadishu Somalia. A Corresponding research question and null hypothesis were formulated to guide the investigation. The study used Quasi Experimental design which adopted post-test only. Two groups which were Experimental and Control Groups were formed. The students in experimental group were taught using peer learning method while in the control group, the students there were taught using traditional teaching method. The population of the study comprises of public senior secondary schools in Hodan District, Mogadishu, Somalia. Two classes consisting of 209 students both male and female respondents out of a total population of 1,035 were used as a reliable sample of the study. The instrument used in the collection of data was a Performance Test (PT). T-test independent sample was used to test the hypothesis formulated and it was found that there was a significant difference in academic performance between senior secondary school students taught using peer learning strategy and those taught using traditional learning strategy in public secondary schools. It also found that there is no significant difference in academic performance between male and female senior secondary school students taught using peer learning strategy and those taught using traditional learning strategies in public senior secondary schools, Hodan District. It was recommended that senior secondary school teachers should encourage learners to adopt peer learning strategy or collaborative means in acquiring more practical knowledge as against to the traditional methods that generally relied on teachers. It is also emphasized that students at senior secondary schools shall be guided to stimulate actions and become innovative towards different aspects in their training by embracing the use of peer learning strategy for both male and female group of learners.

Keywords: Academic, Method, Peer-learning Strategies, Performance, Teaching

Introduction

The importance of students' learning strategies on their academic performance cannot be overemphasized. Peer learning strategies have been profound and multifaceted, impacting educational systems

worldwide. The initial efforts to measure the social impact of education scientifically began in England during The Enlightenment. Scholars in the late 17th and 18th centuries employed scientific methods to study natural order, laying the groundwork for subsequent

educational assessments (Hargis, 2020). E. L. Thorndike's subsequent studies at prestigious universities such as MIT, the University of Cincinnati, and Columbia University further advanced the use of objective testing in higher education.

Somalia's education sector has endured significant crises due to decades of political turmoil and instability. The Ministry of Education (MOE, 2018) identified several weaknesses in the education system, including an overemphasis on passing examinations and insufficient assessment of practical skills and social attitudes. The 1987 review by the MOE, led by Professor Ssentezakajubi, culminated in the 2018 Government White Paper, which advocated for comprehensive education reform (MOE, 2018). The establishment of the National Assessment of Progress in Education (NAPE) in 2019 aimed to monitor educational standards and track changes over time. Despite these efforts, Somalia's curriculum assessment system remains fraught with challenges, including inadequate testing of reasoning and problem-solving skills and a lack of continuous classroom assessment (MOE Policy Report, 2018). Addressing these issues is crucial for improving student learning strategies, particularly in public secondary schools.

The historical and ongoing challenges in Somalia's education system especially in teaching and learning of Islamic studies underscore the need for revisiting curriculum assessment practices. Enhancing these practices via the recommendation of suitable learning strategies in teaching Islamic studies can influence students' learning strategies in the subject, promoting a more holistic and effective educational experience among the Islamic studies teachers. This requires a concerted effort to implement diverse and comprehensive assessment methods that go

beyond rote learning and foster critical thinking, problem-solving, and practical skills. The global, regional, and local contexts highlight the evolving nature of curriculum assessment and the critical role of peer learning strategies in enhancing educational outcomes. By addressing the identified weaknesses and leveraging effective assessment and peer learning practices, educational systems can better prepare students for the demands of the modern world.

Peer learning strategies involve students teaching and learning from each other, fostering a collaborative and supportive educational environment. These strategies have been shown to improve academic performance, social skills, and overall student engagement (Johnson, 2013; Hills, 2020).

PAL involves students working together to help each other understand and apply concepts. This method not only enhances academic achievement but also promotes social interaction and communication skills. Research has shown that PAL can result in both academic and social gains, making it an effective strategy in diverse educational settings (Johnson, 2013). Cross-age tutoring, where older students tutor younger ones, and same-age peer tutoring, where students of the same age group assist each other, are effective in reinforcing learning through teaching. These methods leverage the cognitive and social proximity of peers, making it easier for students to communicate and understand each other's challenges (Briggs, 2013; Goslin, 1986).

Structured peer tutoring involves formal guidelines and training for tutors, ensuring

consistency and focus in the tutoring process. Incidental peer tutoring, on the other hand, occurs spontaneously and informally, providing real-time support as students interact naturally. Both forms of peer tutoring can significantly enhance the effectiveness of formative assessments by providing continuous and context-specific feedback (Stiggins, 2017).

The education system in Hodan district faces significant challenges, including political instability, inadequate resources, and an overemphasis on examinations (MOE, 2018). These challenges hinder the effective implementation of continuous assessments and the adoption of innovative learning strategies. Teachers in Hodan often rely on rote learning and unoriginal tests, limiting the development of critical thinking and problem-solving skills (Hill, 2016). The overemphasis on summative assessments further exacerbates these issues, as it prioritizes grading over learning (Sadler, 2018).

