

**INFLUENCE OF PRINCIPALS' TRANSFORMATIONAL LEADERSHIP ON
TEACHERS' JOB PERFORMANCE IN PUBLIC PRIMARY SCHOOLS IN HEIBAN
COUNTY, SUDAN**

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DECLARATION

I declare that this thesis is my original work and has not been presented for a degree at any other university.

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DEDICATION

I dedicate this work to all those who have contributed to my spiritual, human and academic journey. I would not be here without them, my gratitude for shaping me.

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ABSTRACT

This study investigated the influence of principals' transformational leadership on teachers' job performance in public primary schools in Heiban County, Sudan. The following objectives guided the study: to determine the extent to which principals' collaboration influences teacher job performance; to investigate the influence of principals' innovation on teacher job performance; to examine how principals' teacher empowerment influences teacher job performance and to evaluate how principals' motivation influence teacher job performance in public primary schools in Heiban County, Sudan. The enquiry was anchored on Bass' transformational leadership theory and used a mixed method, convergent parallel design. The study targeted all 93 public primary schools in Heiban County, the Primary Education Director of Education, 93 school principals, and 686 teachers. The sample comprised 19 public primary schools, selected through stratified and simple random techniques; the sample size for teachers was 253, the number obtained using the Yamane formula; ten principals and the Primary Education Director were selected using purposive critical case sampling. The data collection instruments were interview guides for the principals and the Primary Education Director and questionnaires for teachers. The reliability of data collection instruments was established using the split-half method and analysed through the Cronbach Alpha Test, attaining a 0.88 score. The validity of quantitative instruments and qualitative instruments' dependability was achieved through the supervisors' consultancy and pilot testing. Quantitative data was processed using the Statistical Package for Social Science (SPSS), version 21 and analysed using the Spearman rank correlation coefficient. The results were reported in graphs and tables. Qualitative data was analysed using a thematic approach and reported through direct quotes and narratives. The results showed that collaboration ranked first, with $r = .497$, principals' innovation strategies at $r = .370$, principals' teacher empowerment at $r = .474$, and principals' motivation skills at $r = .474$. The findings indicate a positive and significant relationship between principals' TL practices and teachers' job performance in public primary schools in Heiban County, Sudan. The study recommended that structures should be implemented to offer teachers training and refreshing courses.

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LIST OF ABBREVIATIONS AND ACRONYMS

HD	Head of Department
ICT	Information Communication Technology
IL	Instructional Leadership
LMX	Leader-Member Exchange
SDG	Sustainable Development Goals
SMT	Senior Management Team
SOE	Secretariat of Education
SPLA/N	Sudan Peoples' Liberation Army North
SPSS	Statistical Package for Social Sciences
TTC	Teacher Training College
TL	Transformational Leadership
UN	United Nations
UNICEF	United Nations International Children's Fund
USA	United States of America

CHAPTER ONE

INTRODUCTION

This chapter presents the background to the study. It includes the statement of the problem, purpose and objectives of the study, research questions, significance of the study, its scope, and delimitations. It continues with the theoretical and conceptual framework and ends with the operational definition of key terms.

1.1 Background to the Study

Leadership is one of the most important administrative capacities and has occupied the minds of global experts. In a school setting, management is the process by which the leader impacts, controls, and encourages teachers to accomplish desirable goals (Shava & Heystek, 2021). The principal is one of the outstanding personnel in the school since they are expected to pave the way for teachers and learners to engage successfully in the teaching-learning process.

Education defines a nation and shapes the future of every country; through it, poverty and violence cycles in underdeveloped nations may be broken (United Nations, 2020). This is why there has been a global drive for higher standards of learning over the last few decades. This concern is expressed in the United Nations (UN) 2030 Agenda for Sustainable Development Goal (SDG) 4 on quality education.

Quality education is a complex issue that comprises numerous variables, including the effectiveness of instructors in carrying out their responsibilities. Although teacher job performance on its own does not determine learners' outcomes, it significantly impacts them (Azeem & Omar, 2018). By performing their jobs well, teachers contribute to attaining educational goals and objectives through performance on the job. For this purpose, the school principal provides leadership, guiding and supporting them (Kamba et al., 2023). Leithwood et al. (2020) asserted that school leadership influences teaching quality significantly and

positively, and therefore, the leadership practices used to this end matter. Successful school leaders may use different practices to improve organisational performance and student outcomes based on a leadership model or a combination of them.

The Transformational Leadership (TL) theory has been widely applied in various organisational settings, including educational. Empirical studies evidence a positive influence of transformational leaders on teachers' motivation, morale, commitment and performance and its effectiveness in education (Huang et al., 2021; Pennell, 2023). The theory of TL focuses on followers' and leaders' development to higher levels, achieving a performance that exceeds expectations. Burns (1978) first formulated it, and Bass (1985) developed it further, presenting TL under four "main dimensions: idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration" (Osuji, 2020; p.143; Sengendo & Eduan, 2024). However, this study considered only three of them: principal-teacher collaboration originated from inspirational motivation, innovation as a result of intellectual stimulation and empowerment and motivation linked to individualised consideration.

Inspirational motivation refers to the visionary leader's ability to inspire followers. By "providing meaning to their followers' work" (Bass & Steidlmeier, 1999, p.6). School principals envision organisational goals and share them with the teachers so that they become common goals. Educational goals cannot be accomplished by the school principal alone but by enhancing collaboration and team spirit among teachers (Sabitu & Abdul, 2023). Collaboration is key to achieving organisational goals and positively influences teachers' job performance.

Intellectual stimulation refers to the leaders' spur to the followers to be creative, think critically and try new solutions to long-standing challenges (Bass & Riggio, 2006). Innovation, fostered by the school principal, influences teachers' performance improvement

as it brings about more adequate responses to contemporary educational challenges (Landa et al., 2023).

Individualised consideration consists of the relationship leader-follower as an individual. School principals promote teachers' growth in confidence and commitment by empowering them. It is to enable teachers to act and be accountable by delegating tasks and responsibilities to them based on individual knowledge and abilities (Okaforcha et al, 2023), enhancing their performance on the job. Another way to uplift teachers' job performance is through motivation. Individualised consideration provides the principal knowledge about each individual's growth, development and motivation needs (Bass & Riggio, 2006). According to Marjan (2023), leadership motivational practices enhance teachers' job performance significantly.

