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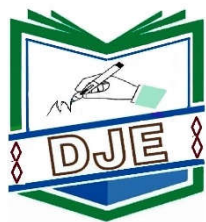
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DILLA JOURNAL OF EDUCATION

**A PEER REVIEWED BI-ANNUAL JOURNAL OF DILLA
UNIVERSITY**

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Message from the Editor-in-Chief

I am pleased to introduce the release of Volume 2, Issue 1 of the *Dilla Journal of Education*, a peer-reviewed bi-annual publication of Dilla University. This issue presents a diverse collection of articles that delve into critical aspects of education within Ethiopia.

On behalf of the editorial board, I invite you to explore the research presented, which examines topics such as principals' leadership styles and their impact on teacher organizational commitment, predictors of risky sexual behavior among trainee teachers, the challenges and practices of teacher performance appraisal in primary schools, the repercussions of higher education reform on mathematics students, and perspectives on principal power in secondary schools. It is my hope that this issue provides valuable insights, stimulates further discussion, and encourages continued research within the Ethiopian education landscape. I encourage you to engage with these articles and contribute to the ongoing dialogue surrounding educational improvement.

Finally, I extend my sincere gratitude to the authors for contributing their valuable research, to the reviewers for their rigorous and insightful feedback, and to the dedicated members of the editorial team for their tireless efforts in bringing this issue to fruition. Your commitment to scholarly excellence is highly appreciated.

Daniel Gebretsadik (PhD, Associate Professor)

Editor-in-Chief

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Principals' Leadership Styles and Secondary School Teachers' Organizational Commitment in Ethiopia

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Abstract

This study investigates how principals' leadership behaviors influence teachers' organizational commitment within selected Ethiopian secondary schools. Drawing on the Full Range Leadership framework and the three-component model of organizational commitment, the research examines the relative contribution of transformational, transactional, and laissez-faire leadership styles to affective, continuance, and normative commitment. A quantitative cross-sectional design was implemented using data collected from 287 teachers selected through stratified random sampling from six administrative regions. Leadership behaviors were measured using the Multifactor Leadership Questionnaire (Bass & Avolio, 1997), while commitment dimensions were assessed through the Organizational Commitment Questionnaire (Allen & Meyer, 1990). Descriptive statistics and Pearson's correlation analysis were conducted to determine patterns and associations. The results indicate that transactional leadership practices were more prominently perceived than transformational behaviors. Normative commitment emerged as the strongest dimension of organizational commitment, followed by continuance and affective commitment. "Transformational and transactional leadership styles" demonstrated statistically significant positive relationships with all commitment dimensions, "whereas laissez-faire leadership" displayed weak or negative associations. The findings suggest that structured performance expectations and exchange-based leadership practices coexist with motivational leadership processes in shaping teachers' institutional attachment. Strengthening transformational competencies while maintaining constructive accountability mechanisms may enhance teachers' commitment within Ethiopian secondary schools.

1 Introduction

1.1 Background of the Study

Educational organizations across the world continue to struggle with achieving their intended goals despite having access to financial, material, and technological resources. While infrastructure and capital are important, institutional effectiveness ultimately depends on how well human resources are engaged and sustained (Gberevbie, 2017). In school settings particularly, the commitment and dedication of teachers constitute a decisive factor in determining whether educational objectives are realized.

Teacher organizational commitment does not emerge in isolation. It is shaped by multiple organizational conditions, including reward systems, professional development opportunities, work climate, alignment with institutional values, recognition practices, and overall job satisfaction (Armstrong & Taylor, 2014; Popli & Rizvi, 2016). Among these influences, leadership consistently appears as the most influential determinant of teachers' commitment levels. Empirical investigations have demonstrated a strong association between the way leaders exercise authority and the extent to which staff members internalize institutional goals (Trot-

tier, Van Wart, & Wang, 2008; Yasir *et al.*, 2016).

Within secondary schools, principals function not merely as administrators but as strategic leaders who shape the professional environment in which teaching and learning occur. Their role involves guiding instructional improvement, restructuring ineffective routines, and cultivating collaborative cultures that support academic success. Leadership practices therefore directly influence the teaching–learning process and school effectiveness (García-Morales, Lloréns-Montes, & Verdú-Jover, 2008). Because principals differ in how they interact with teachers, each school environment reflects a distinct leadership orientation that shapes motivation, morale, and institutional climate.

However, not all leadership approaches yield positive outcomes. Authoritarian or rigid management practices can generate resistance, reduce collegial harmony, and weaken teachers' professional engagement (Akinbode & Fagbohunde, 2012). When leadership behaviors are perceived as unsupportive, teachers may experience reduced attachment to their institutions and diminished motivation, even when alternative employment options are limited (Nasuridin *et al.*, 2014).

Extensive scholarship on school leadership has categorized leadership behaviors into identifiable styles (Sudha, Shahnawaz, & Farhat, 2016; Yukl, 2013; Kelly & MacDonald, 2019;). The most widely applied theoretical model is the Full Range Leadership (FRL) framework, which differentiates transformational, transactional, and laissez-faire leadership patterns (Rukmani, Ramesh, & Jayakrishnan, 2010; Rehman *et al.*, 2012; Abasilim, 2014). Parallel to this, organizational commitment research commonly conceptualizes commitment in three dimensions: affective, continuance, and normative (Othman *et al.*, 2013).

Prior empirical evidence suggests that transformational and transactional leadership behaviors are generally associated with stronger levels of employee commitment, whereas laissez-faire leadership tends to weaken attachment and loyalty (Abasilim *et al.*, 2018b; Garg & Ramjee, 2013; Dariush *et al.*, 2016; Fasola *et al.*, 2013; Wiza & Hlanganipai, 2014; Abasilim *et al.*, 2018a).

Despite growing international evidence, limited contextualized research has examined how these leadership patterns operate within Ethiopian secondary schools. Given ongoing challenges such as teacher turnover, motivation gaps, and inconsistent academic performance, understanding the leadership–commitment relationship remains critically important. This study therefore investigates how “principals’ leadership styles influence teachers’ organizational commitment in Ethiopian secondary schools using the Full Range Leadership and Organizational Commitment frameworks”.

1.2 Statement of the problem

Schools are the main organizations in the instructional framework. A central figure who has a significant degree of inspiration is expected to satisfy the objectives of the learning process. Researchers in organizational commitment show that principals play an extraordinary role in raising the responsibility of teachers (Aydin, Sarier, and Uysal, 2013). Principals perceive teachers' viability and proficiency as their top priorities when it comes to achieving school goals. The principal is responsible for everything that occurs in the school, and the way he or she works with the staff and interacts with them affects how satisfied the teachers are with their work and how they feel about their commitments to the school, to their profession, and teaching.

Moreover, a proficient and talented teacher is expected to accomplish school objectives. Be that as it may, how to use and prepare quality teachers matters. Enlisting, choosing, arranging, and setting representatives are, by all accounts, not the only basic issues for the accomplishment of school objectives. To use such assets, leadership style is the essential and most significant element for the ideal usage of the labor force, which is an impression of organizational responsibility.

As a result of different investigations by researchers, organizational commitment (OC) has crucial consequences for teachers and schools. According to Aydin, Sarier, and Uysal (2013), schools are moving “toward structures in which rank” denotes responsibility rather than “authority, and the supervisor’s goal” is to convince rather than command. As a result, principals need to persuade their subor-

ordinates, colleagues, and superiors to support their goals and urge them to follow through with their decisions to be effective. Similarly, the organization must understand what factors have a significant impact on teacher dedication.

Furthermore, for a school to successfully implement plans, establish a competitive edge, and optimize human resources, leadership styles that foster teacher dedication are critical. As a result, if the state of commitment is the functional product of the leadership style in existence, committed teachers are a crucial success factor for schools to reach their targeted goals. Leadership styles are also important for the school's effectiveness since they motivate teachers and communicate the school's strategic goals and policies (Keskes, 2014; Kelly & MacDonald, 2019).

Ethiopian secondary schools put a strong emphasis on delivering top-notch instruction, research, and development. The organizational culture, teacher-motivation strategies, and rules and regulations of these institutions are distinctive. A deeper understanding of the relationship between leadership styles and organizational commitment is required to develop a leadership style that would encourage and strengthen organizational commitment at the school level.

3,739 secondary schools in Ethiopia offer instruction. The main issues that secondary schools in the nation have had to deal with are low student academic achievement, high teacher turnover, a lack of motivation and commitment on the part of teachers, a lack of communication between school principals and the administrative and teaching staff, and high rates of dropout and repetition.

As a result, this article tried to address the following crucial questions:

1. What type of leadership style is most common in Ethiopian secondary schools?
2. How committed are secondary school teachers in Ethiopia?
3. How much do leadership styles influence teachers' commitment in Ethiopian secondary schools?

1.3 Literature review

Ineffective leadership practices within schools have been linked to teacher dissatisfaction and withdrawal behaviors. Research consistently demonstrates that transformational leadership plays a significant role in strengthening teachers' organizational commitment, particularly during periods of educational reform and institutional change (Mowday, 1998; FDRE, 1994; Mottoh, 2015). Principals who articulate a compelling vision, encourage innovation, and provide individualized consideration tend to foster stronger professional attachment among teachers.

Transformational leadership strengthens commitment through several mechanisms. It aligns teachers' efforts with institutional goals, reinforces shared values, and cultivates intrinsic motivation by recognizing individual potential (Keskes, 2014). By involving teachers in decision-making processes and encouraging intellectual stimulation, transformational leaders create a sense of ownership that enhances emotional and moral commitment to the school.

In contrast, evidence regarding transactional leadership has been mixed. Some studies suggest limited or weak associations between transactional behaviors and commitment dimensions (Hayward, Goss, & Tolmay, 2004). Nevertheless, transactional leadership—particularly contingent reward practices—can provide structural clarity and reinforce performance expectations, which may indirectly sustain certain forms of commitment.

Meta-analytic and empirical investigations affirm that transformational leadership generally demonstrates stronger and more consistent relationships with organizational commitment than laissez-faire leadership (Yukl, 2013). Laissez-faire leadership, characterized by passivity and avoidance of responsibility, is often negatively associated with staff morale and institutional loyalty.

Organizational commitment itself has been conceptualized through multiple frameworks. Meyer and Allen (1990) identified "affective, continuance, and normative commitment as distinct yet related dimensions. Affective commitment reflects emotional attachment; continuance commitment relates

to perceived costs of leaving; and normative commitment reflects a sense of obligation to remain". In educational contexts, Singh and Billingsley (1998) further emphasized teachers' commitment to students, the profession, and the institution as critical components of school effectiveness.

High teacher commitment is linked to improved instructional quality, reduced absenteeism, lower turnover rates, and stronger student outcomes. Conversely, weak commitment is often reflected in disengagement behaviors and reduced institutional participation. Given the central role of school principals in shaping working conditions, leadership style remains a decisive predictor of teachers' organizational commitment.

The present study is anchored in two complementary theoretical traditions: the Full Range Leadership model (Bass & Avolio, 1997) and the Three-Component Model of Organizational Commitment (Allen & Meyer, 1990). Rather than treating these frameworks as abstract taxonomies, they are employed as analytical lenses for interpreting leadership–commitment dynamics within Ethiopian secondary schools.

The Full Range Leadership model conceptualizes leadership behavior along a continuum extending from transformational through transactional to laissez-faire orientations (Bass & Avolio, 1997). "Transformational leadership is operationalized through four interrelated behavioral dimensions—idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration". These dimensions reflect leaders' capacity to articulate vision, foster professional growth, and stimulate innovation. In educational environments, such behaviors are theorized to shape teachers' value alignment and emotional attachment to institutional goals (Bass, 1997).

Transactional leadership, by contrast, emphasizes structured exchanges between leader and follower, typically manifested through contingent reward and management-by-exception practices (Bass & Avolio, 1993). Rather than inspiring identification with collective vision, transactional leadership stabilizes organizational functioning through clarified expectations and corrective feedback mechanisms. Its relevance in school contexts lies in its poten-

tial to generate predictability and accountability in performance systems.

At the opposite end of the continuum, laissez-faire leadership represents an absence of proactive engagement. Characterized by avoidance of decision-making and delayed intervention, this approach has frequently been associated with diminished organizational effectiveness (Buciuniene & Kudiene, 2008; Popli & Rizvi, 2016).

Organizational commitment is conceptualized through the framework proposed by Allen and Meyer (1990), which distinguishes affective, continuance, and normative attachment. Affective commitment reflects emotional identification with the organization; continuance commitment derives from perceived costs associated with leaving; and normative commitment arises from a felt obligation to remain. Subsequent empirical investigations (Brockner *et al.*, 1992; Shore & Wayne, 1993; Hunt & Morgan, 1994; Meyer, Becker, & Vandenberghe, 2004) have demonstrated that these dimensions may vary in prominence depending on contextual and leadership conditions.

Within the present study, leadership styles are examined as potential antecedents shaping these three forms of commitment. Transformational practices are theorized to strengthen affective attachment through value congruence, transactional mechanisms are expected to reinforce normative and continuance considerations through structured reinforcement, and laissez-faire tendencies are anticipated to weaken institutional bonds due to reduced engagement.

By integrating these frameworks analytically rather than descriptively, the study situates leadership behaviors as active mechanisms influencing teachers' psychological attachment within Ethiopian secondary schools.

1.4 Conceptual framework

The conceptual model guiding this study is informed by the Full Range Leadership framework (Bass & Avolio, 1997) and the three-component model of organizational commitment (Allen & Meyer, 1990). These theoretical perspectives provide the structural basis for examining how transformational, transactional, and laissez-faire leadership

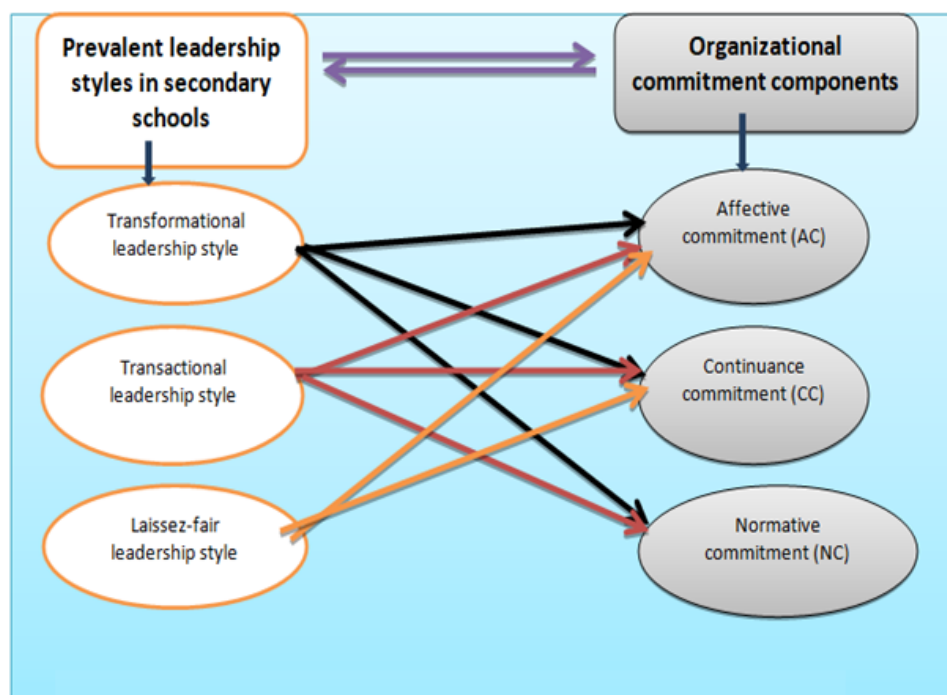


Figure 1: Conceptual framework of the study

behaviors relate to affective, continuance, and normative commitment within Ethiopian secondary schools.

With the use of the MLQ and OCQ, the FRL and organizational commitment (OC) were researched to assess the effect of principals' leadership styles on teachers' commitment in Ethiopian secondary schools. The link between FRLS and OC dimensions is depicted in the diagram.

2 Research Design and Methods

2.1 Research design

This study adopted a descriptive survey research design to examine how "principals' leadership styles relate to teachers' organizational commitment in Ethiopian secondary schools". The design was selected because it allows systematic collection and quantitative analysis of participants' perceptions within naturally occurring school environments. Rather than manipulating variables, the study sought to describe existing leadership practices and assess their statistical association with commitment dimensions.

Descriptive survey approaches are widely applied in educational research when the purpose is to cap-

ture current conditions, attitudes, and relationships among variables (Creswell, 2007; Creswell & Plano Clark, 2011). Such designs enable researchers to analyze trends and patterns as they exist in real settings (Williams, 2007; Orodho, 2005; Salaria, 2012). In the present study, the design facilitated the examination of teachers' evaluations of leadership behavior and their reported levels of organizational commitment.

2.2 Target Population

The study focused on secondary school teachers working in selected Ethiopian regions. Six administrative areas were included: five regional states (Amhara, Oromia, Southern Nations, Nationalities and Peoples' Region (SNNPR), Gambela, and Somali) and one city administration (Addis Ababa).

A multistage selection process was employed to ensure representation across administrative levels. From each region and city administration, one zone was selected; from each zone, one district (woreda); and from each district, one secondary school. This procedure ensured geographic diversity while maintaining feasibility in data collection. The total teacher population across the selected schools was 956.

2.3 Sampling Procedure

To obtain a representative subset of teachers, stratified random sampling was applied. This approach ensured proportional representation from each selected school, thereby increasing the generalizability of the findings (Burns, 2010).

The sample size was determined using the standard finite population formula:

$$n = \frac{N}{e^2(N-1)+1}, \text{ Where:}$$

N represents the total population (956 teachers) while e^2 represents the acceptable sampling error.

Based on this calculation, 287 teachers were selected proportionally from the six schools. This sample size was considered adequate to examine relationships between leadership styles and commitment dimensions using inferential statistics.

Table 1: Sample size of the study

Secondary schools	X1	X2	X3	X4	X5	X6	Total
Number of teachers in each school	109	242	139	156	184	126	956
Sample size of teachers selected from each school	32	73	42	47	55	38	287

2.4 Data Collection

Two standardized instruments were utilized to collect quantitative data. Principals' leadership styles were measured using the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (1997). This instrument assesses transformational, transactional, and laissez-faire leadership behaviors under the Full Range Leadership framework. "Teachers' organizational commitment was assessed using the Organizational Commitment Questionnaire (OCQ) developed by Allen and Meyer (1990), which measures affective, continuance, and normative commitment".

Prior to the main study, a pilot test was conducted at Dilla Secondary School in the Gedeo Zone of SNNPR to evaluate reliability and clarity of the instruments. "The MLQ yielded a Cronbach's alpha coefficient of 0.83, indicating strong internal consistency". The OCQ subscales also demonstrated acceptable reliability, with coefficients exceeding the commonly accepted threshold of 0.70 (Griffith, 2015). Construct validity was supported through alignment with established leadership and commitment theories (Northouse, 2013).

2.5 Data analysis techniques

The collected data were coded and analyzed using SPSS version 21. Both "descriptive and inferential

statistical procedures were employed." Descriptive statistics, including means and standard deviations, were used to summarize the prevalence of different "leadership styles and levels of organizational commitment". To examine the relationship between principals' leadership styles and teachers' commitment dimensions, Pearson's product-moment correlation coefficient was computed. This analysis determined both the strength and direction of associations between "transformational, transactional, and laissez-faire leadership styles and affective, continuance, and normative commitment".

3 Results

3.1 Leadership styles in secondary schools

Table 2 shows descriptive data for the five transformational leadership variables, three transactional leadership aspects, and one laissez-faire element that respondents stated.

"According to the results in Table 2", the mean scores for the transformational leadership indicators varied between 2.90 and 2.32. In comparison, the transactional leadership factors showed mean values ranging from 2.68 to 1.64. The laissez-faire leadership style, however, recorded the lowest mean score of 1.08.

Table 2: Mean scores for the full range components of leadership styles

Full range leadership	Teacher respondents		
	N	Mean	SD
1 Transformational Leadership	287	2.54	1.22
Idealized influence	287	2.33	1.34
Idealized behavior	287	2.32	1.29
Inspirational motivation	287	2.90	1.06
Intellectual stimulation	287	2.62	1.16
Individual consideration	287	2.54	1.26
2 Transactional leadership	287	2.68	1.26
Contingent reward	287	2.68	1.17
Management by exception active	287	2.63	1.17
Management by exception passive	287	1.64	1.44
3 Laissez fair	287	1.08	1.31

3.2 Organizational Commitments in Secondary Schools

“Table 3 shows the mean scores of the three dimensions of organizational commitment as perceived by the teachers”. As per the aforementioned findings, “affective commitment” had the lowest mean score of 2.38 & normative commitment had the highest mean score of 2.62. As a result, affective commitment is the least prevalent type of organizational commitment among secondary school teachers in the present study.

Table 3: Mean Scores on the Dimensions of Organizational Commitment

Dimensions	N	Mean	SD
Affective commitment	287	2.38	1.29
Continuance commitment	287	2.47	1.26
Normative commitment	287	2.62	1.15

According to the aforementioned findings, “affective commitment” had the lowest mean score of 2.38 & normative commitment had the highest mean score of 2.62. As a result, affective commitment is the least prevalent type of organizational commitment among secondary school teachers in the present study.

3.3 “The relationship between principals’ leadership styles and teachers’ organizational commitment”

A Pearson correlation was used to examine the relationship between the three leadership philosophies and the three organizational commitment components. The information as evaluated by the teacher respondents is shown in Table 4, which also shows their leadership styles and organizational commitments in the context of the schools.

As shown in Table 4, transformational leadership exhibited a positive statistical relationship with all

three dimensions of organizational commitment. The Pearson correlation coefficients (r) were .354 for affective commitment, 0.400 for continuance commitment, and 0.407 for normative commitment. In the same way, transactional leadership also showed significant positive associations with teachers’ organizational commitment. The corresponding coefficients were 0.454 for “affective”, 0.472 for continuance, and 0.559 for normative commitment. These results suggest that transactional leadership is moderately connected with both affective and continuance commitments, while its association with normative commitment was comparatively stronger.