Implementing peer learning strategies in Hodan's public secondary schools could address some of these challenges. Peer learning can reduce the teacher's burden by enabling students to support each other, fostering a collaborative learning environment that promotes deeper understanding and retention of knowledge (Briggs, 2013; Johnson, 2013). Moreover, peer learning strategies can provide the much-needed continuous feedback that is essential for effective formative assessment. The integration of peer learning strategies into curriculum assessment practices holds significant promise for improving educational outcomes in Hodan district's public secondary schools. By leveraging the

strengths of formative assessments and the collaborative nature of peer learning, educators can create a more dynamic and supportive learning environment. This approach not only addresses the current challenges but also aligns with the broader goals of modern education, which emphasize critical thinking, problem-solving, and lifelong learning.

Academic self-concept, according to Gbadamosi and Ayobami (2015), refers to the students' belief about their academic abilities and competences. Some researchers suggest that academic self-concept develops from the age of three to five as a result of the parents' influence and educators. Gbadamosi and Ayobami (2015). Markus and Nurius (2010) has on this view emphasized that children assess their academic abilities by comparing themselves to their age line friends.

Klomsten, Skaalvik, and Espnes (2004) some researchers suggested that to raise academic student's abilities as to be able to stand before his peers to teach, children need to be provided with specific feedback by their parents and teachers. Sadhwani (2012) opined that learning opportunities should be made available in groups rather than individual. And that should be free from any gender discrimination, thereby discovering the various abilities of learners.

Statement of the Problem

Despite global advancements in the use of peer-learning method and its increasing recognition as effective educational tools, public secondary schools in Hodan district, Somalia, continue to grapple with significant challenges in these areas. Historically, the evolution of educational assessments from the enlightenment era to the modern day has

profoundly impacted how students' academic performance are when the teachers employed peer learning strategy in teaching various subjects at secondary schools. The shift towards standardized testing in the early 20th century, championed by educational institutions, aimed to create reliable and comprehensive measures of student achievement in Islamic Studies. However, this approach has not fully addressed the diverse and dynamic needs of contemporary learners, especially in regions like Africa where students' academic performance face number of challenges. In Somalia, the education sector has suffered from prolonged political instability, leading to an overemphasis on passing examinations and inadequate assessment of practical skills and social attitudes. The Ministry of Education's efforts to reform the system, including the establishment of the National Assessment of Progress in Education (NAPE), have yet to resolve issues related to the effective testing of reasoning and problem-solving skills and the implementation of continuous classroom assessments.

The Hodan district in particular exemplifies these struggles, with the adaptation of peer teaching method often failing to go beyond rote learning to foster critical thinking and problem-solving skills. The adoption of peer learning strategies, which have shown significant promise globally, remains underdeveloped. Peer learning, involving students in collaborative activities and knowledge exchange, can enhance educational outcomes without direct teacher intervention. However, in Hodan's public senior secondary schools, these strategies are not systematically implemented, limiting their potential benefits. Given these historical, theoretical, and contextual challenges, there is a pressing need to identify the relationship between peer

method of teaching and the academic performance of students in Hodan district's public senior secondary schools.

Objectives:

- 1) To examine the effect of peer learning strategies on students' academic performance.
- 2) It also seeks to find out how effective peer learning strategies can improve educational outcomes of students in Hodan district, Mogadishu Somalia.

Research Questions:

The study was designed to answer the following:

- 1) What is the effect of peer-learning strategies on students' academic performance in Hodan district, Mogadishu Somalia.
- 2) How does peer-learning strategies can improve educational outcomes of students in Hodan district, Mogadishu Somalia.

Hypotheses:

- 1) There is no significant difference in academic performance between senior secondary school students taught using peer learning strategy and those taught using traditional learning strategies in public senior secondary schools, Hodan District.
- 2) There is no significant difference in academic performance between male and female senior secondary school students taught using peer learning strategies and those taught using traditional

learning strategies in public senior secondary schools Hodan District.

Methodology:

This research was conducted in Hodan District, a district in the southeastern Banaadir region of Somalia. It is a neighborhood in the northwestern part of Mogadishu. This area is chosen because it dwells the majority of public schools whereby the researcher selects the two public secondary schools as units of analysis purposely for data collection. The research design used was Quasi -Experimental Design involving only post-test. Two groups were involved in the research. They are experimental and control groups. Two classes of students were used for the study,

in experimental group, the number of students there was 107 and in the control group, the number of students were 102. The researcher gave treatment to the group by teaching the students using peer strategies while in control group, traditional teaching strategy was used. After six weeks of the treatment, post-test was conducted to examine effectiveness of the teaching strategy of peer-ship teaching method of teaching.

Results:

To answer this research question, data generated using Performance Test (PT). T-test independent sample was used to test the hypothesis and the findings were used to draw Table 1

Table 1: Independent t test result for difference in academic performance between students taught using peer learning strategy and those taught using traditional learning.