The link between TL and teachers' job performance has been widely investigated, indicating that teachers' job performance can be boosted through principals' TL practices. In Asia, recent studies evidenced TL's effectiveness in ameliorating organisational performance; for instance, Ersozlu et al. (2022) studied how school principals enhanced innovative climate in their schools. The scholars found that by nurturing innovation in Turkey's private schools, school leaders achieved improved teachers' job performance, influencing students' outcomes. Furthermore, in China, Huang et al. (2021) investigated the effect that TL through university staff empowerment has on organisational commitment. The study's findings revealed that by fostering critical thinking and decision-making involvement, faculty members' organisational commitment is positively affected, improving job performance.

Despite this, the scholars suggested that more causal studies should be conducted to provide a more detailed understanding of this relationship, which this study intends to take care of by focusing on the cause-effect connection between principals' leadership and its influence on teachers' job performance through teacher empowerment.

The theory of TL has a wide range of strategies and practices to achieve organisational change and organisational achievement, and one of them is motivation. As an example, Racero et al. (2022) examined the relationship between leadership motivation and the adoption of innovative practices in educational institutions in Spain. The scholars reported that leaders' motivation was key to technology adoption in the day-to-day teaching activities in schools. It follows then from the findings of the study that there is a need for school leaders to adopt motivation as one of the strategies to enhance teachers' job performance. Hence, the present study has motivation as one of its objectives to examine its effect on teachers' job performance in the primary school context.

In African countries too, TL has been studied under varied contextual situations as the country diversity can offer. Sabitu and Abdul (2023) examined how principals' administrative practice of collaboration predicts teacher job performance in public secondary schools in Nigeria. The numerical results show that TL practices of collaboration significantly predict teacher job performance. The scholars assert that successful principals foster teacher collaboration by enhancing teamwork and having common goals to balance individual strengths and weaknesses in pursuing organisational goals. In the same vein, Msonge and Lekule (2024) investigated the principals' role in fostering collaboration among secondary school teachers in Tanzania. The study established that principals play a central role in nurturing collaboration among teachers and underscored the importance of it in enhancing teacher job performance. TL collaboration of all members is key to organizational goal achievement; thus, this study investigated the effect of teacher collaboration on teachers' job performance. In investigating the effect of TL on staff commitment in Ethiopia, Mesele et al. (2021) reported that school leaders empower teachers by involving them in active participation in the organisation by giving them ownership and responsibility. This positively influences staff commitment. However, the authors recommended that more research should

be done in other contexts as it is not possible to generalise the study's findings. Thus, this study included TL's teacher empowerment and its effect on teachers' job performance in Sudan.

In Sudan, TL practices have been studied, though not in basic education institutions. Taha and Hussen (2023), for instance, investigated the TL practices that secondary school principals most commonly use. The authors reported that inspirational motivation to promote organisational goals achievement, teamwork, and innovation are the most common among principals in Khartoum, Sudan. The scholars further recommend that the Ministry of Education (MOE) set accurate criteria to select school heads who could readily embrace TL.

Research in the country regarding TL and teachers' performance in basic schools is scant, though studies of leadership linked to staff performance have been done. For instance, Marjan (2023) studied TL and employee motivation at Al-Neelain University in Khartoum, Sudan. The scholar asserted that employee motivation can uplift performance, however, the study involved an institution of higher learning. In the same vein, Alredaisy et al. (2023) studied the effect that performance appraisal and rewards have on teaching staff performance at Khartoum University. This study underscores the importance of leaders' motivational practices to improve teachers' performance. Nevertheless, the research was neither anchored in TL nor involved basic education institutions. Leadership in primary public schools in Heiban County might be diminished by the lack of training for principals as the area is remote and there is unequal resource allocation in the country. This may result in sub-standard teacher job performance as teachers lack adequate supervision and leadership. To delve into this matter, the present study sought to investigate the influence of principals' TL practices on teachers' job performance in public primary schools in Heiban County, Sudan.

1.2 Statement of the Problem

Empirical research indicates that learning is strongly influenced by classroom teaching and school leadership (Leithwood et al., 2020), and TL has been widely accepted as effective in educational settings (Shava & Heystek, 2021; Sliwka et al., 2024). School principals in Heiban County face multiple challenges that deter their ability to provide effective leadership to teachers in primary schools. The federal government is responsible for setting policies through the Quality Assurance Directorate in Sudan. Nonetheless, teachers in basic schools may be supervised by local inspectors and school heads because the Secretariat of Education (SOE) lacks the structures and capacity to monitor teachers' performance in basic education (World Bank, 2021). The country faces numerous challenges as the nation is currently undergoing a civil war. Even before it, unequal access to education, inadequate structures for quality assurance and ineffective pre-service teachers' training were outstanding challenges (UNICEF, 2021). Consequently, maintaining good performance standards among teachers remains a challenge reflected in students' underperformance. The National Learning Assessment, 2018, indicates that only 2% of third-grade learners could read fluently (World Bank, 2021). Despite the Sudan government's efforts, numerous challenges remain unaddressed, such as a lack of resources for teacher development and insufficient teachers' support. These factors may contribute to teachers' low morale, frustration and a decline in job satisfaction and performance.

Teachers in Heiban struggle to perform at their best without the necessary collaboration, empowerment, motivation, and innovation, which may negatively impact student achievement and overall school performance. The problem is complex; however, addressing it through the lens of TL could provide an effective alternative, as it has been proven in other contexts already investigated. This study, therefore, bridged the contextual

gap by investigating the influence of principals' TL on teachers' job performance in Heiban County, Sudan.

1.3 Purpose of the Study

The purpose of the study was to investigate the influence of principals' TL on Teachers' job performance in public primary schools in Heiban County, Sudan.

1.4 Objectives of the Study

The following objectives guided the study:

1. To determine the extent to which principals' collaboration practices influence Teachers' job performance in public primary schools in Heiban County, Sudan.
2. To investigate the influence of principals' innovation strategies on Teachers' job performance in public primary schools in Heiban County, Sudan.
3. To examine how principals' teacher empowerment practices influence Teachers' job performance in public primary schools in Heiban County, Sudan.
4. To evaluate how principals' motivation skills influence Teachers' job performance in public primary schools in Heiban County, Sudan.

1.5 Research Questions

This study answered the following research questions:

1. To what extent do principals' collaboration practices influence Teachers' job performance in public primary schools in Heiban County, Sudan?
2. What is the influence of principals' innovation strategies on Teachers' job performance in public primary schools in Heiban County, Sudan?
3. How do principals' teacher empowerment practices influence Teachers' job performance in public primary schools in Heiban County, Sudan?

4. How do principals' motivation skills influence Teachers' job performance in public primary schools in Heiban County, Sudan?

1.6 Research Hypothesis

The study sought to test the following hypothesis:

H₀: There is no significant statistical relationship between principals' transformational leadership and teachers' job performance in public primary schools in Heiban County, Sudan.