Table 4 “further indicates that laissez-faire leadership was negatively correlated with normative commitment and showed only a weak positive relationship with affective commitment”. No meaningful association was found between this leadership style and continuance commitment.

Table 4: Pearson correlation matrix between principals' leadership styles and teachers' commitment dimensions

Leadership styles	Organizational Commitment		
	Affective	Continuance	Normative
Transformational	.354**	.400**	.407**
Transactional	.454**	.472**	.559**
<i>Laissez-faire</i>	0.021	-0.049	-.101*

* Correlation is significant at the $p < 0.05$ level (2-tailed).

** Correlation is significant at the $p < 0.01$ level (2-tailed)

4 Discussions

The present study examined the prevalence of leadership styles among secondary school principals and their association with teachers' organizational commitment in Ethiopia. The findings provide insight into how leadership practices are perceived within the specific educational context studied.

4.1 Leadership Style Patterns

The mean scores obtained for transformational leadership dimensions fell below the benchmark values suggested by Bass and Avolio (1997), who proposed that averages of 3.0 or higher reflect a strong demonstration of transformational behaviors. In this study, the observed values ranged between 2.90 and lower levels across subdimensions. This suggests that although elements of transformational leadership were present, they were not consistently exhibited at optimal intensity.

In contrast, the transactional leadership scores were situated within the range recommended by Bass and Avolio (1997), who indicated that transactional behaviors commonly fall between 2.0 and 3.0. The overall mean of 2.68, alongside comparable scores for contingent reward and management-by-exception (active), suggests that principals were perceived as relatively consistent in clarifying expectations, monitoring performance, and responding to deviations. However, the comparatively lower scores for management-by-exception (passive) and laissez-faire leadership indicate that overt neglect or avoidance behaviors were less dominant, though still observable in certain cases.

Teachers' responses further imply that principals were more likely to rely on structured exchanges and performance monitoring than on inspirational motivation, individualized consideration, or intellectual

stimulation. Transformational attributes such as fostering pride, articulating a compelling shared vision, or mentoring teachers were perceived as less pronounced. This pattern contrasts with arguments presented by Trottier, Van Wart, and Wang (2008), who emphasized the comparatively stronger predictive capacity of transformational leadership in public sector effectiveness.

4.2 Organizational Commitment Patterns

With respect to organizational commitment, Allen and Meyer (1990) did not prescribe normative benchmarks for interpreting mean levels across affective, continuance, and normative dimensions. Nevertheless, prior empirical investigations (Meyer, Becker, & Vandenberghe, 2004; Hunt & Morgan, 1994; Shore & Wayne, 1993; Brockner *et al.*, 1992) have frequently reported affective commitment as the most prominent dimension, followed by normative and then continuance commitment.

The present findings depart from that general trend. Normative commitment emerged as the strongest dimension, followed by "continuance commitment", while "affective commitment" recorded the lowest mean. This suggests that teachers' attachment to their schools may be driven more by a sense of obligation and moral responsibility than by deep emotional identification. Such a configuration may reflect contextual influences in Ethiopian secondary schools, where institutional loyalty and professional duty carry significant weight.

"Normative commitment, which reflects perceived moral obligation to remain with an organization (Allen & Meyer, 1990)", may be shaped by principals' guidance, role modeling, and structured reinforcement practices. Continuance commitment, on the other hand, is associated with perceived

costs of leaving and considerations such as employment security, benefits, and alternative opportunities (Meyer *et al.*, 2004; Hunt & Morgan, 1994 ; Allen & Meyer, 1990). The moderate presence of continuance commitment suggests that pragmatic considerations also influence teachers' retention decisions.

4.3 Leadership and Commitment Relationships

The “correlation analysis revealed statistically significant positive associations between transformational leadership and all three commitment dimensions.” This outcome reinforces theoretical expectations that transformational behaviors cultivate deeper attachment by aligning individual values with institutional goals (Bass, 1997). Research by Lo *et al.* (2010) similarly identified transformational leadership as a meaningful predictor of “affective, continuance, and normative commitment”. Within the Ethiopian secondary school context, these results indicate that when principals demonstrate vision-oriented and supportive behaviors, teachers are more likely to internalize institutional objectives.

Transactional leadership also exhibited significant positive relationships with commitment dimensions, particularly normative commitment. Practices such as contingent reward and active performance monitoring appear to strengthen teachers' sense of responsibility toward their schools. Earlier studies have documented comparable patterns, including positive links between transactional leadership and commitment (Buciuniene & Kudiene, 2008; Ponnu & Tennakoon, 2009; Lo *et al.*, 2010; Marmaya *et al.*, 2011). The present findings contribute additional contextual evidence by demonstrating that structured reward-based leadership can foster moral obligation and sustained participation among teachers.

The association between transactional leadership and affective as well as continuance commitment suggests that clearly defined expectations and reinforcement mechanisms provide teachers with both emotional reassurance and practical stability (Allen & Meyer, 1990; Bass & Avolio, 1993; Shann, 2001). In settings where institutional resources and oppor-

tunities may be constrained, structured leadership practices may offer predictability that strengthens organizational attachment.

By contrast, laissez-faire leadership demonstrated weak or negative relationships with commitment dimensions, particularly normative commitment. The passive and avoidant characteristics of this leadership style—such as delayed decision-making or failure to address challenges—appear to undermine teachers' sense of obligation and loyalty. Previous research has similarly documented the adverse or negligible effects of laissez-faire leadership on organizational commitment (Buciuniene & Kudiene, 2008; Popli & Rizvi, 2016). The present findings reinforce the conclusion that absence of leadership engagement diminishes teachers' institutional attachment.

4.4 Overall Interpretation

Taken together, the findings suggest that leadership style plays a central role in shaping teachers' organizational commitment in Ethiopian secondary schools. Although transformational leadership demonstrated meaningful positive associations with commitment, transactional leadership appeared slightly more dominant in practice. This pattern indicates that principals may rely more heavily on performance-based exchanges than on inspirational or developmental strategies.

Nevertheless, both transformational and transactional approaches were linked to stronger commitment, whereas laissez-faire tendencies weakened it. These results underscore the importance of deliberate leadership practices that combine motivational vision with structured accountability mechanisms.

5 Conclusion

The study demonstrates that principals' leadership behaviors are meaningfully associated with teachers' organizational commitment within Ethiopian secondary schools. Transactional leadership practices were more visibly enacted, while transformational behaviors appeared less consistently demonstrated. Among commitment dimensions, normative attachment predominated, indicating that teachers' institutional ties are shaped more by perceived obligation than by emotional identification.

Both transformational and transactional leadership styles were positively related to affective, continuance, and normative commitment, whereas laissez-faire tendencies weakened these associations. These findings underscore the dual importance of motivational leadership and structured accountability mechanisms in cultivating institutional attachment.

Strengthening principals' capacity for individualized consideration, inspirational articulation, and intellectual stimulation may enhance affective commitment, while maintaining transparent performance expectations can sustain normative and continuance bonds. Leadership development initiatives in Ethiopian secondary education should therefore balance visionary competencies with structured reinforcement practices to foster durable organizational commitment.

6 Recommendations

The following recommendations for practitioners and researchers were made based on the outcomes of descriptive and correlational analysis. As a result, principals who want to improve organizational commitment should think about the following:

1. Provide teachers with an effective leadership style that will increase the academic achievements of the students and organizational commitment.
2. Encourage their teachers to be more satisfied to improve organizational commitment.
3. Make principals aware of the full range of leadership styles to boost levels of organizational commitment among teachers by creating an information exchange system that allows them to improve their knowledge and skills for competence and organizational commitment. In this context, theoretical and practical seminars should be provided in partnership with MOE, the Regional Education Bureau, universities, and principals on the issue.
4. It is hoped that the findings will spur future research into other equally essential factors that influence leadership style. "The influence of leadership style on organizational

commitment" was the main area of interest in this study, which focused on one particular form of work-related behavior. As a result, future studies in this area could expand to include other dimensions related to teacher dedication.

5. In educational institutions, much more research is required. It could be repeated in a variety of secondary education settings. Additional research might be done with private secondary schools from a wider range of backgrounds, as well as a comparison of all employees. Another aspect that has to be addressed is leadership and teacher commitment.

Competing Interest Declaration

This research was fully sponsored by "Dilla University". The institution bears no responsibility for the findings other than for reporting purposes. The author is a staff member of Dilla University engaged in both teaching and research. All intellectual property rights (IPR) and relevant ethical standards were carefully observed throughout the study.

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Availability of the data

The author informs the journal editors that the dataset generated during this study is available and can be provided upon request.

Ethical Approval

Consent was sought from the research participants. Confidentiality was maintained in reporting information.

References

- Abasilim, U. D. (2014). Transformational leadership style and its relationship with organizational performance in Nigerian work context: A review. *IOSR Journal of Business and Management*, 16(9):1-5.
- Abasilim, U. D., Gbervbie, D. E., & Osibanjo, O. A. (2018a). Canonical analysis of perceived leadership styles and employees' commitment in Nigeria. Paper presented at the 14th European Conference on Management Leadership and Governance at HU University of Applied Sciences, Utrecht, The Netherlands.
- Abasilim, U. D., Gbervbie, D. E., & Osibanjo, O. A. (2018b). Does leadership styles relate to personnel commitment in private organizations in Nigeria? Paper presented at the 14th European Conference on Management, Leadership, and Governance at HU University of Applied Sciences, Utrecht, The Netherlands.
- Akinbode, G. A. & Fagbohunde, O. B. (2012). Leadership and organizational factors as predictors of employees organizational commitment in Nigeria: An empirical analysis. *Business and Management Research*, 1:69-87.
- Allen, N. J. & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology*, 63(1):1-18.
- Armstrong, M. & Taylor, S. (2014). *Armstrong's Handbook of Human Resource Management Practice* (13th ed.). London, England: Kogan Page.
- Aydin, A., Sarier, Y., & Uysal, S. (2013). The Effect of School Principals' Leadership Styles on Teachers' Organizational Commitment and Job Satisfaction. *Educational Sciences: Theory and Practice*, 806-811.
- Bass, B.M. (1997). Does the transactional and transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist*, 52(2):130-139.
- Bass, B.M. & Avolio, B.J. (1993). Transformational leadership and organizational structure. *International Journal of Public Administration Quarterly*, 17(4):112-121.
- Bass, B.M. & Avolio, B.J. (1997). *Full range leadership development: Manual for the MLQ*. Palo Alto: Mind Garden.
- Brockner, J., Tyler, T., & Scheneider (1992). The Influence of Prior Commitment to An Institution on Reactions to Perceived Unfairness: The higher they are, the harder they fall. *Administrative Science Quarterly*, 37:241-2615.
- Buciuniene, I. & Škudienė, V. (2008). Impact of Leadership Styles on Employees' Organizational Commitment in Lithuanian Manufacturing Companies. *SEE Journal*, 33:57-65.
- Burns, A.C. (2010). *Research method*. Boston: McGraw-Hill Inc.
- Creswell, J. (2007). *Qualitative Inquiry and Research Design: Choosing among five approaches*, 2nd ed. Thousand Oaks, California: Sage Publications.
- Creswell, J.W. & Plano Clark, V.L. (2011). *Designing and conducting mixed methods Research* 2nd ed. Thousand Oaks, CA: Sage.
- Dariush, L., Choobdar, G., Valadkhani, P., & Mehrali, E. (2016). Leader facilitating organizational commitment of employees (Tehran). *International Journal of Economics, Commerce and Management*, 4:640-655.
- Fasola, O. S., Adeyemi, M. A., & Olowe, F. T. (2013). Exploring the relationship between transformational, transactional leadership style and organizational commitment among Nigerian banks employees. *Int. J. of Academic Research in Economics and Management Sciences*, 2(6):96-107.
- FDRE (Federal Democratic Republic of Ethiopia) (1994). *Education and Training Policy*. Addis Ababa: St. George Printing Press.
- García-Morales, V.J., Lloréns-Montes, F.J. & Verdú-Jover, A.J. (2008). The effects of transformational leadership on organizational performance through knowledge and innovation.

- British journal of management*, 19(4). pp.299-319.
- Garg, A. K. & Ramjee, D. (2013). The relationship between leadership styles and employee commitment at a parastatal company in South Africa. *International Business and Economics Research Journal*, 12:1411-1436.
- Gbervbie, D. E. (2017). Public administration: A conceptual perspective. Ibadan, Nigeria: Cardinal Publishers.
- Griffith, M. (2015). Item Analysis with Cronbach's Alpha for Reliable Surveys. Retrieved from <http://blog.minitab.com/blog/meredith-griffith/item-analysis-with-cronbachs-alpha-for-reliable-surveys>.
- Hunt, S. D. & Morgan, R.M. (1994). Organizational Commitment: One of Many Commitments or Key Mediating Construct? *Academy of Management Journal*, 37:1568-1587.
- Kelly, S. & MacDonald, P. (2019). A look at leadership styles and workplace solidarity communication. *Int. J. of Business Communication*, 56:432-448.
- Keskes, I. (2014). Relationship between leadership styles and dimensions of employee organizational commitment: A critical review and discussion of future directions. *Intangible Capital*, 10:26-51.
- Lo, M., Ramayah, T., & Min, H. (2009). Leadership styles and organizational commitment: A test on Malaysia manufacturing industry. *African Journal of Marketing Management*, 1:133-139.
- Lo, M., Ramayah, T., Minc, H., & Songand, P. (2010). The relationship between leadership styles and organizational commitment in Malaysia: Role of leader-member exchange. *Asia Pacific Business Review*, 16:79–103.
- Marmaya, N., Hitam, M., Torsiman N., & Balakrishnan, B. (2011). Employees' perceptions of Malaysian managers' leadership styles and organizational commitment. *African J. of Business Management*, 5:1584-1588.
- Meyer, J.P., Becker, T.E., & Vandenberghe, C. (2004). Employee Commitment and Motivation: A Conceptual Analysis and Integrative Model. *Journal of Applied Psychology*, 89:991-1007.
- Mowday, R.T. (1998). Reflections on the study and relevance of organizational commitment. *Human resource management review*, 8(4):387-401.
- Mugenda, O.M. & Mugenda, A.G. (2010). Research Methods Quantitative and Qualitative Approaches. Nairobi: Acts Press.
- Nasurdin, A. M., Ahmad, N. H., & Razalli, A. A. (2014). Politics, justice, stress, and deviant behaviour in organizations: An empirical analysis. *International Journal of Business and Society*, 15:235-254.
- Orodho, A.J. (2005). Elements of Education and Social Sciences Research Methods. Nairobi: Masola Publishers.
- Othman, J., Mohammed, K. A., & D'Silva, J. L. (2013). Does a transformational and transactional leadership style predict organizational commitment among public university lecturers in Nigeria? *Asian Social Science*, 9:165-170.
- Ponnu, C. H. & Tennakoon, G. (2009). The Association between Ethical Leadership and Employee Outcomes. *Electronic J. of Business Ethics and Organization Studies*, 14:21-32.
- Popli, S. & Rizvi, I. A. (2016). Drivers of employee engagement: The role of leadership style. *Global Business Review*, 17:965-979.
- Rehman, S., Shareef, A., Mahmood, A., & Ishaque, A. (2012). Perceived leadership styles and organizational commitment. *Interdisciplinary J. of Contemporary Research in Business*, 4:616-626.
- Rukmani, K., Ramesh, M., & Jayakrishnan, J. (2010). Effect of leadership styles on organizational effectiveness. *European Journal of Social Sciences*, 15:365-370.
- Salaria, N. (2012). Meaning of the term- descriptive survey research method. *International Journal of Transformations in Business Management*, 1(6):1-7.

- Shann, M. (2001). Professional commitment and job satisfaction among teachers in urban middle schools. *The Journal of Education Research*, 92(2):67-75.
- Shore, L. M. & Wayne, S. J. (1993). Commitment and Employee Behavior: Comparison of Affective Commitment and Continuance Commitment with Perceived Organizational Support. *Journal of Applied Psychology*, 78:774-780.
- Shukla, S. (2014). Teaching Competency, Professional Commitment and Job Satisfaction-A Study of Primary School Teachers. *Journal of Research & Method in Education*, 4(3):44-64.
- Silverman D. (2005). *Doing Qualitative Research*. Sage Publications: London.
- Singh, K. & Billingsley, B.S., (1998). Professional support and its effects on teachers' commitment. *The Journal of Educational Research*, 91(4):229-239.
- Sudha, K. S., Shahnawaz, M. G., & Farhat, A. (2016). Leadership styles, leader's effectiveness and well-being: Exploring collective efficacy as a mediator. *Vision*, 20:111-120.
- Trottier, T., Van Wart, M., & Wang, X. (2008). Examining the nature and significance of leadership in government organizations. *Public Administration Review*, 68:319-333.
- Williams, C. (2007). Research Methods. *Journal of Business & Economic Research*, 5(3):65-72.
- Wiza, M., & Hlanganipai, N. (2014). The impact of leadership styles on employee organizational commitment in higher learning institutions. *Mediterranean J. of Social Sciences*, 5:135-143.
- Yasir, M., Imran, R., Irshad, M. K., Mohamad, N. A., & Khan, M. M. (2016). Leadership styles in relation to employees' trust and organizational change capacity: evidence from non-profit organizations. *SAGE Open*, 6(4). [www.doi.org/10.1177/2158244016675396](https://doi.org/10.1177/2158244016675396).
- Yukl, G. (2013). *Leadership in organizations* (8th ed.). Upper Saddle River, NJ: Pearson.



Predictors of Risky Sexual Behavior among Trainee Teachers in the Case of Dilla, Arbaminch, and Hosanna College of Teacher Education; SNNPRS, Ethiopia

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Abstract

This study investigated determinants of risky sexual behavior among trainee teachers enrolled at Dilla, Arbaminch, and Hosanna Colleges of Teacher Education in Southern Ethiopia. A descriptive cross-sectional design employing a convergent mixed-method approach was applied. Data were collected from 353 trainee teachers (191 males and 162 females) and 15 purposively selected key informants. Standardized and adapted instruments were utilized, and quantitative data were analyzed using binomial testing and multiple linear regression, while qualitative responses were examined thematically. Findings revealed that more than half of the respondents demonstrated engagement in moderate levels of risky sexual behavior. Regression analysis indicated that peer norms and permissive attitudes were statistically significant predictors, whereas self-esteem, self-efficacy, and substance use were not significant in the final model. Trainees who perceived stronger peer influence and who held favorable attitudes toward risky sexual practices were more likely to report such behaviors. The findings suggest the importance of sustained psychosocial interventions targeting peer group influence and attitude modification within teacher education institutions.

1 Introduction

1.1 Background of the Study

Sexual health and behavioral decision-making among young people continue to attract global attention due to their implications for public health and social well-being. Adolescents and young adults, particularly those between the ages of 15 and 24, experience significant biological, psychological, and social transitions that influence their attitudes and behaviors toward sexuality (World Health Organization [WHO], 2010). During this developmental stage, individuals often begin exploring intimate relationships while simultaneously facing peer expectations, changing social norms, and increased personal independence. These circumstances may increase exposure to behaviors that elevate the risk of sexually transmitted infections (STIs), unintended pregnancies, and related psychosocial challenges (Odeigah *et al.*, 2019).

tions (STIs), unintended pregnancies, and related psychosocial challenges (Odeigah *et al.*, 2019).

Risky sexual behavior generally refers to sexual practices that heighten vulnerability to adverse health outcomes, including early sexual initiation, inconsistent condom use, multiple sexual partners, and sexual activity influenced by alcohol or other substances (Glen-Spyron, 2015; Centers for Disease Control and Prevention [CDC], 2012). Evidence from developing countries indicates that students enrolled in higher education institutions may face additional risks due to new social environments, reduced parental supervision, and limited access to comprehensive reproductive health services (Alamrew *et al.*, 2013; Magu *et al.*, 2012).

In Ethiopia, research examining risky sexual prac-

tices among students has increased in recent years; however, many studies have focused on isolated determinants such as social media exposure or individual attitudes (Girma, 2017; Tsige, 2012). Limited attention has been given to how multiple psychosocial factors interact to influence behavior, particularly among trainee teachers in colleges of teacher education. Understanding these combined influences is important because trainee teachers serve as future role models and educators whose health behaviors may indirectly influence wider student communities. Therefore, examining the predictors of risky sexual behavior within this population is essential for informing targeted educational and psychosocial interventions.

Therefore, the study addressed the following basic research questions:

1. What is the prevalence of risky sexual behavior among trainee teachers?
2. What are the major predictors of risky sexual behavior among trainee teachers?

1.2 Review of Related Literatures

1.2.1 Essence of Risky Sexual Behavior

The prevalence of risky sexual practices is increasing rapidly, creating serious concern both for “adolescents in general and college students in particular.” Risky sexual behavior encompasses practices such as “early initiation of sexual activity, multiple sexual partners, inconsistent or non-use of condoms, and sexual encounters with unknown individuals.” These behaviors heighten vulnerability to “sexually transmitted infections (STIs), including HIV, as well as unintended pregnancies and psychological challenges” (Kerpelman *et al.*, 2016).

Adolescents and school-age youths often have little prior experience or maturity in managing sexual relationships. As a result, they are “more likely to engage in unsafe practices” such as frequent changes of partners, unusual forms of sexual activity, and diverse orientations, expectations, and desires, which differ significantly from those of adults (Odimegwu & Somefun, 2017).

One of the most notable risk factors is engaging in sex without protection. This “significantly in-

creases the likelihood of contracting STIs”, and numerous studies have documented the strong association between having multiple partners and the high prevalence of HIV infection (Kyilleh *et al.*, 2018). Kyilleh and colleagues (2018), as cited in Kato and Omona (2021), reported that many school-age adolescents engage in unprotected sex for reasons such as testing fertility, proving love, seeking marriage prospects, or economic survival. In such contexts, condoms are often avoided because they are perceived as reducing sexual pleasure or due to difficulties in accessing them, making their consistent use impractical (Kato & Omona, 2021).