Gender	N	X	Std. Deviation	Df	t-value	P-value (2-tailed)	Decision
Male	192	45.43	7.92	382	3.331	0.038	Rejected
Female	192	31.81	6.31				

According to Table 1, a t-value of 3.331 was calculated and a p-value of 0.038 was observed for the degree of freedom of 382. The computed p-value of 0.038 was less than the 0.05 alpha level of significance indicating significant difference in favour of those students taught using peer ship learning strategies. Hence, the null hypothesis which stated that there is no significant difference in academic performance between secondary school students taught using peer learning strategy and those taught using traditional learning strategies in public secondary schools, Hodan district was rejected. Their average achievement (45.43v31.81) shows that, the significance difference is in favour.

The findings on peer learning strategies and academic performance in public senior secondary schools in Hodan district aligned well with the existing literature. Peer learning strategies enhanced students' academic performance, promote critical thinking and increased motivation among senior secondary school students. Additionally, the teacher's motivation also plays crucial role in the effectiveness of these strategies, underscoring the importance of supporting and incentivizing students' academic performance. Overall,

integrating peer learning into the assessment process and ensuring teachers' motivation can significantly improve student learning outcomes. To answer this research question, data generated using Performance Test (PT). T-test independent sample was used to test the hypothesis and the findings were used to draw Table 2.

i. independent sample t test for there is no significant difference in academic performance between male and female secondary school students taught using peer learning strategy and those taught using traditional teaching methods in public secondary schools, Hodan district.

Table 2: Performance Test (PT). T-test between Male and Female Students Taught Using Peer-Learning Strategies and Traditional Teaching Methods In Public Secondary Schools, Hodan District.

Gender	N	X	Std. Deviation	Df	t-value	P-value (2-tailed)	Decision
Male	192	45.43	7.92	382	3.331	0.038	Accepted
Female	192	31.81	6.31				

Independent sample t test was conducted to determine difference in academic performance between male and female studies between secondary school students taught using peer learning strategy and those taught using traditional learning strategies in public secondary schools, Hodan district ($0.038 < 0.05$). Hence, the null hypothesis which stated that there is no significant difference in academic performance between male and secondary school students taught using peer learning strategy and those taught using traditional learning strategies in public secondary schools, Hodan district was accepted ($43.43 > 44.81$) and this shows that, the significance difference is not in favour of any gender.

The findings on the significant difference in academic performance between male and secondary school students taught using peer learning strategy and those taught using traditional learning strategies in public senior secondary schools, Hodan District has reflected broader educational views and research on gender difference and peer learning strategies involving male and female learners and that would significantly enhance strong relationship with an improved test performance at secondary schools in Hodan District and beyond.

Discussion:

The findings shows that peer learning strategy moderately enhance students' understanding of curriculum content (Mean: 2.7847). It supports the idea that students can independently explain some concepts within themselves and reinforce their comprehension (Johnson, 2023; Jellison et al., 2015, 2017). Peer learning can potentially promote collaboration in time of learning assessments (Mean: 2.4965). The findings also aligned with the literature indicating that peer-learning strategies can assist in fostering social interaction and effective communication skills through debate which are essential for collaborative learning (Briggs, 2023; Gogus, 2022). Although, the mean score is relatively low (Mean: 2.2153), the findings further suggested that peer learning strategy can enhance and advance students' participation in academic activities; and that is supported by the research pointed the peer learning method enhances motivation and active participation at school settings (Johnson, 2023; Jellison et al., 2017). Moreover, peer learning assist in exam preparation (Mean: 2.8333), as learners independently asses their own performance (Jellison et al., 2015; Briggs, 2023). Some assertions therefore exerted that teacher records an improved performance in students who participated in collaborative learning activities (Mean: 3.0694). This also is consistent

with the evidence which recommend peer learning strategies as media that can improve academic outcomes (Johnson, 2023; Jellison et al., 2015).

Conclusion

Peer learning strategy was one of the strategies used by secondary school teachers in which a teacher allows students actively learn from one another. The method advances the spirit of team work and collaboration between learners as they are fully involved in the curriculum delivery. The result from the analyses indicated that this type of learning strategy was significantly effective because students taught using the strategy academically performed better than those taught using traditional teaching methods. Moreover, such teaching strategy was suitable in teaching both male and female learners because no significant difference found in the academic performance of male and female students taught using peer teaching-learning strategy.

Recommendations:

- 1) Senior secondary school teachers should employ the use of peer teaching strategy in their various lessons delivery to students as such would encourage the target learners to embrace various techniques for collaborative learning at senior secondary schools in Hodan district and many other parts of Somalia and beyond.
- 2) Since no significant difference found in the academic performance between male and female students, it was recommended that senior secondary school teachers should consider and embark on the use of this strategy in teaching as the method was insensitive to gender discrimination at senior secondary schools in Hodan district and many other parts of Somalia and beyond.
- 3) It was also recommended that this piece of research should serve as turning points of

many other studies on various forms of peer learning techniques as the method generally promote learners' competencies.

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