H₁: There is a significant statistical relationship between principals' transformational leadership and teachers' job performance in public primary schools in Heiban County, Sudan.

1.7 Significance of the Study

The findings of the study may benefit the Secretariat of Education by offering new insights on policy formulations to enhance leadership in primary schools. In addition, principals in Heiban County public primary schools might obtain leadership guidelines and suggestions to ameliorate teacher job performance in their schools. In this way, teachers may be guided and motivated by their leaders to more effective ways to carry out their duties, impacting positively their teaching. Students, who are at the centre of the teaching-learning process, would benefit from the study's findings by having quality educational services. The community and society at large might benefit from an improved educational process that leads to the overall development of its members. The researcher would obtain new knowledge in TL to guide principals in implementing TL methods in their schools. Finally, the investigation may add to the existing body of knowledge, as similar enquiries have not been done in this area, which has unique contextual characteristics.

1.8 Scope and Delimitation of the Study

The study focused on the influence of school principals' TL on teacher job performance in public primary schools in Heiban County, Sudan. The choice of public primary schools is because most primary school learners are concentrated in public schools,

which broadens the possibility of beneficiaries from this study. The sample only involved the Primary Education Director, school principals, and teachers. The geographical area of the study was Heiban County.

The TL theory includes many other factors; however, the study was conducted using a mixed method design and was restricted to collaboration, innovation, teacher empowerment, and motivation, which may influence teachers' job performance. Other social factors, such as extreme poverty, class, and school sizes, may affect teacher job performance but were not considered.

1.9 Theoretical Framework

1.9.1 Transformational Leadership Theory

The TL theory guided the study. This was first formulated by Downton in 1973 but gained attention through Bernard Burns (1978) and was further developed by Bass (1985), though the theory continues to evolve through many scholars (Dugan, 2017; Pennell, 2023). TL is a comprehensive leadership theory best described in four factors commonly known as the four I's. These include idealized influence in which the leader is a role model whose integrity becomes exemplary and sacrifices self-gain for organisational and individual goals, gaining much respect (Bass & Steidlmeier, 1999).

The ability of a leader to motivate others to pursue shared objectives that are accomplished as a team rather than separately is known as inspirational motivation. As a result, the leader necessarily fosters a teamwork spirit among the followers, which is encouraged by effective communication of what is expected from them (Bass & Riggio, 2006).

Intellectual stimulation refers to the leader stimulating the followers' minds by questioning their assumptions, encouraging creativity, and inviting them to approach "old situations in new ways" (Bass & Steidlmeier, 1999, p.7), in other words, innovation. This

requires the leader to be open to accepting different ideas without criticizing or rejecting them (Lynch, 2012).

Individualised consideration is about the leader-follower relationship, which results from reciprocal interaction. This allows the leader to know the individual's needs for growth and strengths. The leader sees an individual "as a whole person rather than just an employee" (Bass & Steidlmeier, 1999, p.7) whose development can be fostered through empowerment, not only to extend followers' participation but also as a means of growth for the individual. According to Bass & Steidlmeier (1999), this empowerment involves sharing responsibilities and delegating tasks. The leader's role is also to motivate the followers by tailoring growth opportunities based on their unique needs for professional progress, such as upgrading courses, acknowledging employees' performance, and providing recognition. The TL is a broad theory that does not give precise guidelines for specific situations. Rather, it allows the leader to apply it to the particular context in which the educational institution is to respond to the needs (Pennell, 2023), thus, the choice of the specific theory's components.

1.9.2. Strengths of Transformational Leadership Theory

For the last few decades, TL has been a subject of research in all kinds of organisations, including educational settings. Evidence from it reveals that TL is positively linked to leadership outcomes such as employee motivation and performance (Dugan, 2017; Heenan et al., 2023). This proves the theory's effectiveness and reliability. TL's wide-range approach includes leaders and followers in a continuous process of development that goes beyond leaders and organisational goal attainment. Thus, it affords an expanded view of leadership (Northouse, 2019). TL is rooted in moral values; therefore, it becomes morally uplifting for both the leader and followers (Northouse, 2019). TL has been studied in diverse school setups in terms of countries, educational policies, and cultures with almost parallel results, which provides it with an attribute of universality (Dugan, 2017; Heenan et al., 2023).

1.9.3 Weaknesses of Transformational Leadership Theory

Although TL is widely accepted, scholars have pointed out some weaknesses. Firstly, since it is an extensive theory, it is difficult to define its boundaries and parameters (Northouse, 2019). To mitigate this weakness, the researcher strictly adhered to the study's specific objectives. Additionally, the current study does not intend to include every single component of the theory, therefore this weakness does not hinder the research development. According to Dugan (2017), another weakness is that the theory does not specify how it is implemented. This limitation could be applicable in other organizational settings. However, in the case of educational leadership, this weakness may be turned into a strength as TL is based on principles rather than a set of procedures. Making it possible to be applied in different educational complex settings, which require implementing its principles to respond to contextual needs. Since some of TL's weaknesses, such as being a wide theory and not providing details about its implementation do not represent a serious hindrance to this study, and its strengths outweigh its weaknesses, the study adopted TL as its theoretical underpinning.

1.9.4 Application of Transformational Leadership

There are several theories of transformation; however, the investigation focuses solely on TL because it contains all the elements that the study includes. Though the theory comprises a wide range of guiding principles contained in the four I's, this inquiry embraced three of them. Inspirational motivation is ignited by the school principal's ability to communicate enthusiasm among teachers to work together in the achievement of school improvement thus, becoming common goals. Through clear and effective communication, goals are known, expectations are set, and teachers commit themselves to achieving them in collaboration with one another and their school principal. As a result, improved

organisational performance is achieved collectively through the effort of each teacher and the collaborative environment fostered by the school principal.

Intellectual stimulation emphasizes critical thinking nurtured by the principal by questioning situations, thus encouraging creative ways of solving lasting problems. The solutions to challenging situations encountered in day-to-day activities may be found through the teachers' new ideas. The school principal's role is to encourage such initiatives by accepting them with openness. It is also necessary to be innovative to respond to the educational demands of a fast-changing world by embracing new technology in daily teaching-learning activities to make learning attractive and adequate to the contemporary labour market demands.

Individualized consideration allows the school principal to establish a trustful relationship with each teacher as an individual, allowing the leader to know each teacher personally. The school principal empowers teachers by delegating tasks and responsibilities, taking into consideration individual skills, abilities and knowledge. By doing so, the individual teacher is offered trust and the opportunity to develop skills and have more experience, which results in commitment to a better performance. Based on individual knowledge, the school principals, too, motivate teachers as they acknowledge individual efforts. Teachers can grow in confidence and motivation by participating in teachers' training and refreshing courses to equip them with the necessary knowledge for the subjects they teach, definitely impacting positively their job performance and student outcomes.