1.2.2 Major Predictors of an Individual’s Risky Sexual Behavior

Peer groups and risky sexual behavior

Peer groups consist of individuals of similar age who generally share comparable educational backgrounds, social status, and interests. Within such groups, peer norms and peer influence play an essential role in shaping health-related behaviors (Peci, 2017). These peer norms strongly affect decisions about sexual initiation, early engagement in sexual activity, and later patterns of sexual behavior. Peers may influence college youths directly by modeling risky sexual practices or indirectly through perceptions of their attitudes and behaviors (Sneed *et al.*, 2015).

Adolescents who believe their peers are sexually active are more likely to start sexual activity early and to have multiple partners compared with those who think their peers abstain (Olufemi *et al.*, 2018). Similarly, research with high school learners has shown that when young people perceive approval of sexual activity within their friendship circles or peer groups, they are more inclined to practice risky sexual behaviors themselves (Doornwaard *et al.*, 2015).

University and college students are particularly vulnerable to peer influence because of their heightened sensitivity to social reinforcement and the desire for peer approval. This often drives them to behave in ways that secure recognition and acceptance within their age group (Blakemore, 2018).

Attitude and risky sexual behavior

Attitude reflects an individual's beliefs and perceptions toward certain behaviors. According to Guilamo-Ramos *et al.* (2008), as cited in Muhammad *et al.* (2017), attitudes shape whether a person chooses to engage in specific actions. In conservative societies such as Malaysia, Hong Kong, and China, non-permissive attitudes toward premarital sex are traditionally common. However, modernization and social changes have contributed to more permissive outlooks among sexually active youth in these regions (Ahmadian *et al.*, 2014).

Tilahun *et al.* (2020), conducted study in Metu Town, Southwestern Ethiopia, found that many respondents demonstrated permissive attitudes that made them more likely to engage in risky sexual behaviors. Out of the total participants, 70.4% reported that they supported or practiced substance use such as alcohol, hashish, or cigarettes, which can contribute to unsafe sexual activity. Additionally, over half of the respondents (51.5%) expressed favorable attitudes toward risky sexual behavior, while 48.5% displayed negative or restrictive attitudes.

Earlier findings also align with this. Nigatu & Seman (2011), cited in Tsige (2012), revealed that many university students displayed unfavorable attitudes toward risky sexual practices, emphasizing the diversity of attitudes across campuses.

Theoretical Model of the Study

Various approaches discuss risky sexual behavior among adolescents from different models. Among these models and approaches, the following is the most significant and has more details on risky behaviors, including risky sexual behavior.

Theory of “Planned Behavior”

To better explain and predict how individuals regulate their own behavior, the Theory of Reasoned Action (TRA) was first proposed by Icek Ajzen in 1980. This model was later refined into the Theory of Planned Behavior (TPB), which places strong emphasis on the role of behavioral intentions (Whitton *et al.*, 2019). According to this framework, people's intentions and their perceived ability

to control certain actions are shaped by different background factors. These background factors influence their underlying beliefs, which in turn shape their intentions and ultimately their actual behavior.

The TPB has been widely used to understand health-related practices, including sexual behaviors, by highlighting how personal beliefs and intentions are connected to engagement in risky practices. It has also provided valuable insight into how behavioral factors contribute to disease prevalence (Ngidi *et al.*, 2016).

The model identifies three categories of beliefs: behavioral, normative, and control. • Behavioral beliefs are linked to the anticipated outcomes of a particular action. These beliefs influence attitudes, which depend on how strongly a person holds the belief and how they evaluate its consequences. • Normative beliefs reflect the expectations and perceived approval of others, especially larger social groups. These feed into subjective norms, or the sense of peer or social pressure, which shape decisions about whether to act. • Control beliefs involve the perception of factors that either enable or hinder behavior. They contribute to perceived behavioral control, which refers to how capable a person feels of performing a given behavior. This perception can act as a substitute for actual control, which is often difficult to measure directly.

Overall, TPB offers a comprehensive approach for analyzing why young people may engage in risky sexual behaviors by connecting intentions, social influences, and perceived control with actual practices (Whitton *et al.*, 2019).

2 Materials and Methods

This study was designed to explore the primary predictors influencing trainee teachers' engagement in risky sexual behaviors. A descriptive cross-sectional survey design was adopted, guided by a convergent parallel mixed-methods approach. Within this framework, both quantitative and qualitative data were gathered simultaneously, analyzed separately, and then integrated for triangulation.

The use of a mixed-method design made it possible to generate a more comprehensive understanding of the problem by combining statistical analysis with

in-depth qualitative insights. As noted by Greene (2008), such an approach allows for blending qualitative and quantitative data within a single research project at different stages, thereby strengthening the reliability and interpretability of the findings.

2.1 Study Population

The target “population of this study” was all available regular trainee teachers at Dilla, Arbaminch, and Hosanna College of Teacher Education for the 2021/22 academic year. As data secured from the records of respective colleges reveals, the total number of all available regular trainee teachers was almost 2,827 (i.e., DCTE = 953, ACTE = 1,035, and HCTE = 839). Thus, it encompasses all students from diverse streams and their respective departments. For the qualitative data, 15 key informants were purposely selected for the sake of having depth and factual information.

2.2 Sample and Sampling Procedure

In the current research, 353 trainee teachers were selected via a multi-stage sampling procedure from their respective colleges. For the qualitative part of the study, 15 key informants were purposely selected to attain some supportive information to triangulate with the main quantitative data of the issue under investigation.

2.3 Data collection instruments

Data collection instruments were chosen and decided based on the types of variables in the study. Both developed and adapted questionnaires were employed to collect information on predictive variables. In doing so, the present researchers used a total of 40 items to measure the determinants of risky sexual behavior. A questionnaire for substance abuse was developed by current researchers based on a review of the literature. Instruments to assess peer pressure, social norms, attitude, and self-efficacy towards risky sexual behavior were reviewed, contextualized, and adapted from Muhammad *et al.* (2017) Youth Sexual Intention Scale (YSI-Q), which was constructed based on the Theory of Planned Behavior.

The self-esteem measure was adapted from Rosenberg's (2015) Self-Esteem Measurement Scale

(RSE). The measure or instrument for risky sexual behaviors (practice and intention to engage in risky sexual activity) was more internalized, strictly as well as carefully contextualized or adapted from the Risky Sex Scale/Survey of Turchik (2007). The instruments of this study were checked and evaluated by the selected psychology department's staff. The experts evaluated the appropriateness of each item, the required components, the adequateness of the items in each instrument, how each item expressed the required issue, and the amenity of each item in terms of the participants' socio-cultural contexts. In addition to this, a pilot test was carried out by having 10% of the sample size of participants without replacing them in the main study. Thus, the total items' internal consistency, or Cronbach's alpha, was 72.

On the other side, three (3) specific semi-structured questions or key informants' guidelines were used to explore some key, in-depth, and supportive information to triangulate with quantitative data.

2.4 Data Analysis

After collecting the data, an initial cleaning process was conducted to exclude incomplete responses. For the quantitative dataset, responses were coded and transformed into numerical values to facilitate entry and analysis. Structured and close-ended items were systematically organized before being processed using SPSS version 20.

Several statistical techniques were employed. To determine the prevalence of risky sexual behavior among trainee teachers, a nonparametric binomial test was applied. In addition, stepwise multiple linear regression was used to assess both the main and interaction effects of predictors namely social norms/peer pressure, attitudes, self-esteem, self-efficacy, and substance use on risky sexual behavior.

For the qualitative dataset, responses obtained from interviews were examined using thematic content analysis. This approach allowed the researchers to identify recurring patterns, themes, and explanations that complemented the statistical findings, thereby ensuring a deeper understanding of the issue under study.

3 Results

The primary aim of this investigation was to identify the key factors associated with risky sexual behavior among trainee teachers enrolled at Dilla, Arbaminch, and Hosanna Colleges of Teacher Education in the Southern Nations, Nationalities, and Peoples' Region (SNNPRS) of Ethiopia. To address this aim comprehensively, the study employed both quantitative and qualitative research methods. Data obtained from surveys and interviews were analyzed separately and interpreted in alignment with the guiding research questions. The findings from the statistical analyses were subsequently integrated with insights generated from the qualitative data to provide a comparative and complementary understanding of the issue under investigation.

As divulged in Table 1, the majority of the study respondents (190), or 54%, were above an average or mean value, while 163 (46%) were below the mean value concerning the nonparametric binomial test. The result confirmed that the majority of respondents tend to agree with all issues that describe the basic features of “risky sexual behavior”. That is to say that the majority of the respondents engaged in moderate or average amounts of “risky sexual behavior on the current study sites”. On the other hand, findings from key informants strongly solidified that there is an observable as well as extreme

prevalence of risky sexual behavior among students in their respective colleges. The key informants confirmed the existence of “risky sexual behavior” among students by checking and observing students' odd clothing styles, hairstyles, unique facial features, sexual (erotic)-related actions, and making relationships with many opposite-sex partners in and out of the classroom.

The results in Table 2 show the extent to which the model explains variations in the dependent variable, alongside the residual portion that remains unexplained. The findings indicate that “the independent variables” collectively exert a significant influence “on the dependent variable”. This is evidenced by an F-value of 27.411 and a p-value below 0.05 ($p < 0.000$). Hence, the model applied in this study can be considered statistically robust and effective in accounting for the observed variation in the dependent variable.

As shown in Table 3, the value of adjusted R^2 (.273) indicates the predictive variables in the model explain 27% of the variation in the dependent variable. “This outcome empirically indicates that independent variables” such as peer pressure and permissive attitude are witnessed as predictive variables or factors that trigger trainee teachers to take part in risky sexual behavior.

Table 1: Results of Binomial Test on Prevalence of Risky Sexual Behavior among Respondents

Binomial Test						
	Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)	
Practice of Risky sexual behavior dichotomy	Group 1	.00 163	.46	.50	.166	
	Group 2	1.00 190	.54			
	Total	353	1.00			

Table 2: ANOVA Summary Result of Multiple Linear Regression Model

ANOVA ^a					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	3918.679	5	783.736	27.411	.000 ^b
Residual	9921.542	347	28.592		
Total	13840.221	352			

a. Dependent Variable: Risky Sexual Behavior
b. Predictors: (Constant), Substance Abuse, Peer pressure/social norms, Self Esteem, Self-Efficacy, Attitude

Table 3: Regression Model Summary to the Independent Variables (*i.e.* model to the major predicting factors of risky sexual behavior among trainee teachers)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.532 ^a	.283	.273	5.34718	1.847

a. Predictors: (Constant), Substance Abuse, Peer norms, Self Esteem, Self-Efficacy, Attitude.
b. Dependent Variable: Risky Sexual Behaviors.

Table 4: Results of the Regression Model

Coefficients ^a										
Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	16.139	2.542		6.349	.000					
Peer norms	.250	.067	.183	3.730	.000	.332	.196	.170	.855	1.170
Self Esteem	-.024	.068	-.017	-.358	.721	-.025	-.019	-.016	.941	1.063
Self Efficacy	-.141	.096	-.070	-1.465	.144	-.138	-.078	-.067	.903	1.108
Attitude	.607	.072	.423	8.408	.000	.501	.411	.382	.815	1.227
Substance Abuse	.007	.184	.002	.036	.971	.062	.002	.002	.976	1.025

a. Dependent Variable: Risky Sexual Behavior

Table 4 “shows the results of the regression model”. The result reveals that among predictive variables, self-esteem, self-efficacy, and substance abuse “were insignificant, whereas there is a significant relationship between peer norms as well as attitude and risky sexual behavior among the research participants”.

As illustrated in Table 4, among the five explanatory variables tested in this study, peer norms with coefficient (beta = .183) and attitude with coefficient (beta = .423) and attitude with coefficient (p-value < .001) were “statistically significant at 5 percent or lower”. The result implies that peer group and attitude are attested as predictive variables or factors that propel trainee teachers to engage in risky sexual behavior by the weights and signs on the coefficients of beta. That is to say that there is a high level of involvement in risky sexual behavior among participants who are exposed to the influence of peer pressure and a permissive or directive outlook or attitude towards risky sexual behavior by holding all the other independent variables constant. Furthermore, key informants also frankly proved that there is a direct and obvious pressure or influence from social groups, especially peers, low self-esteem, economic as well as academic dependency, deprived life skills,

limitation of sex-related education, out-of-campus residence or owning more freedom, and favorable or permissive views of trainee teachers towards risky sexual behavior.

4 Discussions

The “general objective of this study was to assess predictors of risky sexual behavior” among all trainee teachers at the study sites. Having this, the discussion was made as follows:

Regarding the first research objective, *i.e.*, the magnitude of the prevalence of risky sexual behavior among respondents, as divulged in Table 1, the majority of the study respondents (190) or 54% were above an average or mean value, while 163 (46%) were below the mean value with respect to the nonparametric binomial test. Thus, “the result revealed that the majority of respondents tend to agree with all items that describe the basic features of risky sexual behavior”. On the other side, findings from key informants strongly proved that there is a tangible, or observable, as well as extreme prevalence of risky sexual behavior among students in their respective colleges.

The key informants assured the existence of risky

sexual behavior among students by checking and observing students' odd clothing styles, hairstyles, sexual (erotic)-related actions, and making relationships with many opposite-sex partners in and out of the classroom. The result is utterly supported by and related to the study of Odimegwu and Somefun (2017) in Nigerian youth, which found that large numbers of school youth have limited experience and commitment to sexual relations and are more likely to have risky sexual behavior. It incorporates the large number and different types of partnerships or multiple partners, unusual sexual practices, and sexual orientation, wishes, expectations, and outlooks compared to other age groups, especially adults.

Correspondingly, the current finding is consistent with the investigation of Kyilleh *et al.* (2018), as quoted in Kato and Omona (2021), where school “adolescents engaged in unprotected sexual practices as a way of testing their fertility, assurance of love, bait for marriage, and livelihood”. Condoms were believed to inhibit the pleasure of sex, and since many engaged in sex for pleasure, the use of a condom was also regarded as impracticable, coupled with inconvenience or challenges involved in getting condoms.

Based on the second objective of the current study, which was to identify the major predictors of risky sexual behavior among participants, as expressed in Table 3, among the five predictive variables tested in this study, peer pressure and social norms with a coefficient ($\beta = .183$) and a p -value $< .001$ and attitude with a coefficient ($\beta = .423$) and a p -value $< .001$ were statistically significant at 5 percent or lower. The result implies that peer pressure, social norms, and attitude are examined as predictive variables or factors that trigger trainee teachers to engage in risky sexual behavior by the weights and signs on the coefficients of β . That is to say that there is a high level of involvement in risky sexual behavior among trainee teachers and students who are exposed to the influence of peer pressure and a permissive or directive outlook or attitude towards risky sexual behavior. Furthermore, key informants also confirmed that there is supreme pressure from social groups, especially peers, positive or permissive views, and low self-esteem of trainee teachers

towards risky sexual behavior.

The current researchers have tried to explore ample related literature or evidence to conduct cross-checking between the present study's results and already existing research findings. Thus, the current finding on the predictive variable, i.e., the significant influence of peer pressure and social norms towards risky sexual behavior, thoroughly agreed with the finding of Sneed *et al.* (2015), who concluded that peer norms have a significant impact on intentions to have sex, early sexual debut, and subsequent sexual behavior; peers may influence college students, especially youths' sexual behavior, through direct modeling of sexual behavior, including risky sexual practice, and the adolescent's perception of peer outlook, views, or tendency toward sex-related activities.

In addition to this, the finding of the current research is quietly consistent with the corresponding investigation by Doornwaard *et al.* (2015), who explain that young school students with perceptions that their peers or norm group approve of and engage in sexual activity are more likely to engage in sexual activity incorporating risky sexual practices themselves. Furthermore, the finding of Olufemi *et al.* (2018) in a study on the prevalence and predictors of early sexual debut among adolescents in Ogbomoso, Nigeria, implicitly supports the present study's finding by explaining that school youth who think and accept that their friends are “sexually active are more likely to have initiated sex and have more partners compared to the youths who perceive that their friends are not sexually active”.

The finding of the current study regarding the significant impact of a permissive attitude towards risky sexual behavior or practice is supported by Ahmadian *et al.* (2014), who conducted a study on risky sexual behavior among rural female adolescents in Malaysia. They stated that a non-permissive attitude towards premarital sex, or risky sexual behavior, is common among conservative cultures like the people in Malaysia. However, there are inadvertent or unexpected changes in people's attitudes, and a permissive attitude is now common among sexually active youths in Malaysia due to the modernization system.

Also, Tilahun *et al.* (2020), in a study titled “Knowledge, Attitude, and Practice towards Risky Sexual Behaviors among Secondary and Preparatory Students of Metu Town, South Western Ethiopia”, confirmed and agreed that attitudes pertained to risky sexual behaviors; about 254 (70.4%) of the respondents responded that they appreciated, favored, and were willing to expose and engage in risky sexual behaviors. However, the finding is inconsistent with the result of Nigatu & Seman (2011), as quoted in Tsige (2012), who stated that practical observation and systematic review show that for many campus students, there was an unfavorable or negative attitude or outlook toward risky sexual behavior (Tsige, 2012).

5 Conclusion

The current research investigation has tried to surround as well as engross the predictive factors of risky sexual behavior among trainee teachers in the selected teacher training colleges. As a result of both quantitative and qualitative approaches, the majority of trainee teachers are involved in risky sexual behavior at the current study sites. In the vein of linear regression, peer pressure and favorable or permissive outlooks are the major predictors of risky sexual behavior. Furthermore, economic as well as academic dependency, norm groups, one's outlook, deprived life skills, lack of awareness, out-of-campus residence, or owning more freedom are also the major triggering factors behind students' risky sexual behavior regarding thematic content analysis.

6 Recommendations

Based on “the conclusions made from the findings”, the following major avenues are given:

- It is advisable that professional counselors, counseling centers, and resources be available to college students.
- Follow-up and monitoring, as well as evaluations, are more advisable for students' both in- and out-of-room maladaptive behaviors (like unique wearing styles, sexual (erotic)-related actions, unusual hairstyles, and having imbalanced alcohols or other stimulating drugs).
- Parents and the community should be involved in the psychoeducation of risky sexual behavior.
- Students in the campus dormitory residence or house service need to be facilitated and maintained.

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Conflict of Interests

The authors declare that there is no conflict of interest.

Ethical Approval

Consent was sought from the research participants. Confidentiality was maintained when reporting information.

References

- Ahmadian, M., Hamsan, H. H., Abdullah, H., Samah, A. A., & Noor, A. M. (2014). Risky sexual behavior among rural female adolescents in Malaysia: a limited role of protective factors. *Global journal of health science*, 6(3):165.
- Alamrew, Z., Bedimo, M., & Azage, M. (2013). Risky sexual practices and associated factors for HIV/AIDS infection among private college students in Bahir Dar City, Northwest Ethiopia. *International Scholarly Research Notices*, 2013.
- Blakemore, S. J. (2018). Avoiding social risk in adolescence. *Current directions in psychological science*, 27(2):116-122.
- Centers for Disease Control and Prevention. (2012). Adolescent and School Health: Alcohol and other drug use. Updated May, 1, 2012.

- Doornwaard, S. M., TerBogt, T. F., Reitz, E., & Van Den Eijnden, R. J. (2015). Sex-related online behaviors, perceived peer norms and adolescents' experience with sexual behavior: Testing an integrative model. *PloS One*, 10, e0127787.
- Girma, W. (2017). The effects of social media on student's risky sexual behavior at Hawassa University: Unpublished MA thesis.
- Glen-Spyron, C. (2015). Risky sexual behavior in adolescence.
- Greene, J. C. (2008). Is mixed methods social inquiry a distinctive methodology? *Journal of mixed methods research*, 2(1):7-22.
- Kato, E. I. & Omona, K. (2021). Peer Influences to the Risky Sexual Behaviours Among Out-of-School Adolescents in Kamuli Municipality.
- Kerpelman, J. L., McElwain, A. D., Pittman, J. F., & Adler-Baeder, F. M. (2016). Engagement in risky sexual behavior: Adolescents' perceptions of self and the parent-child relationship matter. *Youth & Society*, 48(1):101-125.
- Kyilleh, J. M., Tabong, P. T. N., & Konlaan, B. B. (2018). Adolescents' reproductive health knowledge, choices and factors affecting reproductive health choices: a qualitative study in the West Gonja District in Northern region, Ghana. *BMC international health and human rights*, 18(1):1-12.
- Magu, D., Mutugi, M., Wanzala, P., Ndahi, L., WANZALA, P. W., MUTUGI, M. W., & NDAHI, L. P. W. (2012). Sexual risky behaviours among the youth in Kenya. *Medicine Science*, 1(3):177-187.
- Mercy, O. N., & Peter, A. S. (2014). Risky sexual behaviors among female in-school adolescents in delta, Nigeria: self-esteem, parental involvement and religiosity as predictors. *European Scientific Journal*, 10(31):157-177.
- Odeigah, L., Rasaki, S. O., Ajibola, A. F., Hafsai, A. A., Sule, A. G., & Musah, Y. (2019). High risk sexual behavior among adolescent senior secondary school students in Nigeria. *African Health Sciences*, 19(1):1467-1477.
- Odimegwu, C. & Somefun, O. D. (2017). Ethnicity, gender and risky sexual behaviour among Nigerian youth: an alternative explanation. *Re-productive health*, 14(1):1-15.
- Olufemi, A. T., Paulin, O. I., & Akinbode, O. O. (2018). Prevalence and predictors of early sexual debut among adolescents in Ogbomoso, Nigeria. *Am J Public Health*, 6(3):148-154.
- Peci, B. (2017). Peer influence and adolescent sexual behavior trajectories: links to sexual initiation. *European Journal of Multidisciplinary Studies*, 2(3), 96-105.
- Sneed, C. D., Tan, H. P., & Meyer, J. C. (2015). The influence of parental communication and perception of peers on adolescent sexual behavior. *Journal of Health communication*, 20(8):888-892.
- Muhammad, N. A., Shamsuddin, K., Amin, R. M., Omar, K., & Thurasamy, R. (2017). Questionnaire development and validity to measure sexual intention among youth in Malaysia. *BMC public health*, 17(1):1-10.
- Ngidi, N. D., Moyo, S., Zulu, T., Adam, J. K., & Krishna, S. B. N. (2016). Qualitative evaluation of selected social factors that impact sexual risk-taking behaviour among African students at Kwazulu-Natal in the South Africa. *SAHARA-J: Journal of Social Aspects of HIV/AIDS*, 13(1):96-105.
- Tilahun, A. & Mamo, A. (2020). Knowledge, attitude and practice towards risky sexual behaviors among secondary and preparatory students of Metu town, south western Ethiopia. *BMC Public Health*, 20(1), 1-8.
- Tsige, M. (2012). Assessment of Attitude towards Risky Sexual Behavior and Sexual Practice among Adama University Under Graduate Students, Adama, Ethiopia. Unpublished MSC Thesis.
- Whitton, A., Swahn, M. H., Culbreth, R., & Kasirye, R. (2019). Attitudes and Risky Sexual Behavior among Youth in Kampala, Uganda: Empirical Analyses of Risk Factors by Gender.
- World Health Organization (2010). *Global strategy to reduce the harmful use of alcohol*. World Health Organization.