The theory of TL best explains the connection between school principals' collaboration, innovation teacher empowerment, and motivation, and their influence on teacher job performance. In short, TL provides the theoretical foundations to understand the principals' influence of TL practices on teachers' job performance.

1.10 Conceptual Framework

A conceptual framework is a visual model containing the variables of the phenomenon under investigation (Creswell & Creswell 2018). It is specific to each study because it displays its key concepts. It shows the sequence of its elements and how they interact with each other (Cohen et al., 2018).

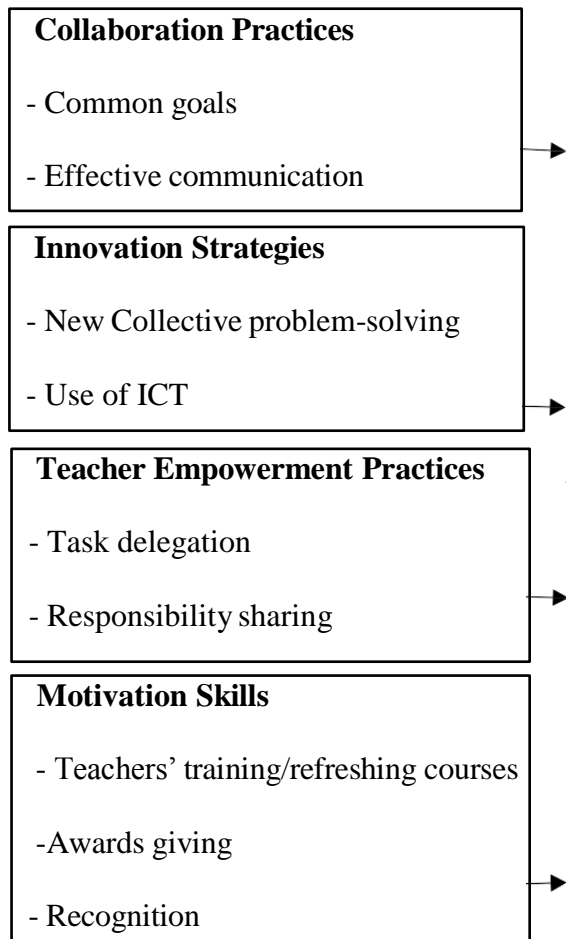
Figure 1

Relationships among principals' TL, Intervening variables, and teachers' job performance

Independent Variable

Dependent Variable

Principals' Transformational Leadership



Teachers' Job Performance

- Confidence in subject mastery
- Effective scheme of work preparation
- Improved lesson plan and notes
- Regular attendance and punctuality
- Improved assessment and feedback

- Extreme poverty
- Class size
- School size

Intervening Variables

As shown in Figure 1, the independent variable in this study is the principals' TL executed in different ways that influence the teachers' job performance which is the dependent variable. It is assumed that the school principal provides leadership to the teachers through specific ways including collaboration practices, innovation strategies, teacher empowerment practices and motivation skills. Furthermore, considering that other variables may have an impact such as the country's extreme poverty, overcrowded classrooms and school size, but cannot be controlled, teachers can perform their duties in a more enthusiastic and revitalized manner and diligently carry out their daily tasks improving their performance in public primary schools in Heiban County, Sudan.

The independent variable shows that when principals and teachers share the same goals, they work together to attain them, cognizant that each one's contribution is vital and that collaboration with each other makes goals reachable. Hence, teachers commit themselves to attending to their duties with regularity and punctuality. In attending to their duties, teachers interact and commit themselves to delivering their lessons effectively to improve their performance in class. This is a way to contribute to the school's improvement because of the enthusiasm communicated to them by the school principals' transformational drive.

By questioning assumptions and encouraging creativity the school principal can transform the school teaching environment. Teachers are stimulated to re-invent new ways of teaching, making them attractive and effective to the learners. This may require them to embrace new technologies such as ICT and innovative ways of problem-solving to the daily challenges in the classroom. By fostering structures such as regular staff meetings, principals may build a collaborative, innovative environment where teachers can unfold their talents and express their initiatives toward better learning output.

Other ways of motivating the teachers are offering teachers' training and refreshing courses, thus, enabling the teachers to acquire the subject mastery required in their teaching.

These opportunities are presented according to their potential and needs. Teachers, in turn, could prepare lesson plans and notes confidently according to the subjects allocated to them, positively impacting their teaching performance. Similarly, when teachers are offered formal training, they may assess their learners more effectively by employing varied ways of assessing their progress. Along the same line, they may acquire awareness of the importance of keeping track of the learning process and provide the necessary feedback to the learners and their parents through prompt classwork marking. A school principal exercises TL by empowering teachers, delegating tasks and sharing responsibilities with them to provide growth opportunities. By sharing responsibilities with them, the school principals would communicate trust in them and their capacity to respond responsibly to the duties delegated, thus making them accountable for their duties' performance and likely at the same time boosting their morale to perform their duties beyond expectations.

10.11 Operational Definition of Key Terms

Collaboration: This is having clear school goals, communicated effectively by the principals to the teachers and shared regularly in the staff meetings. To achieve those goals, the principal assigns roles such as debate masters, disciplinary committee, sports coordinators and other activities directed to achieve the common goals of the institution.

Innovation: This is the search for new ways of solving old-school problems. The teachers are stimulated by the principal to think critically and creatively. Innovation includes as well the adoption of new technologies in their daily teaching to enhance job performance.

Motivation: These are ways that the school principals encourage teachers to improve their job performance such as teachers' training and refreshing courses. Principals also motivate teachers by awarding them and providing recognition for their efforts to perform better their teaching duties well.

Principal: The school head provides leadership to the teachers by empowering and motivating them, and promoting collaboration and innovation to achieve school goals.

Public primary schools: These are schools that offer basic education, which consists of eight years. Initially, started by the Sudan People's Liberation Army/North (SLPA/N). The curriculum is borrowed from South Sudan, where learners sit for the national examination of primary school. The means of instruction is English, though the official language of the country is Arabic. Teachers get remuneration from whatever contribution the parents can make.

Teacher Empowerment: These are school principals' delegation of tasks and responsibilities to the teachers apart from their teaching duties. Principals consider teachers' talents, experience and skills in delegating them for instance, to represent the school in official events, supervise work done by learners and deal with disciplinary matters.

Teacher job performance: These are teachers' daily work duties which greatly contribute to the teaching-learning process. They include keeping professional documents for example, schemes of work, lesson plans, and lesson notes for effective lesson delivery. It also includes regular and punctual attendance at school and duties, keeping track of learners' progress, and providing adequate feedback. Finally, it involves the knowledge's mastery of the allocated subjects.

Transformational leadership: This is a leadership theory that seeks individual and organizational change through a comprehensive approach contained in four main factors, idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter presents the empirical investigations related to this study in this order, globally, regionally and locally. In the review of the studies, some gaps were described. Lastly, the identified gaps the study seeks to bridge are also presented.

2.2. Principals' Collaboration Practices and Teachers' Job Performance

Collaboration between principals and teachers, teachers-teachers and principals with other stakeholders is crucial in organisational improvement. In Germany, Sliwka et al. (2024) assessed principals' TL to facilitate changes toward deeper learning in their schools. To this purpose, the scholars used a nested mixed-method approach, starting with a quantitative survey and from there, selected five principals to interview. The criterion for selecting them was their TL behaviours then data was analysed, codified and reported by themes.

The scholars found that the principals complained that not all teachers were ready for collaborative teamwork (Sliwka et al., 2024). Therefore, creating a common vision is crucial so that all energies are directed to a common goal. The school principals then play a central role in promoting a common vision, nurturing a collaborative environment and enhancing structures for teamwork. Furthermore, the participants indicated that communication is fundamental and needs to be open and supportive to sustain an atmosphere of trust and support.

The study sheds light on important aspects of collaboration in an educational context. Using mixed methods design was instrumental in thoroughly understanding the issue. For the same purpose, this study aimed to get a deep grasp of collaboration by employing a mixed method. Deeper learning is directed at students' better education. However, the present work aimed at students' better learning through teachers' job performance. In both cases, the

principals' TL is a determinant in enhancing collaboration. In their report, the researchers pointed out that a small sample size does not leave room for generalizability and therefore recommended more similar studies. This research bridged that gap by studying principals' TL enhancing collaboration in public primary schools in a different context as Heiban County, Sudan.

Transformational leaders may have different ways of enhancing collaboration with and among teachers. In the Netherlands, van Schaik et al. (2020) studied different ways for school leaders to foster collaboration among teachers. The participants were 10 different school leaders including principals, assistant principals and team leaders and 39 teachers from secondary schools in the country and the research employed mixed methods. An online survey was used to gather numerical data while qualitative data was obtained through interviews with school leaders to classify different ways of enhancing collaboration.

The authors in their findings, identified four main types of school leaders' practices. The study shows that within collaboration practices some are more effective than others in enhancing teacher performance. However, in their recommendations, the scholars explained that the Dutch school system provides high autonomy to each institution, thus leadership is not centralised in the school principal, which is why not only school principals were sampled. They suggested that similar studies could be done in other contexts where leadership is more centralized to verify if the results are similar. This study addressed this gap by assessing similar variables in the context of public primary schools in Sudan where school leadership lies mainly on the school principal and its influence on teacher job performance.

School leaders may use different administrative measures to enhance collaboration to improve teacher performance. In Ibom, Nigeria Sabitu and Abdul (2023), examined administrative collaboration practices that predict teachers' job performance in public secondary schools. The researchers used a correlational design and a questionnaire to collect

data. The participants were 739 teachers and 254 school principals. The scholars found that there is a significant correlation between principals' collaboration practices and teachers' job performance. Sometimes it becomes challenging when principals encounter teachers who prefer to work in isolation. However, it is their responsibility to create a nurturing environment where teachers collaborate for the attainment of the same goals. When principals and teachers work together there is improved teacher performance. To this aim, principals need to consider experience, character, professional competencies and so on to create effective teams.

The study had TL as its theoretical framework, in the same way, this work was anchored in TL. In the same way, the participants were teachers and school principals however, the research approach was mixed methods which is expected to yield more comprehensive results. Another gap is the context, as the study focused on Nigerian public secondary schools, in contrast, public elementary schools in Sudan were the subject of this investigation. Finally, the research instrument apart from questionnaires was face-to-face interviews to get a deeper view of the matter.

School leaders spearhead collaboration with and among teachers in school. Msonge and Lekule (2024) investigated the role of school principals in enhancing teamwork among secondary school teachers in Mwanza, Tanzania. The investigation used a qualitative case study design and selected through a non-probability technique, five school principals whose data was obtained through in-depth interviews. In their findings, the authors coincided with previous studies on the leaders' responsibility to foster collaboration. This is achieved through a clear vision of the institution's educational goals and objectives and well-defined roles so that all members work together to attain them. Regular meetings are ideal platforms for communicating aims, collective planning, and sharing successes and challenges that promote collaboration among teaching staff. Additionally, teachers expressed that when the

principals offer unbiased support to the teachers, it inspires them to trust in their leader and encourages them (Msonge & Lekule, 2024).

As observed, the authors' findings through qualitative methods are similar to quantitative studies' findings though given the small numbers of participants do not leave room for generalisation. This research, however, adopted mixed methods to verify if, in a different context such as Sudan, the results could be similar after obtaining quantitative and qualitative data. Moreover, the reviewed investigation was conducted in secondary learning institutions rather than in primary public schools as this study did, linking a contextual gap. Finally, the theoretical framework to anchor the study was TL.

Practices of TL among secondary school principals in Sudan have been studied as well. In the capital of the country, Khartoum, Taha and Hussen (2023) evaluated the application of TL practices among secondary school principals from the teachers' point of view. The quantitative work had as participants 168 teachers out of 323 selected through a simple random technique but did not include the principals as participants. The scholars found that school principals collaborated with their teachers to articulate educational goals and provide opportunities for them to work together to attain goals and objectives to improve students' learning. Teachers perceive that their leaders apply a high degree of idealized influence by discouraging isolation and individualism and nurturing team spirit. The authors further explained that this positive principals' behaviour might be because the Department of Education applies high-quality standards in selecting school principals.

The study appears to have some contradiction. In the findings, the numerical data showed evidence of the high principals' application of collaborative practices due to their TL qualities. In contrast, in the recommendations, the scholars suggest that the Ministry of Education sets accurate standards in the selection criteria of school principals, to provide for them more professional training in TL and disseminate materials related to the theory. The

current investigation verified the school heads' practices of TL, not in the capital city of Khartoum but in South Kordofan. School heads practices displayed not in secondary schools but in public primary schools. In addition, this study included the participation of the school principals as well as teachers and used the same theoretical underpinning which is TL and its influence on teachers' job performance.