Teacher's Performance Appraisal Practice and Challenges in Government Primary Schools of Dilla City Administration

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Abstract

The main purpose of this study was to assess the current practice and challenges of teachers' performance appraisal practices in government primary schools under the Dilla City administration. The research utilized a mixed-method concurrent triangulation design approach. There were four complete primary schools in the city, and two of them were included in the study. From these schools, 62 teachers, two principals, one school supervisor, two department heads, two PTAs, and two students were selected as a sample. Concerning the sample, teachers were selected using proportional and systematic sampling techniques. Contrary to this, the purposive sampling technique was used to select principals, department heads, and student council; PTAs and one supervisor were also selected by the available sampling method. Findings from both instruments were presented in an integrative way. The findings of the study revealed that teacher performance appraisal has been a common practice, often conducted twice a year, but with the principal as the dominant appraiser. Concerning purpose, the current system of teachers' performance appraisal has not mainly served the developmental drives of PA. The criteria used to appraise teachers were viewed by teachers as fine, but the participation level in the formulation process was forced by the South American Nationalities Education Bureau. Concerning common challenges in the TPA: poor feedback system, low teacher participation, post-appraisal discussions, students' bias, and sometimes using PA for revenge. The text advocates for teacher involvement in formulating TPA criteria, involving stakeholders, and adapting guidelines, while also recommending meticulous assessment of teacher performance using interpersonal communication.

1 Introduction

1.1 Background of the Study

To achieve the objectives for which it was founded, an organization needs both human and non-human resources. The most valued and in-demand of these resources for the effective achievement of the intended goals is people. This is frequently the case since human resources offer the ability, skills, and efforts necessary to efficiently and effectively employ all available resources (Zeng & Qi, 2021). Any organization's management and oversight of its overall activities, whether directly or indirectly,

depends on its human resources.

Performance appraisal constitutes an integral component of human resource management that involves systematically assessing and analyzing employees' work performance, followed by constructive dialogue between the evaluator and the employee regarding the results (Ozkeser, 2019). In this sense, performance appraisal can be understood as a formalized and organized process designed to examine job-related behaviors and outcomes, identify the underlying factors influencing performance, and provide guidance for improved future effec-

tiveness in ways that create value for employees, organizations, and society at large.

It is considered an instrument through which an employee's performance and capabilities can be matched to the job requirements and career plan over time. A properly designed performance appraisal system serves as a device for better communication and development of the employee as well as for the attainment of organizational goals and objectives (Negash *et al.*, 2021). General personnel choices are made using a performance appraisal. It contributes to choices about promotions, transfers, and terminations (Islami *et al.*, 2018). It acts as a tool for determining training and development requirements as well as a standard by which programs for selection and development are evaluated.

The objective of giving employees feedback on how the organization perceives their performance is likewise achieved via appraisal. Similar to other social institutions, schools were created to support the teaching and learning process. They are institutionalized to alter and enhance kids' conduct (Monari & Wanjau, 2022). A system of teacher performance appraisal (TPA) properly designed and implemented is believed to have favorable results in the professional development of teachers. In school settings, according to Vansteenkiste *et al.* (2020), teachers are the primary expensive resources who need and deserve support and encouragement to extend their skills and the frontiers of their knowledge.

In the Ethiopian context, the current teacher evaluation framework follows a results-oriented performance appraisal (ROPA) model, which classifies performance into four levels: poor, acceptable, very good, and excellent. According to Mohammed (2020), this system assesses teachers primarily on their demonstrated achievement of key, major, and minor responsibilities assigned to them. Furthermore, within Ethiopia's primary education sector, advancement along the professional career structure is determined by both appraisal outcomes and years of service. Based on these criteria, teachers may progress through nine hierarchical ranks: beginner teacher, junior teacher, teacher, senior teacher, associate teacher, lead teacher, senior lead teacher I, senior lead teacher II, and senior lead teacher III

(SREB, 2017).

Teacher performance appraisal in Ethiopia has lots of problems. According to Shugate (2020), some of the problems with teaching performance evaluations in secondary schools in Ethiopia include inadequate evaluator skills, performance criteria that are unrelated to instructors' professions, and a negative attitude towards the entire system of performance ratings.

Presently, government schools at all levels execute performance appraisals, which are occasionally done. Nevertheless, in many of these schools, performance appraisal appears to receive formal recognition and is conducted on a routine basis, yet it functions largely as a procedural requirement rather than as a meaningful motivational mechanism through which important administrative and professional development decisions are informed.

The primary objective of this research was to examine the existing practices and associated challenges of teacher performance appraisal in government primary schools within the Dilla City Administration. In addition, the study seeks to address identified gaps in current implementation and to propose practical recommendations that may enhance the effectiveness and overall quality of performance appraisal practices in the selected schools. Therefore, at the end of this study, the researcher planned to achieve the following specific objectives:

- Examine the existing performance appraisals in those government primary schools.
- Assess the awareness of teachers about the purpose of the current TPA.
- Identify the challenges of teachers' performance appraisals in schools.

2 Research Method Approach

For this study, a mixed method was employed. A mixed-methods procedure that combines data from both quantitative and qualitative methods to provide a better understanding of a research problem. It can be useful when unexpected results arise, deepen understanding of quantitative findings, and help design and validate research instruments. Additionally, interviews and document analysis fall

under the qualitative approach (Creswell & Zhang, 2009). Mixed research methods are convenient for the social and human sciences as distinct research is used to collect extensive data and confirm findings from different data sources. In general, mixed methods research represents research that involves collecting, analyzing, and interpreting quantitative and qualitative data in a single study or in a series of studies that investigate the same underlying phenomenon.

Researchers may use various mixed-methods research designs depending on the study topic, available data, and available resources (Dawadi *et al.*, 2021). For this study, the “researcher used convergent parallel triangulation mixed methods designs. This design benefits the researcher, who converges or merges quantitative and qualitative data to provide a comprehensive analysis of the research problem” (Creswell & Zhang, 2009). In this procedure, the qualitative and quantitative strands are usually weighted equally.

Hence, the researcher used triangulation to validate quantitative data for this study. In this context, the researcher collects both types of data at the same time. In short, interview qualitative items were adjusted and held at a time during the collection period of the quantitative survey.

Under this design, findings derived from quantitative analysis were systematically examined alongside qualitative evidence to ensure confirmation and strengthen the credibility of the results. The qualitative strand enables researchers to gain deeper insight into complex realities, particularly by capturing participants’ perspectives and lived experiences. In contrast, the quantitative strand provides the analytical basis for examining relationships among measured variables, thereby supporting explanation, prediction, and, where applicable, control of the phenomena under investigation.

2.1 Population

The target population of this research was all the permanent teachers, principals, cluster supervisors, department heads, PTAs, and student councilors in the entire four primary target schools in the Dilla City administration. In Dilla city administration,

there were four full-cycle primary schools.

2.2 Sample Size and Sampling technique

Mulualem *et al.* (2022) define sampling as the process of selecting a subset of the population to serve the total number of primary schools in the city. In the two full-cycle primary schools, there were 73 teachers and 18 administrative bodies that could participate in the appraisal of the performance of teachers (six principals, four department head teachers, four PTA representatives, four representatives’ student council, and one cluster supervisor).

According to Dhivyadeepa (2015), in order to perform a stratified random sample, the researcher has to obtain a comprehensive list of the population and clearly split each unit into one stratum. Thus, the researcher took into consideration the number of teachers, department heads, and student council members while choosing a sample from a school for this study using stratified and simple random selection approaches.

With regard to the teacher sample, the required number of participants was initially determined using Cochran’s sample size determination procedure. Following this calculation, teachers were selected through proportional allocation combined with systematic sampling methods. From each of the selected schools, participants were identified systematically to ensure fairness in selection. Approximately 50% of the teachers from each school were included, resulting in a total sample of 62 teachers. Proportional representation was applied to reflect the relative size of each school’s teaching staff within the overall population. After establishing the final sample size, a systematic selection process was implemented whereby every third teacher listed on the official staff roster was chosen according to the predetermined sampling interval formula,

$$K = \frac{N}{n},$$

Where, “*N*” is the total number of teachers in the school and “*n*” is the sample required from that population.

Utilizing a formal tone, the selection of 62 teachers from the sample schools was accomplished through

the application of the formula $K = \frac{N}{n}$, where " n " signifies the necessary sample from the population and " N " denotes the entire teacher population in the respective schools. Moreover, two Parent-Teacher Associations (PTAs) were selected via purposive sampling, which entailed the active participation of two PTA members in the teacher appraisal process, while the remaining individuals did not actively participate in PTA tasks. In essence, two department heads with a year or more of experience and two student representatives from grade eight were chosen through purposive sampling based on their maturity level and academic performance. Additionally, two principals, one from each school, were selected to provide accurate data that would best enable them to address the research questions. As noted by Manna and Mete (2021), purposive sampling allows researchers to choose a sample based on their informed judgment and understanding of the population. Furthermore, one supervisor was selected using the available sampling method.

2.3 Data Collection Instruments

Considering the aforementioned fact, three types of data collection instruments were used: primary data sources, namely the questionnaire and the interview. Secondary data sources were relevant documents that the researcher used as additional evidence for the study. Questionnaires were used to collect information from teachers, and interviews were used to collect information from principals and supervisors, student council members, department heads, and PTA members. The questionnaires were composed of closed-ended items and contained demographic variables about the respondents.

The closed-ended items were treated using a 5-point Likert scale of strongly agree (SA), agree (A), moderate (M), disagree (DA), and strongly disagree (SD) with their respective values of 5, 4, 3, 2, and 1, respectively. The questionnaires contain five different parts and 34 closed-ended questions. When responding due to language barriers, the questionnaire distributed to teachers was translated from English to Amharic. Most of the items were adopted from previous related studies (Baye, 2021). An equal number of the questions were restructured by the researcher himself.

Interviews are a valuable tool for researchers, as they facilitate the collection of diverse perspectives from participants and enable the gathering of detailed, first-hand information (Kelly *et al.*, 2010). The study utilized interviews to gather valuable information from selected informants, including department heads, student council members, PTAs, school principals, and cluster supervisors, based on their roles. This study utilized semi-structured interviews to gain in-depth insights into the strategies and measures employed by each school to achieve their goals, particularly regarding teacher performance appraisal practice, due to their flexibility in question order.

The study analyzed sample schools' performance appraisal records for the 2021–2022 academic year, portfolio documents, and appraisal criteria, as well as portfolio documents demonstrating the link between appraisal and the TPA process, criteria, problems, and interventions.

2.4 Procedures for Data Collection, Analysis, and Interpretation

The initial step in data analysis was systematic data collection, which entails gathering data sets that are examined for patterns and trends (Englander, 2012). This process involves utilizing a variety of data collection techniques, including surveys, focus groups, interviews, observations, experiments, and secondary data analysis. These techniques are employed to gather data from a range of sources, investigate it for trends and patterns, and interpret it to gain new insights. In this study, data was collected through surveys, interviews, and document analysis and examined to provide context for the information that had been gathered.

2.5 Method of Data Analysis

The initial portion of the questionnaire, which pertained to biographical information, was analyzed and interpreted through the use of descriptive techniques, specifically percentages. Additionally, the data collected via closed-ended questions was encoded and analyzed statistically using SPSS version 23.

To evaluate the differences between two indepen-

dent groups of data collected from schools A and B, an independent t-test was utilized. This statistical method is appropriate for comparing the means of two sets of data (Duffy & Orlandi, 2008; Watson & Moritz, 1998). Thematic analysis and semi-structured interviews were employed to obtain words, phrases, statements, and paragraphs to narrate the qualitative data. The qualitative data were utilized as a complement to the quantitative data.

3 Results and Discussion

3.1 Practice of Teachers' Performance Appraisal

Accordingly, Tables One, Two, and Three, followed by a data description, present the practice that was measured in terms of accessibility, frequency of occurrence, and appraisers in a teacher's performance appraisal in the targeted school.

Respondents were requested to indicate whether a formal performance appraisal (PA) system existed in their schools. The results revealed that 61 teachers (98.4%) affirmed the presence of an established PA practice within their institutions. In contrast, only one respondent reported that no

formal performance appraisal system was in place.

Concerning the frequency of occurrence displayed in the above, 50 (80.6%) respondents confirmed that performance appraisal activities were held in their school semiannually or twice a year. The remaining 8, 3, and 1 teachers assured that they were appraised once a year, three times a year, and four times or more a year.

Regarding appraisers, a majority of the respondents (48, 77.4%) claimed that directors or vice directors; the rest (six, 1, 4, and 0 respondents) discovered that department heads, student council members, members of PTA, cluster supervisors, and all were involved in undertaking teachers' PA, respectively.

In the same mood, interviewees asserted that there is a formal appraisal practice in their school to achieve different goals. Interviewee TR revealed that "performance appraisal in our school aims to enhance better learning and achieve the school's intended outcome". Similarly, interviewee WMH explained that "the aim of PA in the school is to identify the strengths and weaknesses of teachers and coach them on their limitations to help my school achieve its intended purpose".

Table 1: Availability of Teachers' Performance Appraisal

Is there formal appraisal process in your school?						Total	
Yes	%	No.	%	I have no idea	%	No.	%
61	98.4	1	1.6	0	0	62	100

Table 2: Frequency of occurrence of Teachers' Performance Appraisal

How often is performance appraisal conducted in your organization? Per year								Total	
Once	%	Two times	%	Three times	%	Four times and above	%	No.	%
8	12.9	50	80.6	3	4.8	1	1.6	62	100

Table 3: About appraisers of Teachers' Performance Appraisal

In your school, who are involved in the process of teachers' performance appraisal?											
Directors &/or Vice Directors	%	Department heads	%	Student	%	PTA	%	Supervisors	%	All	%
48	77.4	6	9.7	3	4.8	1	1.6	4	6.5	0	0

Table 4: Independent samples *t* – test for carry out of performance appraisal

	Sig.	Sig. (2-tailed)
Is there a formal appraisal system in your school?	.255	.576 .323
How often is performance appraisal conducted in your school?	.829	.666 .685
Who are involved in the process of teachers' performance appraisal?	.019	.233 .355

Note: The Sig (2-tailed) is a two-tailed p-value used to evaluate the null hypothesis that the mean is not equal to 50, and a value below the alpha level indicates statistically significant difference from zero.

Likewise, interviewee TH asserted that "the purpose of PA in my school is to motivate best-performing teachers and punish unsuccessful teachers, provided that both accountability and motivational purposes are materialized". Similarly, interviewees SUP and SC explain, "The results of our twice-a-year teacher performance evaluation at our school will be used as a measure of progress and other benefits". This tells the researcher that performance is being assessed in the schools. The independent *t* test results in terms of availability of formal PA in each school, regarding the frequency of PA in the two schools, and concerning who is involved in the process of teacher PA ($D = 0.576$ and p - value > 0.05), ($D = 0.666$ and p - value > 0.05), and ($D = 0.355$ and p - value > 0.05) respectively, show that the mean of the appraisal practice didn't bring any statistically significant variation between schools, implying that the accuracy of the performance appraisal practice was almost the same across schools.

3.2 Purpose of Teacher's Performance Appraisal

The purpose of a teacher's performance appraisal is to assess their effectiveness and provide feedback on their teaching methods and strategies.

Regarding the purpose of the performance appraisal, 13 items of questions were arranged and disseminated to teacher respondents. Of these questions, the first five focus on the purpose of PA being to improve instruction; the second three items of questions focus on teachers' professional development; the third two items of questions weigh on aiding school administrators in making decisions; and the last three items of questions concentrate on motivating teachers to take more responsibility.

Therefore, evidence respondents stated that PA experience in their respective schools was successful in improving instruction (mean = 4.51), enhancing teachers' professional development (mean = 4.57), aiding school administrators in passing decisions (mean = 4.17), and motivating teachers for more responsibility (mean = 4.23). This shows that a significant number of participants had the view that their PA had met its intended purpose.

The interviewees asserted that the purpose of PA is theoretically to achieve different goals. Nevertheless, the data from Interviewee TR didn't verify the findings presented in the table above. They brightly explained that the PA purpose in their respective schools is not meant to secure periodic promotion, motivation, and scholarship. Likewise, concerning improving classroom preparation, however, they clarified that it had made an insignificant contribution. According to Interviewee SUP, "Currently, teachers' performance appraisal is used to upgrade the teacher's education status; otherwise, the contribution of performance appraisal in rewarding outstanding teachers in terms of finance, certificates, and moral support is negligible".

In the same vein, interviewees WMH and TH make clear that the purpose of PA is right now for "paper value", implying that PA experience in the sample schools rarely contributed to improving instruction, enhancing teachers' professional development, or making valid administrative and motivational decisions.

Independent *t*-test results under the subject of improving instruction ($D = 0.473$ and p value > 0.05) indicate that there is no significant difference between the two schools. However, on the topic

Table 5: Performance appraisal purpose

No	Items related purpose of performance appraisal		1	2	3	4	5	Total	Mean
1	To improve the teaching-learning process	F	-	-	3	12	47	62	4.71
		%			4.8	19.4	75.8	100	
2	To identify the strengths and weaknesses of the teacher	F	-v	1	5	15	41	62	4.55
		%	-	1.6	8.1	24.2	66.1	100	
3	To decide on teacher's salary improvement	F	4	1	11	11	35	62	4.16
		%	6.5	1.6	17.7	17.7	56.5	100	
4	To enhance students' academic achievement	F	-	1	3	18	40	62	4.56
		%	-	1.6	4.8	29.0	64.5	100	
5	To offer a high-quality education	F	-	-	7	12	43	62	4.58
		%	-	-	11.3	19.4	69.4	100	
6	To identify training needs (training purpose)	F	-	5	4	10	43	62	4.47
		%	-	8.1	6.5	16.1	69.4	100	
7	To link teachers needs with the organizational goal	F	1	2	9	24	25	62	4.79
		%	1.6	3.2	14.5	38.7	40.3	100	
8	To help teachers develop professionally	F	-	1	8	15	38	62	4.45
		%		1.6	12.9	24.2	61.3	100	
9	To provide information on teachers' promotion & transfer	F	2	4	8	19	29	62	4.11
		%	3.2	6.5	12.9	30.6	46.8	100	
10	To control the overall performance of teachers	F	1	2	9	20	30	62	4.23
		%	1.6	3.2	14.5	32.3	48.4	100	
11	To improve the motivation of teachers	F	-	2	6	17	37	62	4.44
		%	-	3.2	9.7	27.4	59.7	100	
12	To provide feedback on teachers' performance	F	1	2	5	15	39	62	4.44
		%	1.6	3.2	8.1	24.2	62.9	100	
13	To serve as the basis for reward and punishment	F	6	2	11	20	22	62	3.82
		%	9.7	3.2	17.7	32.3	35.5	100	

The values are; strongly disagree =1; disagree =2; Undecided =3; agree =4; strongly agree = 5

of identifying the strengths and weaknesses of teachers ($D = 0.038$ and P value 0.05), this shows that there is a significant difference between the two schools.

Regarding performance appraisal criteria Performance criteria are statements of standards used for measuring job-related performance. For performance to be effective, it should encourage the participation of employees in designing the organizational goal up to its implementation. This is also true in the education system, where all stakeholders have to participate in all aspects of educational development activities.

As illustrated from Table 6, items 1–5, in the teachers' appraisal criteria, the group of respondents

responded with their disagreement with the participation of teachers in the formulation of TPA, the clarity of the criteria objectives, the relevance of the TPA criteria, the measurements of teachers' professional competency, and the appraisal criteria that measure teachers' motivation to work.

Almost all respondents showed their disagreement, and the mean values were less than the expected mean, which was 2.44. This implies that the entire group of respondents opposed the participation of teachers in the formulation of the TPA. However, Q2, 3, 4, and 5, with respective mean values of 4.03, 4.29, 4.02, and 4.24, indicated that the group of respondents agreed on the issues related to performance appraisal criteria.

Table 6: Regarding Performance appraisal criteria

No	Items related to criteria of performance appraisal		1	2	3	4	5	Total	Mean
1	There is the participation of teachers in the formulation of criteria	F	6	6	9	21	20	62	2.44
		%	9.7	9.7	14.5	33.9	32.3	100	
2	The criteria used are clear	F	2	4	11	18	27	62	4.03
		%	3.2	6.5	17.7	29	43.5	100	
3	The criteria used are relevant to the purpose of PA	F	2	2	6	18	34	62	4.29
		%	3.2	3.2	9.7	29	54.8	100	
4	The appraisal criteria objectively measure teachers' professional competence	F	2	5	10	18	27	62	4.02
		%	3.2	8.1	16.1	29	43.5	100	
5	The appraisal criteria measure teachers' motivation to work	F	2	2	6	21	31	62	4.24
		%	3.2	3.2	9.7	33.9	50	100	

The values are; strongly disagree =1; disagree =2; Undecided =3; agree =4; strongly agree = 5

Table 7: Independent samples T-Test for performance Appraisal criteria

Items	Sig.	Sig. (2-tailed)
There is a high participation of teachers in the formulation of criteria	.101	.216
		.276
The criteria used are clear	.232	.135
		.185
The criteria used are relevant to the purpose of TPA	.471	.917
		.926
The appraisal criteria objectively measure teachers' professional competence	.721	.949
		.950
The appraisal criteria measure teachers' motivation to work	.504	.852
		.867

Note: The Sig (2-tailed) is a two-tailed p-value used to evaluate the null hypothesis that the mean is not equal to 50, and a value below the alpha level indicates a statistically significant difference from zero.