2.3 Principals' Innovation Strategies and Teachers' Job Performance

Innovation in TL is much linked to intellectual stimulation through which leaders challenge their followers to critical thinking, to look for novel solutions to longstanding problems, and to respond to educational needs as they arise. In the Netherlands, Vermeulen et al. (2022), analysed TL and leader-member exchange (LMX) factors that affect teachers' innovative behaviours. The quantitative longitudinal research counted the participation of 597 teachers, though the educational level in which they teach was not specified either so the sampling method. The study findings indicated that there is a relationship between TL and innovation where LMX appears as a moderating variable. The authors indicated that the educational demands of the 21st century call for quality teachers who are given the opportunity for professional development and can take on challenges to respond to those demands. The school principal's role is to stimulate teachers to take on challenges, be creative and implement newness in their daily teaching practices.

In their study Vermeulen et al. (2022) used a longitudinal design that took over three years of data collection, in contrast, this work was limited to a single period of data collection due to financial and time constraints and the aim of the investigation which can be achieved through a different research design other than a longitudinal design. Moreover, school principals were included in the sample through a purposive sampling technique to expand on a wider view of the issue under investigation. Additionally, teachers and schools were selected according to the scope of the study which is public primary schools and teachers in

Heiban. Lastly, the contextual gap was covered as Vermeulen et al. (2022) study took place in the Netherlands and the present investigation was conducted in South Kordofan, Sudan.

School principals play a central role in nurturing innovation in educational settings. Ersozlu et al. (2022) explored how school principals and teachers foster an innovative climate in their schools in Turkey. The qualitative investigation employed a multiple-case study design and involved five private schools represented by their principals, vice-principals and two teachers. The scholars used archives, in-depth interviews, and observations to collect data codified and reported by themes. In their findings, the authors coincide with Vermeulen et al. (2022) in their view that education aims to equip young generations in future labour markets with the needed competencies and skills in a digital and fast-changing era.

School principals and teachers need to work hand in hand to foster innovation, they do so by encouraging creativity among teachers and learners, motivating educators to adopt technology in their teaching and providing training and technical support in the use of ICT. The study offered an in-depth understanding of innovation, though, there is no indication of the educational levels of the schools sampled, nonetheless, the present inquiry intended to limit its scope to public primary schools. Moreover, the authors suggested that similar studies should be conducted in public schools with lower socioeconomic status as the study involved only private schools where access to technology is not challenging. This is because the adoption of technology in schools is not the only way to enhance innovation and other ways than ICT adoption should be explored. This investigation explored, the way teachers and principals can collectively solve persistent problems in unexplored ways apart from the use of ICT.

Leadership and innovation have been studied in varied contexts. For instance, Ramasimu (2023) evaluated the impact that principals' awareness of the importance of innovation has on innovative practices and students' achievement in rural secondary schools

in Limpopo, South Africa. The quantitative investigation used a cross-sectional design and had 108 school principals as participants selected through a random sampling technique. In their findings, the scholars indicated that learner performance is influenced by leaders' understanding of the importance of innovation in their schools. Furthermore, innovation is expected to be nurtured by the school head by promoting creative thinking, and problem-solving, and encouraging teachers to implement new ideas to later on evaluate them. These initiatives encourage teachers and learners to explore new ideas, making learning more engaging and interesting.

The reviewed study involved rural schools, similar to the ones included in the present study, in a rural setting but in a different country and therefore contextual characteristics as it is Sudan. While the quantitative paradigm offers accurate numerical results the qualitative data could yield a more comprehensive view, as the authors recommended, this study employed a mixed methods approach to bridge the gap. Lastly, the inclusion of teachers in the sample offered a complementary view of the subject under investigation.

Innovation in learning institutions requires the leader's sustenance. In Tanzania, Landa et al. (2023) evaluated the influence of leaders' support in innovating teaching and learning technologies among teaching staff. The quantitative research involved 192 academic staff from two public universities in the country and adopted a cross-sectional design. The authors found a positive influence of leaders' support on the staff's adoption of teaching-learning technologies which means technology integration is more easily implemented when the leader provides higher support. In addition to this, teaching-learning technology facilitates learning, making it interesting and more productive. Therefore, leaders need to nurture an innovative climate in learning institutions and support teaching-learning technology integration.

The research by Landa et al. (2023), employed a quantitative design involving only two universities which restricts the generalizability of its results, while this investigation added to the numerical design the qualitative one to obtain a more holistic view from key stakeholders such as teachers and principals. Moreover, the study's scope was public universities, in contrast, the present enquiry focused on public primary schools. Although Tanzania is a developing African country and so is Sudan, these different setups leave a contextual gap bridged in this study. Lastly, the study in Tanzania solely looked at using technology as an innovative practice in the educational field though there are other ways to implement innovation. Thus, the present investigation included collective problem-solving in innovative ways as well.

In Khartoum, Sudan, Saf et al. (2019), investigated how to integrate ICT in kindergartens to enhance cognitive learning, for this purpose, the authors sampled 10 preschool teachers, 50 of their pupils and 35 parents from two schools. The study adopted an experimental design, in which the pupils were divided into two groups, experimental and control. Both groups were pretested and the experimental group received lessons aided by ICT use of devices for a month. According to the researchers' findings, the experimental group outperformed the control group in terms of academic success. Furthermore, children developed language and numerical skills faster than the control group. A high percentage of the participating teachers observed that the use of ICT facilitated teaching and learning in class and parents expressed that it was easier for them to follow their children's learning process at home.

The investigation has proved that the adoption of ICT in the learning process can be effective, however, there is a contextual difference in that the study was done in Khartoum the capital city and the current study was done in a rural setting and not in kindergartens but in public primary schools. Besides, the study is based on quantitative evidence which

qualitative data could complement to give a clear overview of the subject under investigation. Moreover, the principals' role in ICT integration in the school was omitted in the study by Saf et al. (2019). Using mixed methods allowed the researcher to add the school principals' insights through in-depth interviews as leadership is key to enhancing innovation in schools.

2.4. Principals' Teacher Empowerment Practices and Teachers' Job Performance

Empirical studies revealed that principals' empowerment influences teacher job performance. For instance, in Indonesia, Amalia et al. (2021) analysed the effect of empowerment on teacher job performance, and the investigation aimed to analyse the mediation of organizational citizenship behaviour. The quantitative survey included 52 teachers of elementary private schools present in two districts in the country, with a bachelor's degree, and a minimum of one year of classroom experience. The sampling method employed was non-probability purposive judgment and the data collection instrument was a Likert scale questionnaire.