The interviewee believed that the criteria were already developed by the Ministry of Education framework and adopted by the SNNPR education bureau. Speak with SUP and TH. It is important to note that teachers do not participate directly in the preparation process; they know what is expected of them when they enter into a goal agreement with the principal before starting work. SC has no information regarding a teacher's participation in the formulation of PA criteria. The independent t-test result regarding performance appraisal criteria, items of questions related to the participation of teachers in the formulation of criteria, the clarity of criteria used, the criteria relevant to the purpose of PA, the appraisal criteria measurement, and teachers' professional competence, and the appraisal criteria measure teachers' motivation to work.

Regarding Performance appraisal problems/ challenges

Since teachers' "performance appraisal is a complex activity, schools have faced problems in practicing it". These problems may be related to the skill and competence of evaluators; the operational process of the appraisal scheme and the perception of teachers about performance appraisal; the bias of evaluators; the maturity level of evaluators; and the criteria. In this regard, some (nine) of teachers' performance appraisal problems were listed, and 62 of them "were asked to rate those problems based on the Likert rating scale: very highly serious (5), highly serious (4), moderately serious" (3), minimally serious (2), and very minimally serious (1). According to Asfaw (2021), the mean scores from the data analysis were interpreted as 0.05–1.49 (very low), 1.5–2.49 (low), 2.5–3.49 (medium), 3.5–4.49 (high), and above 4.5 (very high).

Table 8: Regarding Performance appraisal problems/challenges

No	Items related to problem and challenges of PA		1	2	3	4	5	Total	Mean
1	Appraisers lack of the necessary knowledge & skill	F	9	8	13	17	15	62	3.34
		%	14.5	12.9	21	27.4	24.2	100	
2	Appraisers lack of the necessary experience	F	9	8	19	12	14	62	3.23
		%	14.5	12.9	30.6	19.4	22.6	100	
3	Poor administration of the overall process	F	10	9	15	15	13	62	3.19
		%	16.1	14.5	24.2	24.2	21	100	
4	Shortage of pre-appraisal discussion	F	9	10	11	13	18	62	3.5
		%	14.5	16.1	17.7	21	29	100	
5	Lack of post-appraisal discussion	F	2	4	8	19	29	62	4.11
		%	3.2	6.5	12.9	30.6	46.8	100	
6	The presence of negative perception of teachers about PA	F	6	7	12	19	18	62	3.58
		%	9.7	11.3	19.4	30.6	29	100	
7	The presence of inadequate and inappropriate appraisal criteria	F	10	6	17	17	12	62	3.24
		%	16.1	9.7	27.4	27.4	19.4	100	
8	Bias of evaluators that can replace organizational standards by personal values in the evaluation process	F	9	13	12	12	16	62	3.21
		%	14.5	21	19.4	19.4	25.8	100	
9	Students aren't mature enough to properly evaluate their teachers	F	8	7	9	15	23	62	3.61
		%	12.9	11.3	14.5	24.2	37.1	100	

In response to items 1–9, in the Performance Appraisal Problems/Challenges, the teacher respondents reply with the necessary knowledge and skills, the necessary experience, administration of the overall process, pre-appraisal discussion, and post-appraisal discussion, the perception of teachers about PA, inappropriate appraisal criteria, the bias of evaluators, and maturity to properly evaluate their teachers. Almost all respondents showed their agreement, and the mean values were greater than the expected mean (3:00), which were 3.34, 3.23, 3.19, 3.5, 4.11, 3.58, 3.24, 3.21, and 3.61.

On the other hand, the responses obtained from interviewees TR and WMH were forwarded with the following suggestions: "Due to the lack of knowledge, skill, and experience of appraisers, they found that managing the appraisal process in their school was one of the more difficult tasks". Interviewee SUP also argued that "post-appraisal discussion is the most serious challenge in the teacher performance appraisal process". Interviewees TH and SC, on their part, forwarded the following as the major constraints: "Mostly higher levels of academic achievement" students are involved in the appraisal of teachers' performance. According to them, students ranked 1-3 mostly participated in teacher evaluations. Students do not have any training in PA, and sometimes they use the appraisal

as a revenge mechanism. Most students were not aware of the purpose of TPA, so they simply filled out the form. Some students are regularly "biased in marking on matters unrelated to the performance of teachers".

4 Discussions

4.1 Practice of Teachers' Performance Appraisal

Regarding availability, in those "sample schools, teachers' performance is evaluated on a regular basis or by procedure, and the schools have a planned way of letting the teachers know where they stand and how they are progressing". This means very large numbers of teachers were assured of the existence of performance appraisal practices in primary schools in the mentioned city.

Regarding the frequency of the occurrence of performance appraisals in the selected school, questionnaires and interviewee respondents revealed that there is teacher performance appraisal practice that occurs twice a year. Teacher evaluation should be conducted twice at the end of each semester (MOE, 1997). This is because not only are the rules established twice a year, but instructor performance ratings are also calculated each semester as part of the student assessment process. In this sit-

uation, teacher performance evaluation, formative use of performance appraisal, or making the best use of teacher evaluation data poses several issues and is used to decide on career promotion, give out performance advantages, or penalize instructors who don't perform at the same level.

Regarding appraisers of TPA, the result shows that the majority of participants (48, or 77.4%) claimed that the school principals are the main ones, and it seems like a solitary agent who evaluates their performance through inbuilt or other parts of performance related to the school system. However, appraisal of the performance of teachers requires participation from different stakeholders (MOE, 2002). Nonetheless, this shows that either the school leader is not willing to use other possibilities, such as self-appraisal, colleagues, etc., or may have other justifications. This issue needs further investigation. If employees are not allowed to evaluate themselves, they will become highly defensive during the appraisal review and may refuse to accept the evaluation result. It is also critical to understand the weak points of your coworkers.

The independent t test results in terms of the availability of formal PA in each school, regarding the frequency of PA in the two schools, and who is involved in the process of teaching PA ($D = 0.576$ and $p\text{-value} > 0.05$), ($D = 0.666$ and $p\text{-value} > 0.05$), and ($D = 0.355$ and $p\text{-value} > 0.05$), respectively, show that the mean of the appraisal practice didn't bring any statistically significant variation between schools, implying that the accuracy of the performance appraisal practice was almost the same across schools.

4.2 Performance appraisal purpose

In goal theory, Locke and Latham (2019) highlight mechanisms that connect goals to performance outcomes. The other theory Control theory emanates from the work of Emile Durkheim and focuses attention on feedback as a means of shaping behavior (Glad & Ljung, 2018). The social cognitive theory was developed by Bandura. According to Beauchamp *et al.* (2019), it is based on his central concept of self-efficacy. This suggests that what people believe they can or cannot do has a powerful impact on their performance.

Regarding the purpose of performance appraisal, the study results indicated that teachers are not competing with each other based on their PA results for promotion or demotion. The investigation made it clear that the teachers' outcomes were undesirable. However, the wrong attitude of carelessly "using it" as if teachers must be promoted; there is also concrete quota promotion (professional training, upgrading) from teachers in the school. The purpose of performance appraisal was misused or interpreted negatively in this case.

In line with this, it is possible to explain why the interviewees reflect the purpose of PA destructively. The researcher suggested that the current system of performance appraisal is conducted only for procedure purposes, and there is no way to accomplish its purpose properly. When there is an opportunity for benefit, the quota and the type of subject will come together, and the teacher who does not perform well will possibly benefit from the quota. In the same way, promotion is associated with a pay raise, but all teachers benefit from promotion, even if they do not perform well. This means that the purpose of teacher evaluation has failed.

Independent t test results under the subject of improving instruction ($D = 0.473$ and $p\text{ value} > 0.05$) indicate that there is no significant difference between the two schools. However, on the topic of identifying the strengths and weaknesses of teachers ($D = 0.038$ and $P\text{ value } 0.05$), this shows that there is a significant difference between the two schools. Therefore, the aim of performance appraisal in school B is to help the appraisers identify the strengths and weaknesses of teachers and support them based on evidence accordingly, but in school A, the topic of identifying the strengths and weaknesses of teachers is not reasoned. This indicates that in school B, there is formative assessment practice, while in school A, there is no formative assessment practice at all. Glad & Ljung (2018) and Ozbay (2019), a control theory, focus attention on feedback as a means of shaping behavior. Thus far, the rest of the questions Q 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20 have independent t test results ($D = 0.473, 0.724, 0.265, 0.584, 0.996, 0.772, 0.086, 0.846, 0.42, \text{ and } 0.588$, respectively). This shows that with a $P\text{-value} > 0.05$, there is

no significant difference between the two schools regarding the above points of the question of TPA.

4.3 Performance appraisal criteria

In this context, participants were requested to assess the appraisal criteria currently implemented in the sampled schools. The findings indicate that the calculated mean scores (2.44, 4.03, 4.29, 4.02, and 4.24), together with the overall weighted mean of 3.8, exceeded the benchmark or ideal mean value of 3. However, the specific item with a mean score of 2.44 suggests that most respondents expressed disagreement with that particular statement. As emphasized by Nadot (2022), even minor procedural shortcomings can undermine the effectiveness of an appraisal system and potentially result in its failure. Consistent with this concern, respondents indicated dissatisfaction regarding teachers' limited involvement in the development and formulation of performance appraisal criteria.

In line with this, the interview group made public that there was no teachers' participation in the formulation of the TPA criteria. The interviewee believed that the criteria were already developed by the Ministry of Education Framework and adopted by the SNNPR Education Bureau. The interview group made it clear that teachers do not participate directly in the preparation process; they know what is expected of them when they enter into a goal agreement with the principal before starting work. It is also important to understand if there are any questions or concerns that you do not understand. According to the results of the survey and the interview, one of the reasons why teachers do not participate directly in the preparation of the assessment criteria is that the assessment criteria have already been developed by the Ministry of Education and sent to all regions. The second is that when teachers agree on a goal with the principal, they discuss the key, major, and minor tasks in depth and ensure understanding.

According to the information obtained from the document, the criteria for the evaluation of the performance of teachers transferred from the Ministry of Education and the criteria prepared by the principals of both sampled schools are the same. This does not make teachers see themselves as stake-

holders who attempt to achieve the school's goals and objectives rather than being directly involved in setting standards. As Sewagegn (2019) stated, when preparing the teacher's performance appraisal standard, if the teacher knows as much as possible about the standard that is being evaluated, there will be many benefits.

The independent t-test result regarding performance appraisal criteria, items of questions related to the participation of teachers in the formulation of criteria, the clarity of criteria used, the criteria relevant to the purpose of PA, the appraisal criteria measurement and teachers' professional competence, and the appraisal criteria measure teachers' motivation to work (p value > 0.05) shows that the mean of the appraisal exercise regarding the criteria didn't bring any statistically significant variation between schools, implying that the accuracy of the performance appraisal criteria was almost the same in two schools.

4.4 Performance appraisal problems and challenges

In this regard, nine of the teachers' performance appraisal "problems were listed, and 62 teachers were asked to rate those problems based on the Likert rating scale very highly serious (5), highly serious (4), moderately serious (3), minimally serious (2), and very minimally serious (1)". According to Asfaw (2021), the mean scores from the data analysis were interpreted as 0.05–1.49 (very low), 1.5–2.49 (low), 2.5–3.49 (medium), 3.5–4.49 (high), and above 4.5 (very high).

Therefore, the mean score of participants in the three items, Q.36, 38, 41, and 30, was related to the maturity level of evaluators (3.61), the negative perception of teachers towards performance appraisal (3.58), the shortage of pre-appraisal discussion (3.5), and the shortage of post-appraisal discussion (4.11).

Participants were rated as having highly serious

The findings further indicate that several issues were identified as serious concerns, with mean scores ranging between 3.5 and 4.49. In contrast, the mean ratings for items Q33, Q34, Q35,

Q39, and Q40—addressing weak administrative support (3.19), insufficient skill and knowledge (3.34), limited experience in conducting performance appraisal (3.23), inadequacy of appraisal criteria (3.24), and evaluator bias (3.21)—fell within the range of 2.5 to 3.49. These values suggest that respondents perceived these factors as moderately serious challenges affecting the appraisal process.

Similarly, interview data revealed that deficiencies in appraisers' knowledge, competence, and practical experience made the management of the appraisal system difficult within the schools. Participants emphasized that inadequate professional training for evaluators and minimal teacher involvement during the development of performance appraisal criteria constituted the most critical challenges facing teacher performance appraisal (TPA) practices. Moreover, it was noted that students—often those with relatively high academic achievement—participate in evaluating teachers' performance (Almutairi & Shraid, 2021). However, students typically lack formal preparation in performance appraisal procedures, and in some instances, the evaluation process may be influenced by personal motives, including the use of appraisal as a form of retaliation.

As LEMJI (2019) also argued, post-appraisal discussions between the assessed and the appraiser are a highly serious challenge in the teacher performance appraisal process. The *t* test analysis for the data in both (school A and school B) government primary schools indicates that there is no significant difference between the two schools.

5 Conclusions

Formal teachers' performance appraisals are often conducted twice a year. The practice is measured in terms of accessibility and frequency of occurrence. Although the guidelines state that many stakeholders are involved, the principal is the one who has the highest share. This is outside of the guidelines and can lead to biased results. Every teacher gets promoted when it comes to performance; every teacher gets a pay raise and benefits. On the contrary, teachers who do not show the proper quality and results in the work of the school may be prevented from progressing under the excuse of quotas.

Either way, the process is unfair. Teachers are not competing with each other and are promoted as long as they meet the criteria. Teachers expressed satisfaction with the suitability of the standards. However, they feel that other points that should be included have been left out because they were not involved in developing the appraisal criteria. Here, the evaluation criteria come from the Ministry of Education, but they remain localized. Rather than presenting another alternative, the principals copied the requirement from the guidelines and gave it to us to implement, so this opens the door to influence and can be a hindrance to achieving the school's goals.

According to the findings, insufficient training for evaluators is a critical issue in addressing the challenge and problem at hand. For example, the evaluators selected from among the students use the appraisal of the teachers to take revenge on the appraiser. Moreover, the lack of teacher participation in the development of performance evaluation criteria for teachers is a significant area for improvement. The absence of post-evaluation discussions, teachers' difficulty in identifying their weaknesses, and their low regard for the importance of school improvement are additional factors that contribute to the problem. Consequently, teachers may perceive evaluation results as lacking relevance to their professional growth.

6 Recommendations

Drawing from the aforementioned conclusions, the following recommendations are suggested: Schools in the study area must implement formal teacher performance appraisal systems and practices, typically conducted on a biannual basis. However, it is crucial to note that these practices often appear superficial and aim to fulfill bureaucratic requirements rather than foster genuine improvement. A fundamental shift in perspective is therefore necessary. To address this issue, school leaders ought to utilize teacher performance appraisals as a means of driving strategic, developmental, and communicative initiatives, with the ultimate goal of enhancing teacher academic and professional competencies as well as overall school performance.

Concerning the intended purpose of performance

appraisal, the author of the study proposes the following recommendations: school administrators should carefully consider the objective of teacher performance evaluations and carry them out according to relevant guidelines and objectives. Additionally, it is suggested that each school establish its own comprehensive teacher performance evaluation plan to optimize the system's operation and implementation. This plan, along with the school's strategic objectives, should be communicated to all stakeholders and experts. Furthermore, it is recommended that school principals design tailored training programs for teachers and implement a performance-based reward system to motivate superior performers.

The criteria for evaluating the performance of teachers are primarily formulated at the central level, and there is a sense of dissatisfaction among teachers that these criteria do not take into account the contextual situation, including differences between schools and the lack of participation of teachers in the process. To address this issue, the Education Bureau should ensure that assessors are involved in the preparation of evaluation criteria in appropriate circumstances. School leaders and experts should also consider the current situation of the schools and contextualize the appraisal criteria in a way that can enhance the capacity of teachers. To avoid problems with teacher performance evaluations, it is important to use interpersonal communication and set evaluation criteria without personal or political interference. In addition, recruiting older students to serve as student appraisers and providing adequate training on academic and social relationships can help address the issue.

Conflict of Interests

The authors declare that there is no conflict of interest.

References

- Almutairi, T. S. & Shraid, N. S. (2021). Teacher Evaluation by Different Internal Evaluators: Head of Departments, Teachers Themselves, Peers and Students. *International Journal of Evaluation and Research in Education*, 10(2):588-596.
- Asfaw, B. (2021). Teachers Performance Appraisal Practices in Government Schools of Addis Ababa. Doctoral Dissertation, St. Mary's University.
- Baye, A. (2021). Teachers' Performance Appraisal Practices in Government Schools of Addis Ababa.
- Beauchamp, M. R., Crawford, K. L., & Jackson, B. (2019). Social cognitive theory and physical activity: Mechanisms of behavior change, critique, and legacy. *Psychology of Sport and Exercise*, 42:110-117.
- Chen, J., Cheng, H., Zhao, D., Zhou, F., & Chen, Y. (2022). A Quantitative Study on the Impact of Working Environment on the Well-Being of Teachers in China's Private Colleges. *Scientific Reports*, 12(1):1-9.
- Creswell, J. W. & Zhang, W. (2009). The Application of Mixed Methods Designs to Trauma Research. *Journal of Traumatic Stress: Official Publication of the International Society For Traumatic Stress Studies*, 22(6):612-621.
- Dawadi, S., Shrestha, S., & Giri, R. A. (2021). Mixed-methods research: A discussion on its types, challenges, and criticisms. *Journal of Practical Studies in Education*, 2(2):25-36.
- Glad, T., & Ljung, L. (2018). Control theory. CRC press.
- Dhivyadeepa, E. (2015). Sampling techniques in educational research. Lulu. com.
- Duffy, A. & Orlandi, A. (2008). A review of statistical methods for comparing two data sets. *The Applied Computational Electromagnetics Society Journal (ACES)*, 90-97.
- Englander, M. (2012). The interview: Data collection in descriptive phenomenological human scientific research. *Journal of phenomenological psychology*, 43(1):13-35.
- Islami, X., Mulolli, E., & Mustafa, N. (2018). Using Management By Objectives As A Performance Appraisal Tool for Employee Satisfaction. *Future Business Journal*, 4(1):94-108.

- Kelly, S. E., Bourgeault, I., & Dingwall, R. (2010). Qualitative interviewing techniques a styles. *The SAGE handbook of qualitative methods in health research*, 19:307-326.
- Lemji, S. (2019). An Assessment of Practices and Challenges of Teachers' Performance Appraisal System Enhancing Organizational Performance in Secondary Schools of Gurage Zone (Doctoral dissertation).
- Locke, E. A. & Latham, G. P. (2019). The development of goal setting theory: A half century retrospective. *Motivation Science*, 5(2):93.
- Manna, R. & Mete, J. (2021). Population and Sample. *International Journal of Research and Analysis in Humanities*, 1(1):30-30.
- Ministry of Education (2002). Education Sector Development Program Action Plan-II (2001/2-2004/5). Addis Ababa: FDRE Ministry of Education of Ethiopia
- Mohammed, A. A. (2020). Review Paper on University Teachers Performance Appraisal. *Open Access Library Journal*, 7(7):1-18.
- Monari, D. G. & Wanjau, K. L. (2022). Factors Affecting Utilization of Performance Appraisal Practices in the Telecommunications Industry: A Survey Of Telecommunication Firms In Kenya. In *Proceedings of the Sustainable Research and Innovation Conference* (Pp. 228-232).
- Muluaem, Y. G., Mulu, Y. E., & Gebremeskal, T. G. (2022). Relations of Previous English Achievement with English Learning Beliefs and College Academic Achievements. *HELIYON*, E09841.
- Nadot, Y. (2022). Fatigue from Defect: Influence of Size, Type, Position, Morphology and Loading. *International Journal of Fatigue*, 154, 106531.
- Negash, E., Asmare, A., & Eshete, S. K. (2021). Effects of Employee Motivation on Organizational Performance at Ethiopian Telecom South West Region Jimma. *Ijhcm (International Journal of Human Capital Management)*, 5(1):28-41.
- Ozbay, H. (2019). *Introduction to feedback control theory*. CrC Press.
- Ozkeser, B. (2019). Impact of training on employee motivation in human resources Management. *Procedia Computer Science*, 158:802-810.
- Sewagegn, A. A. (2019). A Study on the Assessment Methods and Experiences of Teachers at an Ethiopian University. *International Journal of Instruction*, 12(2):605-622.
- Shugute, E. (2020). Practices and Challenges of Managing Teachers 'performance Appraisal in Secondary Schools of Kembatta Tembaro Zone (Doctoral Dissertation).
- Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020). Basic psychological need theory: Advancements, critical themes, and future directions. *Motivation and emotion*, 44(1):1-31.
- Watson, J. M. & Moritz, J. B. (1998). The beginning of statistical inference: Comparing two data sets. *Educational Studies in Mathematics*, 37(2):145-168.
- Zeng, Z. & Qi, L. (2021). "Internet+ Artificial Intelligence" Human Resource Information.
- Nadot, Y. (2022). Fatigue from Defect: Influence of Size, Type, Position, Morphology and Loading. *International Journal of Fatigue*, 154, 106531.
- Nadot, Y. (2022). Fatigue from Defect: Influence of Size, Type, Position, Morphology and Loading. *International Journal of Fatigue*, 154, 106531.