The study findings showed that empowerment significantly and positively affected teachers' job performance. The authors remarked that when there is flexible leadership that allows teachers to decide about their job activities, there is a higher success in their performance. However, the study lacks theoretical underpinnings, in that there was no provision of a theory that explains how it does occur, leaving a gap that this present study covered by using TL's teacher empowerment.

Additionally, Limon (2022), studied the relationship between principals' empowering leadership and teachers' performance mediated by organizational commitment in Turkey. The quantitative study aimed at testing the significance of leadership empowerment on teacher job performance. The participants were teachers from different educational levels, ranging from preschool to high school levels, from private and public sectors in Turkey, selected through

convenience sampling. In addition, the data collection instrument was an online questionnaire.

The study's findings show that when school principals delegate responsibilities and tasks related to teachers' duties, there is a higher organizational commitment, which in turn, improves performance. However, the principals' empowerment's direct effect on teachers' job performance was not significant. The scholar suggests that principals should empower teachers through responsibility and authority delegation, facilitating professional development. This enhances organizational commitment which predicts teacher job performance.

Although the reviewed study focused on the same dependent and independent variables as the current study, the mediation of organizational commitment was not included. A methodological gap exists in that a quantitative method provides a limited understanding of the subject being studied. To bridge the gap, this study employed a mixed-method approach which allowed the researcher to collect qualitative data as well, as to obtain a more in-depth understanding. In addition to this, the convenience sampling method does not guarantee the representativeness of the population, for instance, school principals' voices were not included. This study, however, used a purposive sampling method to ensure the representation of all study participants.

Okaforcha et al. (2023), studied empowerment through task delegation as a predictor of teacher job performance in public secondary schools in Anambra, Nigeria. The quantitative investigation used a survey design and the participants were 232 principals selected through a census method sampling. A structured questionnaire was used as the data-gathering tool and the findings showed that principals' responsibility and task delegation have a significant influence on teacher job performance. Furthermore, Okaforcha et al., (2023) found that delegating supervisory tasks to teachers can make them more accountable allowing them to

grow professionally. It can also improve communication among teachers and teacher-principals, when principals delegate disciplinary responsibilities, teachers improve classroom management.

Although Okaforcha et al., (2023) described the significance of empowerment on teachers' job performance through a quantitative survey, the population sample excluded teachers' views which are important if understanding the phenomena is to be attained. This enquiry included the participation of both teachers and principals. On the other hand, the sampling method employed by Okaforcha et al., (2023), was census given the manageable population size, whereas this study included a larger population through a purposive sampling method to ensure the inclusiveness and representativeness of principals and teachers. Lastly, the research instrument was a structured questionnaire to yield quantitative data, while the present study used apart from the questionnaire, semi-structured interviews that allowed the researcher to get a deeper and more comprehensive grasp of the issue.

In North West Province in South Africa, Shava & Heystek (2021), analysed the principals' instructional leadership (IL) and TL in South African Schools. The study examined how school principals use TL and IT practices to sustain quality teaching-learning. Notably, the selected schools were initially underperforming. The qualitative research employed a purposive sampling method and the selection criteria were to have 5-10 years of experience as principals and exhibit TL and IL practices. The research data instrument was face-to-face interviews analysed through coding. The sample size was six school principals from elementary and secondary schools.

The findings indicate that through the participation and empowerment of teachers in decision-making and implementation, the principals were able to lead a change from poorly performing schools to quality learning-teaching. Importantly, there are common elements among the schools such as high poverty levels, overcrowded classrooms, and lack of parental

support. Furthermore, the principals acknowledged that they could not create all the necessary conditions for the change without sharing tasks and responsibilities according to teachers' experience and abilities. For instance, heads of departments (HOD) and senior management teams (SMT) have direct responsibility for students' achievement. There are several similarities between Shava & Heystek's (2021) study and this investigation, apart from focusing on empowerment and teachers' performance, in that the schools are characterised by poor performance, extremely poor conditions, and overcrowded classrooms. Another similarity is that this study, used interviews to collect qualitative data and the participants were selected through a purposive method. However, this investigation employed qualitative and quantitative data through a mixed-method approach to complement each other and give a full view of the subject it also included teachers as participants. Moreover, the theoretical underpinning was provided only by TL and the study's focus was on teachers' empowerment through task and responsibility delegation to all teachers in the school.

In North Kordofan, Sudan, Abdalla (2019) investigated the economic empowerment in rural communities in the area. The qualitative study used a case study design and data was collected through group discussions. The sample size is not specified but the criteria were to select the participants were women, youth, and livestock owners. The study aimed to grasp an understanding of the situation to propose workable plans for economic empowerment. The findings were low productivity and food shortage though the area has cultivable land and underground water. The scholar suggested feasible measures, for instance, providing improved seeds and restocking the existing flocks.

The reviewed work could be relevant as the geographical context is the same as this study, and one of the variables under investigation is empowerment. However, there are very significant differences, firstly, the focus of this present study is on principals' empowerment and its influence on teacher job performance, empowerment means the responsibilities

conferred by the school principals to the teachers. These responsibilities are within the teachers' roles and duties and are given considering their capacity and experience. Another way to empower teachers is by principals' delegation of tasks so that not all the burden is centred on one person whose duties are many, given the nature of their role as principals. Other differences are the sampling technique, target population, and data collection instruments which ought to be chosen according to the study's aims and objectives. Although the reviewed study may appear relevant in terms of the independent variable, empowerment and its focus on Sudan as Abdalla's, (2019) enquiry was, other substantial differences leave gaps that this study took care of. Firstly, the scope gap, as teachers and principals were included in its scope, as well as public primary schools. A contextual gap as the Heiban County is not in North Kordofan but in South Kordofan State. In summary, this study examined the influence of principals' TL on teachers' job performance in Heiban, South Kordofan State, Sudan.

2.5 Principals' Motivation Skills and Teachers' Job Performance

Motivation is at the heart of TL, in schools, it is one of the many functions of the school principal. Fitria and Eddy (2021) investigated the influence of principals' TL and work motivation on teacher job performance in Rambang District, Indonesia. The quantitative study used descriptive statistics and involved 75 junior school teachers, though the sampling technique was not reported. The investigation aimed to determine the influence of principals' TL and job motivation on teacher job performance, for this purpose, a questionnaire with a Likert scale of answers from 1-5 was used. The scholars found that TL motivation's impact on teacher performance is strong. There is an emphasis on intrinsic motivation in TL, teachers need to be motivated by having their efforts recognised. The principals' role in motivation is crucial because they can give a positive direction to teachers' mentality and attitudes by encouraging them and giving them space to contribute to attaining organisational

goals, for instance, through professional development. In this sense, principals act as motivators apart from all other functions such as administrators, managers, leaders, educators, and so on.