Repercussion of Higher Education Reform: In the Case of Mathematics Department Students before and after the reform in One of the Universities in Ethiopia

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Abstract

This study sought to examine how mathematics department students of public universities in Ethiopia were affected by recent reforms in higher education. A descriptive survey design was used to carry out the investigation. A total of 86 mathematics students participated in the study. It filled out achievement test questions, 30 of whom joined the department after taking the new reform's freshman course in 2020 and 30 and 26 of whom joined the department before the new reform's freshman course was delivered in 2019 and 2018, respectively. A 40-item achievement test on elementary concepts of algebra in mathematics was used as an instrument for the study. Out of 40 concepts, the mean scores reported by students who joined the Department of Mathematics after and before taking their freshman course were 19 and 15 respectively. Moreover, there was a significant difference in students who joined the Department of Mathematics after and before the new reform and took the freshman course regarding understanding and solving elementary algebraic concepts of mathematics with equal variances, not assumed to be $p = 0.040$ less than $p = 0.05$ level of significance. It is therefore recommended that it is essential to improve mathematics success for all students and that the new freshman course reform plays a significant role in increasing students' mathematics success rate. This study has proven that they are trainable, and therefore, the new reform of freshman courses has to be nurtured for all students.

1 Introduction

1.1 Background of the Study

Ethiopia, officially known as the Federal Democratic Republic of Ethiopia (FDRE), is one of Africa's most populous nations, with a population exceeding 115 million (Boateng, 2020). Over the past two decades, the country has experienced substantial expansion in its education sector. While this expansion significantly increased access to schooling at all levels, questions regarding instructional quality, graduate competence, and institutional effectiveness have become central to national discourse.

Globally, education is widely recognized as a catalyst for economic transformation and social progress. However, as noted by Vasquez-Martinez *et al.* (2013), the central concern is not merely the implementation of reform, but rather its effectiveness, sustainability, and measurable outcomes. In Ethiopia, similar concerns have prompted a comprehensive review of the higher education system.

For more than twenty years, Ethiopia's education policy emphasized expansion. However, according to Mengisteab (2021), this quantitative growth was not always accompanied by improvements in quality. In response, the government introduced a na-

tional Education Development Roadmap (Roadmap, 2020) designed to address structural weaknesses and refocus the system on competence, accountability, and relevance. The reform particularly emphasizes strengthening foundational knowledge in higher education institutions, which serve as the primary producers of skilled manpower. Ashcrof and Rayner (2011a; 2011b) previously identified systemic challenges affecting quality assurance in Ethiopian higher education. The new reform initiative seeks to address such concerns by restructuring curriculum design, instructional methods, and student preparation mechanisms.

Within this broader transformation, mathematics education occupies a critical position. Mathematics underpins scientific and technological development and requires strong conceptual foundations. The introduction of a reformed freshman mathematics course was intended to reinforce logical reasoning, symbolic literacy, and essential algebraic structures before students proceed to departmental specialization (MOSHE, 2020).

Thus, evaluating whether this curricular reform has produced measurable improvements in students' foundational mathematical competence is both timely and necessary.

1.2 Statement of the Problem

The Ethiopian government has consistently prioritized science, technology, engineering, and mathematics (STEM) disciplines as drivers of national development. Nevertheless, low achievement in mathematics remains a persistent challenge across educational levels. Improving student outcomes requires not only curriculum reform but also a careful understanding of students' prior knowledge and preparedness.

Research highlights the importance of background knowledge in determining academic success (Bekele, 2019; Prescott, 2022; Starke, 2021). Students entering higher education without sufficient mastery of elementary mathematical concepts often encounter difficulties in advanced coursework. Belina (2012) also emphasizes that prior knowledge significantly influences learning effectiveness and conceptual integration.

Before implementation of the new reform, admission patterns into mathematics departments sometimes resulted in students enrolling without adequate foundational competence. In some cases, students demonstrated weaknesses in algebraic manipulation, logical reasoning, and symbolic interpretation. Such gaps hinder progression in higher-level mathematics courses. To address these concerns, the Education Development Roadmap (Roadmap, 2020) proposed a structural shift toward strengthening foundational learning. The reform called for an educational framework grounded in critical thinking, ethical responsibility, and competence-based preparation aligned with national development goals.

Specifically, the newly designed freshman mathematics course for natural science students provides systematic coverage of logic, set theory, number systems, functions, trigonometry, and analytic geometry (MOSHE, 2020). The underlying assumption is that reinforcing fundamental concepts at entry level will enhance performance in subsequent departmental studies. However, despite policy optimism, empirical assessment of this reform's effectiveness remains limited. Therefore, this study investigates whether measurable differences exist between students who entered the mathematics department before and after the implementation of the freshman reform course. Accordingly, to see the influence of this reform on students' achievement in the department of mathematics in the narrow sense of assessing its impact, this study was guided by the following general and specific objectives.

1.3 Objectives of the Study

The objective of this study is to see the repercussions of higher education reform on students who join the mathematics department.

Specific objectives

- To investigate the achievement of freshmen students on the basic language of mathematics concepts before and after the reform;
- To exhibit the significant difference in basic mathematics achievement results of freshman students before and after the reform that joined the mathematics department for the bachelor's science program.

1.4 Hypothesis

N_1 : There is a significant difference in the basic mathematics achievement results of freshmen students who joined the mathematics department for the Bachelor of Science program before and after the reform.

1.5 Significance of the study

Over the past 27 years, Ethiopia has achieved substantial quantitative expansion in education; however, qualitative improvement has lagged behind (Yadessa & Shemelis, 2022). The higher education sector continues to face challenges related to instructional quality, academic rigor, and learning outcomes. As Hui-Ling and Chien (2017) suggest, sustainable educational reform requires careful evaluation of school effectiveness and institutional impact. Similarly, Vasquez-Martinez *et al.* (2013) argue that the true value of reform lies in its observable outcomes rather than its theoretical aspirations. Given the strategic importance of mathematics in national development and scientific advancement, assessing the effectiveness of reforms in mathematics education is particularly critical. The long-term impact of educational change is often difficult to detect immediately after implementation. Therefore, early evaluation studies play an essential role in guiding policy adjustments and instructional improvements. By examining differences in foundational mathematical achievement between pre-reform and post-reform cohorts, this study contributes empirical evidence to ongoing national discussions regarding the effectiveness of the Education Development Roadmap. The findings may inform curriculum refinement, instructional strategies, and departmental placement practices.

2 Research Methodology

2.1 Sample and Population

This study was conducted on students who joined the department of mathematics at one of Ethiopia's universities. The study population consists of mathematics department students. By convenience sampling techniques, there were 86 mathematics students, of whom 30 joined the department after taking the new reform's freshmen course in 2020 were categorized in one group, 30 students who joined the department in 2019 and another

26 students who joined the department in 2018 (both groups joined the department before the new reforms were categorized in another group), and all participated in the study at entry point to the department, *i.e.*, department placement.

2.2 Design of the Study

The researchers devised a quantitative case study to investigate the effects of the new higher education reform on mathematics students at a single Ethiopian university. "Quantitative data was analyzed based on descriptive and inferential statistics. Descriptive statistics" were examined to get the percentage, mean, and standard deviation; inferential statistics were examined by using the t test to determine whether there was a significant difference between two groups on basic elementary mathematical concepts. A "significant difference between two groups has been tested at the 0.05 level of significance because of the possibility of a level of significance between 0.01 and 0.1". This study was designed to indicate the extent of the repercussions of new reforms in higher education on mathematics students at one Ethiopian university.

According to Anderson and Krathwohl's Taxonomy (2001), understanding different types of functions means constructing meanings of activities and graphic messages by writing, exemplifying, classifying, inferring, comparing, or summarizing (Anderson & Krathwohl, 2016). Based on this taxonomy and the researcher's understanding of basic elementary mathematics concepts, the researcher prepared the achievement test question from the Mathematics Review Manual (Lovric, 2009) and from other related studies. Two of the researcher's colleagues had examined the validity of a test prepared by the researcher using basic elementary mathematics concepts. A retest was performed in a 30-minute interval to determine the reliability of test instruments, and its correlation was 0.998, indicating that the test instrument is reliable. The prepared test has been delivered for 2018 and 2019 entries to the mathematics department to examine their background knowledge of basic mathematics, and then, having the results of the previous two groups as one group, the achievement test was adopted for 2020 entry students that joined the department after the new reform of the refresher

course in 2020.

2.3 Data Analysis Technique

The researcher distributed the prepared tests, which were then gathered for analysis. Thus, “the collected data were organized, interpreted, and analyzed using a percentage, mean, standard deviation, and independent t test” followed by analyses from which summaries and conclusions were drawn. The associated values of the degree of agreement were multiplied by a number. The rating was calculated by dividing the total number of respondents by the sum of the products of value and frequency. The ground mean was then calculated by adding all rating means within a category and dividing the result by the total number of cases. “An interpretation was made based on the ground mean, and conclusions were drawn on the fundamental questions”. The “standard deviation” used to indicate how far responses had been scattered from the grade mean. To assess the significant difference between two groups’ achievement of basic elementary mathematics concepts, a t-test was conducted and a detailed analysis was made.

3 Results

The “analyses of the data took place based on two statistical methods: descriptive statistics (percentage, mean, standard deviation (ST. DV), skewness, and kurtosis) and inferential statistics (t test)”. Then, the interpretation of hypotheses regarding the differences in basic mathematics achievement results between students who joined the department before the reform (i.e., 2018 and 2019 entries) and those who joined after the reform (i.e., 2020 entries) was used. The descriptive frequency and percentage of statistical findings from students who understood the fundamentals of mathematics on those chosen topics were reported as follows:

To explore the “baseline of students’ background knowledge of those selected” basic concepts of mathematics, students were made to take the test question at the first class of the school year of their first membership in the Mathematics Department.

Descriptive statistics were used to examine students’ background knowledge on selected basic concepts of mathematics as follows:

Table 1: Descriptive statistics: students’ test questioner result on selected basic concept of mathematics out of 40

Group	Mean	N	Std. Dv	Variance	Kurtosis	Skewness
After the New Reform	18.9149	30	9.82196	96.471	-.776	-.034
Before the New Reform	15.0385	56	8.59996	73.959	-.922	.266
Total	16.8788	86	9.35717	87.557	-.844	.168

Table 1 shows “the means, standard deviations, skewness, and kurtosis” for test questions by class. As the table shows, there is a mean difference between the two groups with the data distributions being skewed on the left side (-.034), indicating that Mean < Median < Mode, whereas the data distributions are skewed on the right side (.266), indicating that Mean > Median > Mode. Although the two groups’ kurtoses are -0.776 and -0.922, indicating that the distribution of the result is relatively flat.

To test the Hypothesis

N_1 : “There is a significant difference in the basic mathematics achievement results” of students

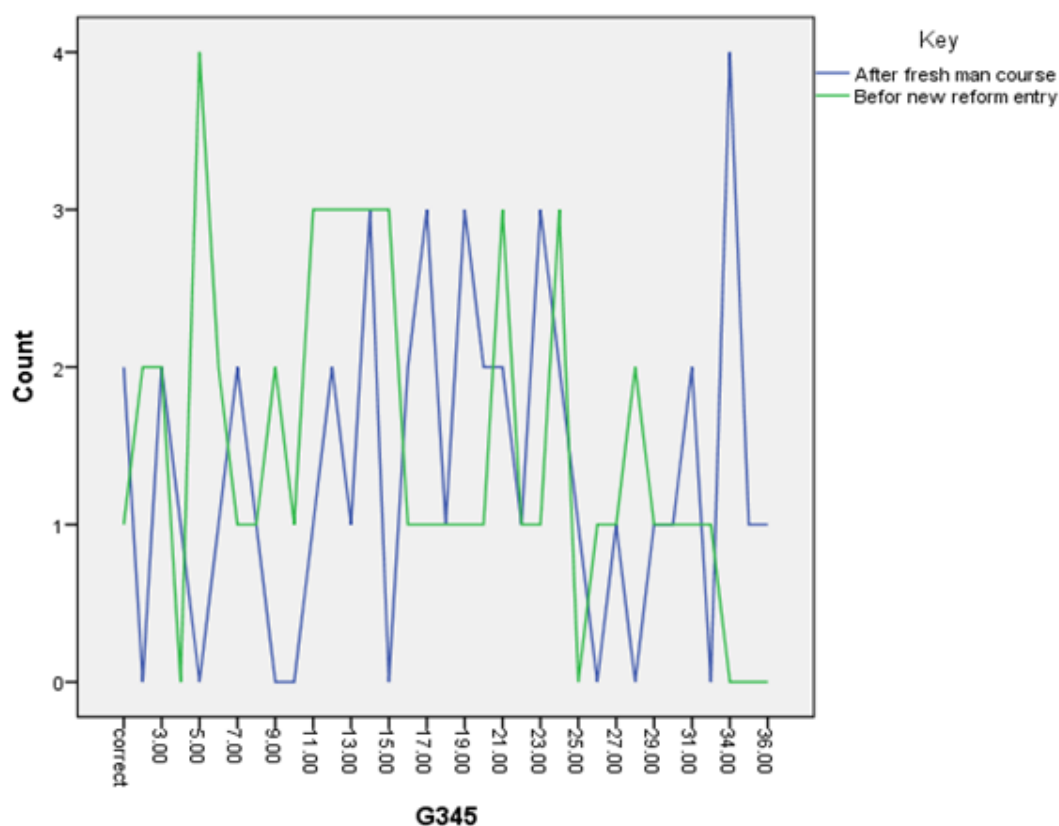
who join the department mathematics before and after the new reform.

The Levene test of the test questioner is detected (Sig = 0.475), which indicates no violation of homogeneity between the two groups. If “the p-value is significant (less than 0.1 at a 90% confidence level), the variance of the subgroups is not homogeneous and is estimated using Tamhane’s T2”. (Gupta, 1999), but because the data is homogeneous, an Independent Samples Test was performed using equal variances rather than the assumed Sig (P) = 0.040, which supports the alternative hypothesis that there is a significant difference in the basic mathematics achievement results of the study.

Table 2: Independent Samples Test

		Levene's Test for Equality of Variances		<i>t</i> – test for Equality of Means					
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean Difference	Std. Error Difference	95% CI of the Difference Lower Upper
G345	Equal variances assumed	.514	.475	2.094	97	.039	3.88	1.85	.20157 7.55
	Equal variances not assumed			2.080	91.99	.040	3.88	1.86	.17417 7.57

Graphical representation of the distribution of two groups is shown as follows

**Figure 1:** Distribution of two groups

4 Discussions

The current study contains an analysis of the repercussions of higher education reform on students who join the mathematics department. As table 1 shows, from the definition of skewness and kurtosis: Brown (2011) explains that “skewness characterizes the symmetry of a distribution, whereas kurtosis provides information about the relative peakedness

or flatness compared to a normal distribution”. This occurs when $\text{mean} < \text{median} < \text{mode}$ is used. “If the distribution of data is skewed toward the right, we call it positively skewed.” When $\text{mean} > \text{median} > \text{mode}$, this occurs (Brown, 2011). According to Brown (2011), “kurtosis gives information about the group distribution of peakedness or flatness

compared to the normal distribution”. Whereas the distribution of positive numbers is relatively peaked, the distribution of negative numbers is relatively flat (Brown, 2011).

As can be seen from above, the data distributions are skewed on the left side (-.034), indicating that $\text{Mean} < \text{Median} < \text{Mode}$, whereas the data distributions are skewed on the right side (.266), indicating that $\text{Mean} > \text{Median} > \text{Mode}$. Although the two groups’ kurtosis is negative, indicating a relatively flat.

We presented some of the students’ work below to triangulate the achievement of students in the two groups, *i.e.*, before and after the reform, respectively. Errors were mainly seen when adding, subtracting, and exponentiating the power of zero of exponential expressions in a term. Students who had not taken the freshman course prior to the reform were more affected than students who had taken the freshman course after the reform.

Students who had not taken the freshman course had difficulties with both operation and direction signs and demonstrated too many misunderstandings when working with signs. The researcher realized the impact of the new reform refreshment course on some concepts in mathematics. The following are samples of five students’ work before and five students’ work after the new refreshment reform to demonstrate the problem of computations in simple mathematical language from both sides, presented below.

The impact of the reform on students can be seen in some of the simple mathematical computations selected from the above two images.

From table 2, the significance level is $\text{Sig} (P) = 0.040$, which is less than 0.05, which supports the alternative hypothesis that there is a significant difference in the basic mathematics achievement results of the study. Figure 1 also shows the distribution of results for the two groups.

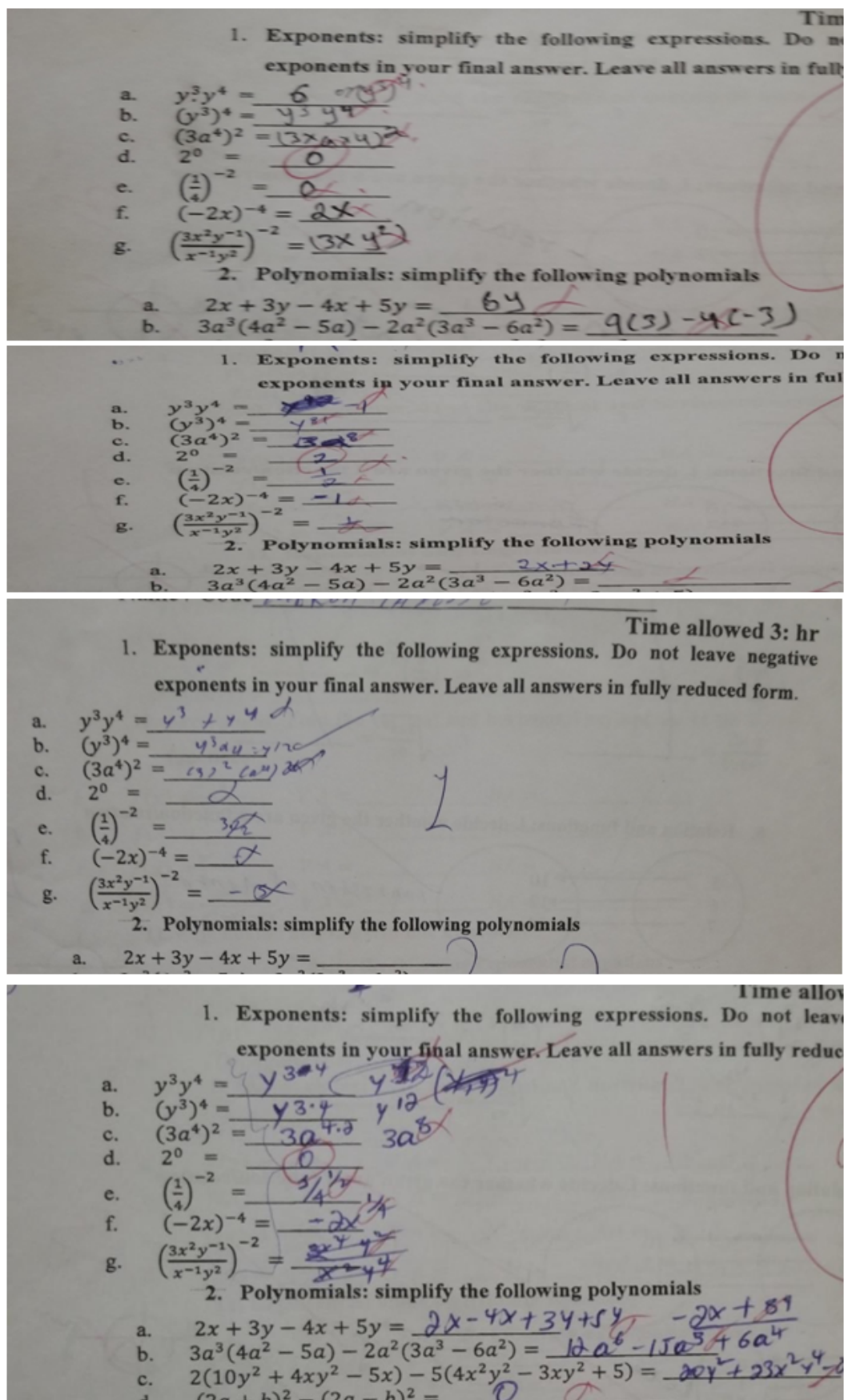


Figure 2: Five students work before new reform

Let us see some of students work from the second group (among the students after the reform)

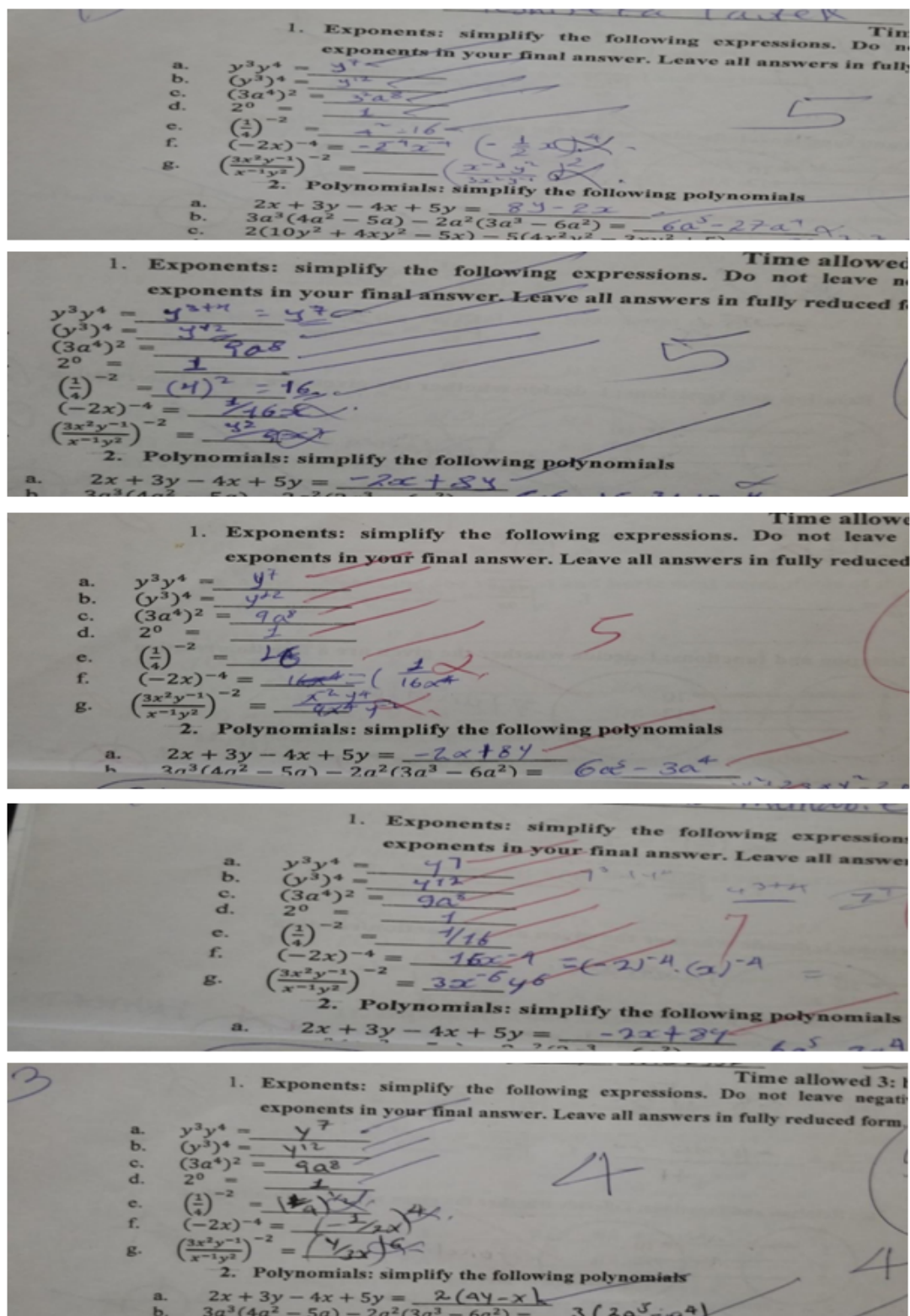


Figure 3: Five students work after they took new reform course

5 Conclusion

The extent of achievement of students who took the freshman reform course versus those who entered university before the freshman program launched and did not take the freshman reform course towards the basic language of mathematics concepts on their first day at university was investigated in this study.

Groups that took the reform refreshment course outperformed those who did not and who joined the mathematics department before the reform refreshment course. Students who took the refreshment course in the new governmental reform performed better than those who didn't have the opportunity to pass through the reform's freshmen course.

The finding specifically indicates that students who took the mathematics refresher course (Math. 101) performed better than those who did not take the basic language of mathematics course in their freshman year.

As a result, the key contribution of this finding is that:

1. the new reform of the freshman course plays a significant role in improving the success of all students in mathematics.
2. to increase the success rate of students in mathematics, this study has proven that they are trainable [not clear], and therefore, the teachers who give new reforms to freshman courses have to nurture all students.

References

- Anderson, L., & Krathwohl, D. (2016). *Anderson and Krathwohl- Understanding the New Versions of Bloom's Taxonomy*. Retrieved, from <http://www4.uwsp.edu/education/lwilson/curric/newtaxonomy.htm> (2001, 2005), revised 2013 & 2016
- Ashcrof, K. & Rayner, P. (2011b). *An Analysis of the Strengths and Weaknesses of Ethiopian Higher Education*. WENR.
- Ashcrof, K., & Rayner, P. (2011a). Ethiopian Higher Education; Expansion, Dilemmas and Quality. *ARCHIVE*, 7.
- Bekele, A. (2019). *Investigating the Influence of Pre- Calculus Mathematics Refreshment Module to First Year Engineering Students in an Ethiopian University: With Special Reference to First Year Engineering Students*. Retrieved from https://uir.unisa.ac.za/bitstream/handle/10500/25761/thesis_asnake%20muluye%20bekele.
- Belina, R. G. (2012). Prior or Background knowledge. *The University of Oklahoma*. (pp. 1-12). <http://www.ncrel.org/sdrs/areas/issues/students/learning/lr100.htm> (Accessed at 6/7/2017: Mid - continent comprehensive center (MC 3) regional ELL/CCSS Task Force.
- Boateng, F. (2020). Higher Education system and Institution, Ethiopia. *Research Gate*, DOI: https://www.doi.org/10.1007/978-94-017-9553-1_449-1.
- Brown, S. (2011,). *Measure of shape: Skewness and Kurtosis*. Retrieved, from <https://www.scribd.com/document/180694167/SkewStatSignif-pdf>.
- Embassy of Ethiopia, L. (2020). *google*. Retrieved, from <https://www.ethioembassy.org.uk/ethiopias-new-education-development-roadmap-charting-a-course-to-a-brighter-future>
- Gupta, V. (1999). *SPSS for beginners*. Congress: VJBooks.
- Hauser, L. (2015). *Precalculus Students' Achievement When Learning Functions: Influences of Opportunity to Learn and Technology from a University of Chicago School Mathematics Project Study*. Florida: Scoholar Commons; Graduate Theses and Dissertations.
- Hui-Ling, P. & Chien, Y. (2017). Educational Reforms with Their Impacts on School Effectiveness and School Improvement in Taiwan, R.O.C. *School Effectiveness and school Improvement*, 72-85.
- Kastberg, S. E. (2002). Understanding mathematical concepts: the case of the logarithmic function. Dissertation, Athens, Georgia.

- Kastbery, R. K. (2017). Links in learning logarithms. *Australian senior Mathematical Journal*, 27(1) (Accessed in 15/08/2017), 1-20.
- Lovric, M. (2009). *Mathematics Review Manual*. Hamilton, Ontario, Canada L8S 4K1: Miroslav Lovric: Department of Mathematics and Statistics McMaster University 1280 Main St. West.
- Mengisteab, T. (2021). Ethiopia: Progressive Education Reform to Radical Change. *The Ethiopian Herald* (Addis Ababa), 1-6.
- MoE. (2008). Educational statistics annual abstract: *Education Sector Development Program*, 35.
- Mohammed Karim, D. L. (2010). Precalculus Algebra: Original Purpose – Its Relevancy to Students’ Needs – and Some Suggestions. *KBM Journal of Science Education*, (2010), 1(2), 19-23.
- Mohammed, K. D. (2010:19). Pre-calculus algebra: Original purpose-its relevancy to students’ needs- and some suggestions. *KBM Journal of Science Education* 1(2), 19-23.
- MOSHE. (2020). *Basic Mathematics for Natural Sciences*. Addis Ababa, Ethiopia.
- Roadmap, E. N. (2020, Feb 4). Ethiopia’s New Education Development Roadmap: Charting a Course to a Brighter future. Retrieved from <https://www.ethioembassy.org.uk/SPSS>. (2004). *Base user guide*. Chicago: South Wacker Drive.
- Starke, K. (2021). The Importance of Background Knowledge in Understanding Text. Retrieved from <https://www.teachhub.com>.
- Thangarajah, P. (2020, DEc 21). *Introduction to the Basic Language of Mathematics*. Retrieved from google: https://math.libretexts.org/Courses/Mount_Royal_University/MATH_1150%3A_Mathematical_Reasoning/1%3A_Basic_Language_of_Mathematics/1.0_%3A_Introduction_to_the_Basic_Language_of_Mathematics.
- Vasquez-Martinez, C., Giron, G., Luz-Arellano, I., & . Ayon-Bañuelos, A. (2013). The Effects of Educational Reform. *Education Policy, Reforms and School Leadership*, 254-258.
- Weber, K. ([Sa]). *Students’ understanding of exponential and logarithmic functions*. Murray, KY 42071. U. S. A.: Murray State University.
- Yadessa, M. & Shemelis, M. (2022). In-depth analysis of primary schools performance, financial strength and challenges in Bench-Sheko, Kafa and Sheka Zones, Ethiopia. *Heliyon*, 8(3), 1-7. <https://doi.org/10.1016/j.heliyon.2022.e09116>.



Influence of social media utilization and parent adolescent communication on academic- achievement of secondary school students in south Ethiopia

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Abstract

This study examined the extent to which social media engagement and parent–adolescent communication contribute to the academic achievement of students at Hodo Public Secondary School. Specifically, the research addressed three central questions: (1) whether social media use and communication with parents predict academic performance; (2) the level at which students participate in social media and family communication; and (3) whether patterns of social media use vary by gender. A cross-sectional research design was implemented using stratified and simple random sampling procedures. From a population of 487 students, 253 were selected (including a contingency allowance), and nine teachers participated in interviews. Both quantitative and qualitative data were collected. Quantitative analysis was conducted using descriptive statistics (mean, standard deviation, percentage) and inferential tests (linear regression, independent t-test, and one-sample t-test) through SPSS Version 20. Qualitative responses were transcribed, coded, and categorized into themes. Findings indicated that social media utilization and parent–adolescent communication significantly predicted academic achievement ($p = .034$, $F(2,216) = .101$). Significant variation was also observed in levels of social media use ($M = 1.90$, $SD = 2.63$; $t(219) = 1.498$, $p = .046$) and communication ($M = 2.57$, $SD = 3.50$; $t(219) = 1.736$, $p = .012$). However, no statistically meaningful gender difference was detected in social media use at the .05 level. Overall, the results suggest that both digital engagement and family communication patterns are influential factors in secondary school academic performance.

1 Introduction

1.1 Background of the Study

A consistent body of literature indicates that many secondary school students experience unsatisfactory academic outcomes (Kolawale & Dele, 2012; Aina & Olanipekun, 2014). The continuing decline in performance at both secondary and tertiary levels has generated considerable concern among educators, families, and policymakers (Aina & Olanipekun, 2015). In response to such challenges, Ethiopia introduced initiatives such as the School Improvement Program to enhance instructional quality and strengthen student achievement (MoE,

2016).

Academic success is shaped by multiple interrelated influences operating within and beyond the school environment. Among the emerging factors receiving growing scholarly attention are social media engagement and the quality of parent–adolescent interaction. During adolescence—a developmental stage characterized by shifting autonomy and relational patterns—communication within families undergoes transformation (Smetana *et al.*, 2015). While supportive parenting fosters independence and adaptive functioning, ineffective parental involvement may undermine both behavior and aca-

demic outcomes (Suizzo, 2020).

Social media platforms have become embedded in daily life. Nalwa and Anand (2018) describe social media as internet-based communication systems that facilitate interaction, information exchange, and content sharing. Similarly, Ahn (2019) conceptualizes it as virtual community spaces where users generate and disseminate ideas and knowledge. Students frequently utilize these platforms to gather information, collaborate academically, and participate in digital learning networks (Kuppuswamy & Narayan, 2018). Nevertheless, the rapid expansion of social media has introduced both benefits and risks (Dhaha & Igale, 2013). Empirical findings suggest that academic difficulties may arise when students engage in multitasking during class time, diverting attention toward networking platforms rather than instructional activities (Nicole, 2017).

As a result, the researchers feel that further study is needed to better understand the influence of social media utilization and parent-adolescent communication on academic achievement among secondary school students. Therefore, the primary goal of this study is to examine the impact of social media utilization and parent-adolescent communication on academic achievement among Hodo secondary school students in the Kembeta Temaro zone of southern Ethiopia.

1.2 Statement of the problem

Rapid technological development has significantly altered contemporary social and educational environments. Among these changes, social media platforms have become deeply integrated into the daily routines of adolescents. A large proportion of secondary school students maintain active online profiles and frequently engage with platforms such as Facebook and other networking sites. Kuppuswamy and Narayan (2018) observed that students often devote substantial amounts of time to online interaction, sometimes at the expense of their academic responsibilities. When learners prioritize chatting, gaming, browsing, or posting over studying, their educational performance may be compromised.

Nicole (2017) further noted that excessive social

media involvement may weaken students' classroom concentration and reduce their ability to focus on instructional activities. Similarly, Nalwa and Anand (2018) highlighted that students frequently multitask across multiple digital platforms, dividing attention between academic tasks and online engagement. Such divided attention can hinder deep learning and retention of subject matter. In addition, Obi *et al.* (2012) reported that habitual use of informal abbreviations in online communication may negatively influence students' formal writing skills, as these shortened expressions sometimes appear in academic work.

Beyond digital influences, the quality of communication between parents and adolescents plays a vital role in shaping students' academic development. Ineffective or limited parent-child communication may contribute to reduced academic motivation, negative attitudes toward schooling, low self-confidence, and behavioral difficulties. Satir (2013) emphasized that exposure to negative experiences—whether online or within the family environment—may undermine adolescents' emotional stability and academic engagement.

Although previous studies have examined social media utilization and parent-adolescent communication separately, limited research has explored their combined effect on academic achievement, particularly within Ethiopian secondary school contexts. Most existing studies have concentrated on university populations or small-scale samples. Consequently, there remains a need for localized research investigating how these two factors jointly relate to students' academic performance.

Therefore, this study was designed to examine the relationship between social media utilization, parent-adolescent communication, and academic achievement among students at Hodo Public Secondary School. Based on this purpose, the following research questions were formulated:

- Is the power of social media usage and parent-adolescent communication predictive of academic achievement among study participants?
- What is the degree of social media utilization and parent-adolescent communication

among the study participants?

- Is there a “gender difference in terms of social media utilization”?

1.3 Operational definitions

- **Academic Achievement:** In this study, academic performance refers to students’ first-semester results in the 2020 academic year. It is measured by each learner’s Semester Average Achievement (SAA), calculated on a 100% scale.
- **Parent-adolescent communication:** This term describes the interaction between adolescents and their parents (biological or non-biological) who provide both responsiveness and demands. For the purposes of this research, it is defined operationally as a ratio-level variable, measured by participants’ total scores on the Parent–Adolescent Communication “Scale during the data collection phase”.

- **Social media utilization:** This refers to the engagement with online technological platforms that enable individuals to connect regardless of distance. “In the present study, it is operationally framed as a ratio-level variable”, assessed through participants’ total scores on the Social Media Utilization Scale gathered during the data collection period.

1.4 Conceptual framework (relationship) between the variables

The researcher briefly discussed the contents of the framework for investigating the impact of social media usage and parent-adolescent communication on the academic achievement of secondary school students. In this study, the independent variables (IV) were social media utilization and parent-adolescent communication, which were believed to influence academic achievement (DV). Additionally, Figure 1 below illustrates the connection between the demographic variable (sex) and social media usage.

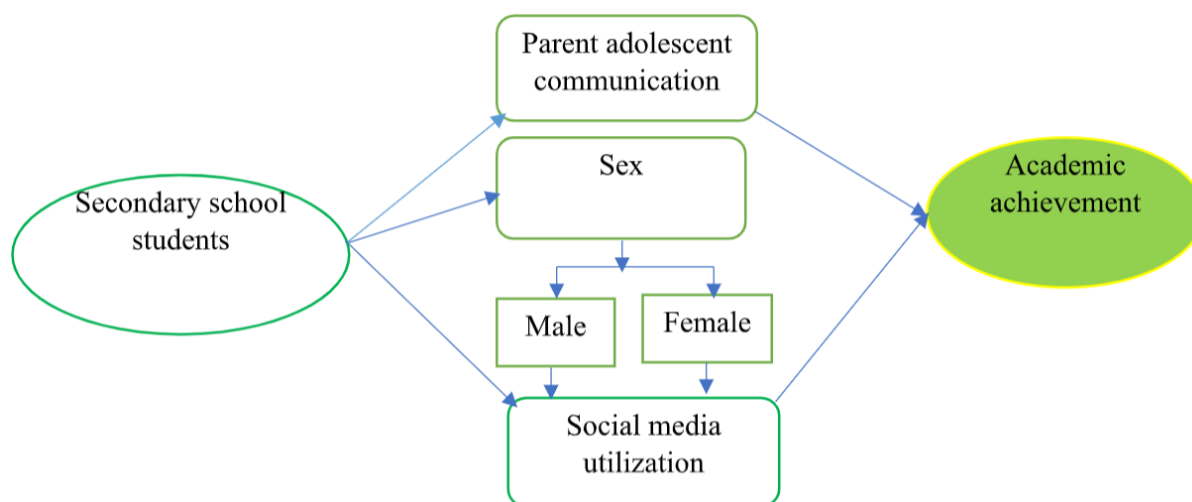


Figure 1: Conceptual Framework on the influence of Social Media Utilization and parent-adolescent communication on Academic Achievement

2 Research Design and Methods

The current study conducted at “Hodo Public Secondary School”, located in the “Kembata-Tembaro Zone of the Southern Nations, Nationalities, and Peoples’ Region (SNNPR)”. Geographically, the school lies about 329 km southwest of Addis Ababa, 187 km west of Hawassa, 56 km west of Durame,

and 31 km east of the Omo River (Tembaro Woreda Transport Office). The school was intentionally chosen over other public and private institutions in the zone because many of its students are heavy users of social media. In this setting, learners frequently access social media through mobile phones, making use of free Wi-Fi provided at school and

services from local internet cafés. Concerns raised by teachers, principals, and the wider school community regarding this trend served as the main reason for selecting Hodo Secondary School as the study site.

2.1 Period and Study design

From April 1 to April 30, 2020, in this study, the researcher applied a cross-sectional research design to collect data at a single point in time to analyze and interpret in connection to qualitative

data collected from selected teachers. It allows the researcher to apply surveys, questionnaires, and interviews to gather data from participants as well as explore characteristics, behaviors, or attitudes within a specific time frame.

2.2 Study participants

There were 3 principals (2 males and 1 female), 37 teachers (26 males and 11 females), and 487 students (309 males and 178 females) who were available during the data collection period.

Table 1: Population frame

Grade	Sections											
	A			B			C			D		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Ninth	44	28	72	48	24	72	40	32	72	36	36	72
Tenth	37	13	50	31	18	49	34	16	50	39	11	50

2.3 Sample and sampling techniques

To select participants for this study, a mixed probability sampling technique involving stratified and simple random sampling was used. In stratified sampling, the researcher divided the students into strata based on grade level, gender, and sections. Using simple random sampling, sample students were then selected from each grade level and section in proportion to their representation in the population. The number of sample students from each grade level and section was determined by multiplying 0.52. The table below displays the proportion of the sample size from each grade and section. Individual students were then selected using simple random sampling, similar to a lottery method. In this case, every student in the population had an equal chance of being selected. In the subsequent process, pieces of paper with "Yes" and "No" written on them were placed in a box, corresponding to the total number of students in each section. Students were then asked to randomly

select one piece of paper. The final sample consisted of 253 students from both grade levels. Only those who chose "Yes" were included in the study.

To obtain the required data, the researcher selected a representative portion of the total population, commonly referred to as a sample. Consistent with this sampling principle, 253 participants were drawn from the total population of 487 students. The sample size was determined using Yemane's (1967) formula for sample size calculation, incorporating a 15% contingency allowance to account for possible non-response or incomplete data.

$$n = \frac{NZ^2P(1-P)}{E^2(N-1)+Z^2P(1-P)}$$

Key: n = sample population

N = total population

Z = z - score

P = proportionality

E = alpha significance level

Table 2: Sample Frame

Grade	Sections												Grand Total
	A			B			C			D			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	
9 th	23	14	38	25	12	37	21	17	38	19	19	38	150
10 th	19	7	26	16	9	25	18	8	26	20	6	26	103

2.4 Instrument of Data collection

This study relied on both primary and secondary sources of information. Primary data were collected directly from participants to capture original and relevant characteristics (Kothari, 2007). The main tool used was a structured questionnaire distributed to 253 students, of which 219 completed usable responses. In addition, in-depth interviews were carried out with nine teachers. Secondary data were gathered through a review of students' Semester Academic Achievement (SAA) reports obtained from the school records office. These combined methods helped examine how social media use and parent–adolescent communication affect academic performance.

2.5 Methods of data collection

To gather reliable and well-organized information, the following procedures were used: the Likert scale survey questionnaire and an in-depth interview.

Questionnaire

Social media usage was assessed using a five-point Likert-scale questionnaire adapted from Helou and Ab-Rahim (2014) and Mingle & Adams (2015). Before administration, the instrument was reviewed by an English language specialist, adjusted for clarity, and translated into Amharic to ensure accessibility for respondents. The finalized tool consisted of 15 items, for example: *"I use social media to keep in touch with my relatives"*.

Parent–adolescent communication was evaluated using another five-point Likert-scale questionnaire adopted from Mehmood and Taswir (2013) and Wanajak (2011). Like the previous tool, it was revised and translated into Amharic with the help of experts. This scale contained 10 items, such as: *"I sometimes feel afraid to ask my parents for what I need"*.

In-depth interview

In-depth interviews were used as a qualitative method to capture participants' perspectives in detail and provide a comprehensive understanding of the research issue. For this purpose, nine teachers (seven men and two women) were chosen randomly. Each interview lasted about 30 minutes, allowing respondents sufficient time to express their views on the topic.

Document observation

The researcher also reviewed students' academic records to triangulate data. Semester results were collected from the school's record office using student roll numbers obtained during questionnaire completion. Any participant who did not provide their roll number was excluded from this part of the analysis. This method enabled comparison of self-reported behaviors with actual academic achievement.

2.6 Data collection procedure

The researcher first prepared the close-ended items, adapting and refining them before translating the questionnaires into Amharic with the assistance of language experts to ensure clarity. Ethical clearance was then secured from the Psychology Department of Dilla University, which granted permission to access the required data and documents. Afterward, arrangements were made with school principals to identify suitable times when students could complete the survey without disrupting their classes. Prior to distribution, participants were briefed on the purpose of the study and given clear instructions on how to respond. Questionnaires were completed under the supervision of the researcher and assistants, with sufficient time allotted to allow participants to fully understand and answer the questions.

2.7 Data analysis

The study applied both quantitative and qualitative approaches to analyze the collected data. Quantitative responses were carefully checked, coded, and entered into SPSS version 20 for processing. Analysis involved both descriptive and inferential methods, such as linear regression, one-sample t-tests, and independent t-tests.

For the qualitative component, data from interviews were first coded, categorized, and organized into themes. Notes and audio recordings were transcribed word-for-word in Amharic by the researcher. During translation, attention was also given to tone, expressions, and body language used by respondents to preserve meaning.

3 Results

3.1 Participants demographic characteristics

As presented in Table 1, the demographic data obtained from 219 respondents show that 67.1% of the participants fall within the 16–18 age range, which corresponds to late adolescence. This finding demonstrates that most students included in the study belong to the late adolescent developmental stage.

Regarding sex, the majority of participants were males which constituted 69.4%, and the remaining 30.6% females. The implication of the above finding the majority of participants were male in the study area.

Table 3: Demographic variables on the effect of social media utilization and parent-adolescent communication on academic achievement of high school students, south Ethiopia (219)

Age	N	%	Sex	N	%	Grade Level	N	%
16-18 (Late adolescence)	147	67.10	Male	67	30.60	Ninth	115	52.50
19-22 (Early adulthood)	51	23.30	Female	152	69.40	Tenth	104	47.50
Above 22 (Middle adulthood)	15	6.80	Total	219	100.00	Total	219	100.00
Below 15 (Early adolescence)	6	2.70						
Total	219	100.00						

n=frequency, %=percentage

3.2 Influence of “Social Media Utilization and parent-adolescent communication on academic achievement”

In Table 4, social media utilization has a statistically significant impact to academic achievements, $F(2,216) = .101$, $p = .034$.

R Square

The Model Summary Table shows how well the regression line accounts for the overall variation in the dependent variable. As presented, the R value for the two predictors parent–adolescent communication and social media use was .101, meaning that together they explained 1.01% of the variance in academic achievement.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F-Change	
1	.031 ^a	.001	-.008	14.227	.001	.101	2	216	.304	2.089

a. Predictors: (Constant), Parent-adolescent communication, social media utilization

b. Dependent Variable: Academic achievement

Regarding the Durbin–Watson test, one of the key assumptions of regression is that the observations remain independent. When data are collected over time, successive responses may become correlated. To check this, the Durbin–Watson statistic is expected to range between 1.5 and 2.5. In this study, the obtained value was 2.089, which falls within the acceptable range, indicating that autocorrelation was not present.

3.3 Overall interpretation of “regression analysis on academic achievement”

In summary, “a stepwise multiple regression was performed to determine whether social media engagement and parent–adolescent communication had a significant impact on students’ academic performance”. The analysis indicated that, together, these predictors explained only a small and non-significant portion of the variance ($\beta = .001$, $F(2,216) = .101$, $p = .304$).

Additionally, an ANOVA (see Table 4) was conducted to further explore the relationship. Findings revealed that social media use had a statistically significant influence on academic achievement ($\beta = .001$, $F(2,216) = .101$, $p = .034$).

Supporting this, one interviewee—a 41-year-old male teacher—stated that:

"Excessive use of social media can lead individuals to lose focus on what is important to them. Concerns have been raised by many school teachers

and the general public due to the lack of regulations or guidelines provided by school officials regarding inappropriate use of technology. As high school students, their primary focus should be on their education, and it is not beneficial for their academic life if they prioritize social media or use it in an unbalanced manner. However, I cannot definitively state that it is detrimental to their academic life when used poorly. It may negatively impact their academic life if they utilize social media in a way that is not aligned with their educational goals, such as spending excessive time on non-academic activities like chatting, sharing, and liking posts, rather than seeking out crucial information for their studies".

However, “other participants of the interview, one participant of interview sex: male and aged 34 from teachers”: stated that:

"It is impossible to determine the impact of using social media on academic life, as there are both benefits and drawbacks. On one hand, it provides access to valuable information for academics, social activities, and entertainment. On the other hand, it can be seen negatively as it often distracts students from studying. Therefore, the impact of social media on academic performance depends on the user's experience and intentions. It is important to acknowledge that social media can both present opportunities and challenges. While it offers access to academic information, unintentionally spending excessive time on it can hurt an adolescent's academic life".

Table 5: One-Sample t – test Summary on Social Media Utilization and Parent-Adolescent Communication

Variables	Mean	Standard deviation	N	r	t	df
Social media utilization	1.90	2.63	219	.046	1.498	-.054
Parent-adolescent communication	2.57	3.50	219	.012	1.736	.393

$P^* < .05$

According to Table 5, “one sample t- test demonstrated significant difference between the social media utilization and parent adolescent communication among the students”. The extent social media utilization and parent adolescent communication among was, 95%CI, social media utilization ($M = 1.90$, $Sd = 2.63$), $t(219) = 1.498$, and parent

adolescent communication ($M = 2.57$, $Sd = 3.50$), $t(219) p = .012$,) which implied that “there is a statistically significant difference in extent social media utilization and parent adolescent communication among study participants”.

In addition to this, “one participant of interview sex: female and aged 30 from teachers” said that:

“The use of social media by students at our school, whether for academic purposes or personal enjoyment, is not overemphasized. Students access social media both through the school’s Wi-Fi and their mobile data. Additionally, the interviewees noted that parents stay updated on their children’s academic progress and maintain communication with the school. We organize familiar parent days at the beginning and end of the school year, and when necessary, we contact parents to address any current issues that assist us in managing and supporting students at their respective academic levels”.

In contradict to this, “one participant of interview sex: male and aged 52 from teachers” said that:

“Despite the claims of other informants, the entire school community is not effectively utilizing social media for academic information or entertainment due to the absence of a centralized network and inadequate school Wi-Fi. It can be argued that

our community lacks social media usage because there are no funds, preventing students from accessing cell data or online connectivity. Furthermore, parent-school communication is deficient. Only a small number of parents attend parent-teacher conferences, and some parents make impersonal phone calls to address their children’s issues. Additionally, certain parents choose not to attend these conferences and evade their responsibilities. Consequently, this highlights the poor interactions or orientations between parents and adolescents at home.”

3.4 Gender differences in terms of social media utilization

The results indicate that there was no statistically significant difference in academic achievement between male and female students at the 0.05 level of significance. The mean score for males was 65.73 (SD = 3.292, N = 152), while for females it was 65.97 (SD = 3.950, N = 67). These findings suggest that the average academic performance of male and female participants did not differ in a statistically meaningful way.

Table 6: Independent sample *t* – test on social media utilization interns of gender

Social media	Male			Female			95% CI for MD	<i>r</i>	<i>t</i>	<i>Df</i>	
Utilization	Mean	Sd.	<i>N</i>	Mean	Sd.	<i>N</i>					
	65.73	3,292	152	65.97	3.950	67	.267	.483	.049	1.576	212

*P** <.05

In addition to this, one participant in the interview, a male aged 35, said that:

“I don’t understand the gender difference in terms of social media usage. It might be determined by an individual’s purpose and goals for using social media and their perceptions of its outcomes, but biological sex cannot make a difference in terms of social media usage. Whenever there is an opportunity, there is also a challenge. Having access to information for academic purposes is a major advantage of social media, but unintentionally spending too much time on it is a negative aspect of social media usage and can be seen as an influence on academic life for adolescents”.

In contrast to this, “one participant in the interview sex, a male aged 52 from teachers”, said that:

“In my opinion, males tend to use social media more than females because females may often be occupied with helping their mothers in the kitchen and other household tasks. Additionally, males are likely to spend more time outside of their homes, which grants them the freedom to socialize with their peers on social media sites. These factors contribute to gender differences in social media utilization”.

4 Discussions

4.1 The extent of “social media utilization and parent–adolescent communication”

Findings from this study indicate a statistically significant difference in how participants engage with social media and communicate with their parents. The actual results showed only slight deviations from expected values. In recent years, parents have demonstrated limited awareness of how technology shapes adolescents’ relationships. Nonetheless, it is important for parents to understand this influence, as doing so helps them maintain supportive relationships with their children and guide their choices regarding decision-making and media use (Currie, 2014; Toombs, 2014).

4.2 Influence of “social media utilization and parent–adolescent communication on academic achievement”

The results also suggest that both social media engagement and parent–child communication play measurable roles in shaping students’ academic outcomes. Oche and Aminu (2016) noted that many learners fall behind academically due to spending excessive time on social platforms. Similarly, Obi, Bulus, Adamu, and Sala’at (2012) observed that heavy reliance on these sites negatively affects grammar and language skills, while Abaleta (2014) reported that overuse can impair students’ ability to communicate clearly and hinder learning. Internet dependency has become a worldwide concern, often leading students to prioritize online activities over personal or educational responsibilities, which ultimately damages academic success.

In contrast, Camilia, Sajoh, and Dalhtu (2013) found that social media can benefit learning, with about three-quarters of students in their study reporting that they used these platforms for school-related tasks. Likewise, Kaplan and Haenlein (2016) pointed out that social media can foster personal growth, creativity, and technical skills. Harrath and Alobaidy (2016) further argued that when used purposefully, media consumption may enhance academic outcomes. Beyond social media, effective communication between parents and adolescents has been linked to improved self-esteem, academic achievement, and moral reasoning (Har-

tos & Power, 2012). On the other hand, Brown and Iyengar (2018) stressed that the absence of parental guidance, acceptance, and autonomy support puts adolescents at a disadvantage, leaving them without essential skills for academic success.

4.3 Gender differences in social media use

The study also “revealed no significant differences between male and female students in terms of social media engagement”. Lenhart (2015) reported a similar trend, noting that both genders generally participate in online activities at comparable rates. Nonetheless, gender as a demographic factor does influence the types of platforms students prefer: while males show more interest in LinkedIn, females are more likely to favor Facebook personal pages (Lenhart *et al.*, 2013). According to social role theory, such differences arise because men and women are socialized into distinct responsibilities and behavioral patterns. Men tend to emphasize independence, intellectual pursuits, and competition, whereas women focus more on interpersonal and communal roles.

Earlier studies, however, have documented contrasting findings. Some research has suggested that females use social media more frequently than males, while others reported that men dominate internet use due to lower privacy concerns. For instance, Cho *et al.* (2019) found that older female users from individualistic cultures expressed stronger privacy concerns compared to men. Similarly, Akyildiz and Argan (2012) observed that male students in Turkey spent more time on Facebook than females. Tufekci (2018) showed that women were several times more likely than men to participate in online networking sites. Perrin (2015) also noted that American women gradually surpassed men in social media use. In Ethiopia, Mohammed (2014) documented significant gender-based differences in the frequency of online activity. Tham and Ahmed (2016) reached a similar conclusion in their study of secondary school students, emphasizing notable gender variations in social media practices.

Taken together, these findings imply that while social media can both support and hinder academic life, the balance depends largely on how it is managed. Tham and Ahmed (2016) suggested that the

responsibility lies mainly with parents, who should help ensure that adolescents use social media constructively without compromising their studies.

5 Conclusion

The findings of this research can be summarized in three key points:

1. Both social media usage and communication between parents and adolescents significantly influence students' academic performance.
2. Notable differences exist in the extent of social media engagement and parent–child communication among the participants.
3. No meaningful gender-based differences were found in social media use.

Overall, the results highlight that social media activity and the quality of parent–adolescent interaction are important determinants of academic achievement among secondary school learners. This underlines the responsibility of stakeholders—including parents, teachers, counselors, school leaders, community members, and government institutions—to develop strategies that address challenges linked to digital device usage. Moreover, parents and guardians are encouraged to foster open, supportive communication to promote students' success.

Strengths and Limitations of the Study

This research stands out as the first of its kind conducted in Ethiopia, making it a valuable contribution to the field. However, certain limitations must be acknowledged. The study focused solely on one school site, which restricted the diversity of participants and locations. Furthermore, the reliance on self-reported data introduces the possibility of bias. Consequently, the outcomes of this research should not be generalized to all secondary school students in the Kembata Tembaro Zone or across Ethiopia.

Author's Declaration

I, Markos Malimo Setena, affirm that the study entitled “The Influence of Social Media Utilization and Parent–Adolescent Communication on Secondary School Students' Academic Achievement” was entirely conducted by me.

Ethical Approval and Consent for Participation

Prior to data collection, formal approval was obtained from the Department of Psychology, Institute of Education and Behavioral Science, as well as from the school administration. The objectives of the study were clearly explained to participants, and written informed consent was secured before participation. Confidentiality of all responses was strictly maintained throughout the process.

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Availability of Data

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References

- Abaleta, A. B., Centaza, S.M., & Calimlim, M. E. (2004). Impact of Social Networking on the Academic Performance of College Students in Anellano University- (Unpublished Dissertation).
- Ahn, J. (2019). The Effect of Social Network Sites on Adolescents Social and Academic Development Current Theories and Controversies. *Journal of Information Science and Technology*, 62(8), 1435-1445. www.doi.org/10.1002/asi21540
- Aina, J.K. & Olanipekun, S.S. (2016) “The influence of English language on students’ academic performance in Physics Colleges of education, Asian,” *Academic Research Journal of Social Science and Humanities*, vol. 1, no. 23, pp. 272-281.
- AKimberly, B., *et al.* (2016) “Social networking sites affect one’s academic performance adversely”. [Online]. Available:<http://www.scribd.com/doc/28919575/SOCIAL-NETWORKING-SITES>
- Akyıldız, M. & Argan, M. (2012). Using on-line social networking: Students’ purposes of Facebook usage at the University of Turkey. Retrieved from <http://www.aabri.com/LV11Manuscripts/LV11094.pdf> on March 16, 2022.
- Brajša-Žganec, A., Merkaš, M., & ŠakićVelić, M. (2019). The relations of parental supervision, parental school involvement, and child’s social competence with school achievement in primary school. *Psychology in the Schools*, 56(8), 1246–1258.<https://doi.org/10.1002/pits.22273>.
- Bronstein, P., Ginsburg, G. S., & Herrera, I. S. (2015). Parental predictors of motivational orientation in early adolescence: a longitudinal study. *Journal of Youth and Adolescence*, 34, 559–575.
- Brown, L. & Iyengar, S. (2018). Parenting styles: The impact on student achievement. *Marriage & Family Review*, 43(1), 14-38. Retrieved from <http://ejournals.ebsco.com/direct.asp?ArticleID=4256BB19337AE6259EF6>.
- Camilia, N. O., Ibrahim, D. S., & Dalhatu, L. B. (2013). The effect of social networking sites usage on the studies of Nigerian students. *The international journal of engineering and science (IJES)*, 2, 39-46. Retrieved from <http://theijes.com/papers/v2-i7/Part.3/F0273039046.pdf>.
- Cho, D. (2019). The role of high school performance in explaining women’s rising college enrollment. *Economics of Education Review*, 26(4), 450-462.
- Currie, M. (2014). Parenting in the Technology Generation: Exploring the Impact of Technology on Adolescents and their Parents. Honors Thesis. The University of Queensland.
- de Looze, M., van den Eijnden, R., Verdurmen, J., Vermeulen-Smit, E., Schulten, I., Vollebergh, W., & terBogt, T. (2012). Parenting practices and adolescent risk behavior: Rules on smoking and drinking also predict cannabis use and early sexual debut. *Prevention Science*, 13, 594–604. <https://doi.org/10.1007/s11121-012-0286-1>.
- Dhaha & Igale. (2013). A description of Facebook use and academic performance among undergraduate and graduate students. In Poster presented at the meeting of the American Educational Research Association, San Diego, CA.
- Grolnick, W. S. & Slowiaczek, M. L. (2015). Parents’ Involvement in Children’s Schooling: A Multidimensional Conceptualization and Motivational Model. *Child Development*, 65(1), 237–252.
- Harrath, Y. & Alobaidy, H. (2016). Impact of Social Networking Sites on Student Academic Performance: The Case of University of Bahrain. *Journal of Cases on Information Technology (JCIT)*, 18(2), 35–50.
- Hartos, J. & Power, T. (2012). Association between mother and adolescent reports for assessing relations between parent-adolescent communication and adolescent adjustment. *Journal of Youth and Adolescence*, 29, 441–450.

- Helou, A. M. & Ab-Rahim, N. Z. (2014). The influence of social networking sites on students' academic performance in Malaysia. *International Journal of Electronic Commerce Studies* 5(2) 247-254. Retrieved from <http://www.academicjournals.org/ojs2/index.php/ijecs/article/viewFile/1114/213>.
- Hollamann, J., Gorges, J., & Wild, E. (2016). Motivational antecedents and consequences of the mother–adolescent communication. *Journal of Child and Family Studies*, 25, 767–780. <https://doi.org/10.1007/s10826-015-0258-8>.
- Kaplan, A. & Haenlein, M. (2016). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59-68. doi: <https://doi.org/10.1016/j.bushor.2009.09.003>.
- Kolawale, C.O.O. & Dele, A. (2012). "An examination of the national policy of language education in Nigeria and its implications for the teaching and learning of the English language," *Ibadan Journal of Education Studies*, vol. 2, no. 1, pp. 12-20, 2012.
- Kothari, C. P. (2007). Research Methodology. New Delhi: Wiley Eastern Limited. Academic Performance. *NASPA Journal*, 44(3), 512-537.
- Kuppuswamy, S. & Narayan, P. (2018). The Impact of Social Networking Websites on the Education of Youth. *International Journal of Virtual Communities and Social Networking (IJVCSN)*, 2(1).
- Lenhart, A., Madden, A., Macgill, R. A., & Smith, A. (2015). Teens and social media Pew Internet and American Life Project. Retrieved from http://www.pewinternet.org/files/oldmedia/Files/Reports/2007/PIP_Teens_Social_Media_Final.pdf.pdf.
- Mehmood, S. & Taswir, T. (2013). The effects of social networking sites on the academic performance of students in College of Applied Sciences (NizwaOman). *International Journal of Arts and Commerce*, 2 (1). Retrieved from http://www.ijac.org.uk/images/frontImages/gallery/Vol.2_No._1/10.pdf.
- Mingle, J. & Adams, M. (2015). Social media network participation and academic performance in senior high schools in Ghana. *Library Philosophy and Practice (e-journal)*. Retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=3446&context=libphilprac>.
- MoE (Ministry of Education) (2016). *School Improvement Programmed Implementation Guide*. (August 2006) MOE - blueprint D or Zero Draft.
- Mohammed, R. A. (2014). Research paper on social media usage, sexual behavior and risk perception among adolescents of some private high schools in Addis Ababa (Master thesis). Un published.
- Nalwa, K. & Anand, A. P. (2018). Internet addiction in Students: a cause of concern. *Cyber psychology and Behavior*.
- Nicole, C. S. (2017). The benefits of Face book "Fiends;" Social Capital and College Students' Use of Online Social Network Sites. *Journal of Computer Mediated Communication*.
- Obi, B. A. (2012). The need for safety consciousness among youths on social networking sites. *Journal of Applied Science and Management (JASM)*. 4547
- Obi, N. C., Bulus, L. D., Adamu, G. M., & Sala'at, A. B. (2012). The need for safety consciousness among Youths on social Networking Sites. *Journal of Applied Science and Management (JASM)*, 14(1)
- Oche, M. & Aminu, A. (2016). Nigeria: Social Networking and the Future of Students 3RD October 2010. Leadership Newspaper (ABUJA). <http://Allafrica.com/Stories/201010040385.html>. Retrieved, 21(05), 2013.
- Otani, M. (2020). Parental involvement and academic achievement among elementary and middle school students. *Asia Pacific Education Review*, 21(1), 1–25. <https://doi.org/10.1007/s12564019-09614-z>.

- Perrin, A. (2015). Social networking usage: 2005–2015. Pew Research Center. Available at:
- Rideout, V., Foehr, U., & Roberts, D. (2019). “Generation M2: Media in the lives of 8 to 18 year-olds,” 2010. [Online]. Available: <http://www.kff.org/entmedia/upload/8010.pdf> edia,” *Business Horizons*, vol. 53, no. 1, pp. 59–68,
- Smetana, S., Robinson, J., & Rote, W. (2015). *Socialization in adolescence*. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization* (pp. 60–84). Guilford Press.
- Song, J., Bong, M., Lee, K., & Kim, S. (2015). Longitudinal investigation into the role of perceived social support in adolescents’ academic motivation and achievement. *Journal of Educational Psychology*, 107(3), 821–841. <https://doi.org/10.1037/edu0000016>.
- Satir, V. M. (2013). *Peoplemalcing*. Palo Alto, CA: Science and Behavior Books.
- Suizzo, M. (2020). Parent–child relationships. In S. Hupp & J. D. Jewell (Eds.), *The encyclopedia of child and adolescent development* (pp. 1–13). John Wiley & Sons. <https://doi.org/10.1002/9781119171492.wecad408>.
- Tham, J. & Ahmed, N. (2016). The usage and implications of social networking Sites: A survey of college students. *Journal of Interpersonal, intercultural and Mass communication*, 2(1). Retrieved from http://s3.amazonaws.com/academia.edu.documents/28412838/1508.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1497261141&Signature=AbGDTW&h1h5Ze0FB1jUtrzs8A%2BRA%3D&response&contentdisposition=attachment%3B%20filename%3DUsage_and_Implications_of_Social_Network
- Toombs, E. (2014). *Evaluating the parent adolescent communication toolkit: usability, measure assessment and preliminary content effectiveness*. Submitted in partial fulfillment of the requirements for the degree of Master of Arts at Dalhousie University Halifax, Nova Scotia
- Trung, B. & Ducreux, E. (2013). Parental influence and academic achievement among middle school students: Parent perspective. *Journal of Human Behavior in the Social Environment*, 23, 579–590. <https://doi.org/10.1080/10911359.2013.765823>.
- Tufekci, Z. (2008). Grooming, gossip, Facebook and My Space. *Information, Communication & Society*, 11(4), 544–564, www.doi.org/10.1080/13691180801999050.
- Wanajak, K. (2011). Internet use and its impact on secondary school students in Chiang Mai, Thailand. Retrieved from <http://ro.ecu.edu.au/theses/394>.
- Wang, M. T. & Sheikh-Khalil, S. (2014). Does parental involvement matter for student achievement and mental health in high school? *Child Development*, 85(2), 610–625. <https://doi.org/10.1111/cdev.12153>.
- Ward, A., Stoker, H. W., & Murray-Ward, M. (2016) “Achievement and ability tests-Definition of the domain,” *Educational Measurement*, vol. 2, pp.
- Yemane, T. (1967). *Statistics: An introductory analysis*. New York: Guilford.



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