Although Fitria and Eddy's (2021) work evidenced a positive influence of TL motivation on teachers' performance, there are several gaps compared to the present study. First, the methodology used was quantitative and a mixed-method approach can provide a wider and in-depth understanding of the study's issue. Secondly, a purposive sampling technique ensured the participation of key individuals whose views are valuable, teachers and principals. Furthermore, the sample population were junior school teachers and this enquiry targeted primary schools. Lastly, the contextual gap is outstanding as the work was conducted in Indonesia while, the present work involved South Kordofan, Sudan's different population and geographical location.

In Pakistan, Saqib et al. (2022) examined the impact of TL leadership and intrinsic motivation on organizational commitment and performance in public institutions. The quantitative study used correlation analysis and the data collection instrument was a questionnaire scale from 1-7. The sample size was calculated through a finite population formula and the participants included teaching personnel from all public and private institutions in the area. The authors found that the TL role of intrinsic motivation is significant in employees' performance, though in higher learning institutions leaders may find it hard to keep up with motivation. Intrinsic motivation refers to employees' internal feelings resulting from the recognition of their potential and efforts to perform well and goal achievement. Among the most powerful staff motivators are assigned responsibilities, working environment, development opportunities, rewards, and feedback.

The investigation confirmed the positive relationship between motivation and teachers' job performance, however, there are several gaps regarding the areas that were

covered in this study. Saqib et al. (2022) employed only a quantitative approach while this study used a wider approach as it is a mixed method and there were preestablished criteria to select the participants to guarantee that the key players were represented and had enough experience in the field to give a meaningful contribution. While the scope of Saqib et al. (2022) study was higher learning institutions, this research scope was public primary schools in Sudan and the contextual gap consists of the different geographical locations.

In Libya, Abdalla et al. (2021) examined the relationship between TL and organizational performance in the education sector, mediated by the use of information technology. The authors used a quantitative cross-sectional approach and the participants involved were 201 employees selected through random sampling. The quantitative study employed descriptive analytical statistics and used a Likert scale questionnaire to collect data. The authors found that the use of information technology is not significant in the mediation of the two variables, on the other hand, there is a significant statistical connection between motivation and employee performance. Furthermore, the scholars affirm that TL is not centred on giving incentives in return for performance, rather, it involves individuals to become part of organisational goals by encouraging and providing development opportunities.

In their work, the authors employed a cross-sectional quantitative approach and acknowledged that the study only describes the situation under investigation between 2019 and 2020, it does not go into causalities or a deeper understanding. In contrast, this investigation seeks to get a more comprehensive grasp of the matter through a mixed-method study. Moreover, the sample includes workers in general, while this enquiry included only principals and teachers as their roles are central to the subject under study. Abdalla et al. (2021) included in their study educational institutions in general, while, this investigation was limited to public primary schools in Heiban, Sudan. In the recommendations, the scholars

suggest that more cross-cultural studies of the same variables should be conducted. This gap was bridged by conducting the study with similar variables but in Sudan, thus, a different geographical setup, population and context.

Motivation in TL has a wide range of motivational strategies among them, recognition and opportunities for professional growth. Lukumay (2021) assessed the factors that determine motivation towards teachers' job performance in public secondary schools in Monduli District, Tanzania. The investigation employed a survey design and included the participation of 94 teachers selected through a purposive method. The collection data instruments were questionnaires and interviews. The scholar found that teacher motivation impacts teacher work performance and in the case of Monduli secondary schools, teachers' performance is as low as their motivation is low. The author points out that school principals can provide professional development opportunities to the teachers based on their needs, experience, and interests. When employees participate in courses or other activities to develop their knowledge, competence and skills, their confidence increases as well as their capacity to take on greater responsibilities in the school, motivating them to perform better.

Principals' recognition of their efforts to carry efficiently their duties is another factor contributing to teacher motivation to improve their performance. Lukumay (2021), based the study on Herzberg's hygiene theory and Maslow's need hierarchy theory which are more commonly used to explain motivation and its relationship with employees' job satisfaction rather than employees' performance. This investigation nevertheless, used the TL theory because it is performance-oriented which is its main concern and another reason is that TL is much supported by empirical research as one of the most effective leadership theories in the field of education. Another gap that this study bridged is methodological since the referred study used a quantitative approach while the present work used a mixed-method design to get a wide-range grasp of the matter. Finally, the contextual gap covered refers to a different

physical location and educational levels, as this enquiry took place in South Kordofan, Sudan and involved public primary schools.

Transformational leaders use recognition and rewards to motivate their followers. Alredaisy et al. (2023) assessed the influence that rewarding and performance appraisal have on teachers' performance at Khartoum University in Sudan. Apart from the influence between variables, the study aimed to identify which independent variable ranks first in strength. The quantitative study sampled 40 members of staff out of 400 selected through random sampling and used analytical descriptive methods. The data collection instruments were questionnaires and interviews. The scholars found that there is a strong statistical influence of rewarding and performance appraisal on teaching staff performance and that rewarding is more influential than staff appraisal at Khartoum University. This may be attributed to the fact that the university's policy is equal reward among the employees while appraisal performance is more used to underscore low job performance. Besides, the authors recognized that the study did not include all aspects of rewarding and recommended that other forms of motivation be explored such as staff development, psychological rewards and other intrinsic motivators as they could be based on individuals' differences.

Although Alredaisy et al. (2023) conducted their study in Sudan, yet, Khartoum is a different geographical area as this research involved Heiban County, which is located in South Kordofan. Moreover, the educational level in the scholars' work was university and this investigation targeted public primary schools, leaving a content gap as there are insufficient studies on primary schools in Heiban County. The methodological approach described was quantitative, however, the scholars added interviews to the questionnaires, of which no findings were included in the report. The current study used a mixed-method approach that provided questionnaires to collect quantitative data and interviews to get qualitative data to expand understanding of the issue under analysis and incorporated the

findings in the report. In their scope, the authors included only two kinds of motivators, both extrinsic. In contrast, this enquiry expanded the scope by including teachers' development, awarding and recognition seen through the lens of individualized consideration as TL suggests.

2.6 Summary of the Literature and Research Gaps

The reviewed empirical studies involving school heads' TL and its influence on teacher job performance have been conducted in various educational settings. The studies reveal a positive influence of principals' TL on teachers' job performance (Mesele & Orkaido 2021). In contrast, the existing local studies were conducted either in universities or secondary schools but failed to cover primary schools revealing an empirical gap. There are methodological gaps as most of the reviewed studies used quantitative designs, still fewer used qualitative methods and only a few mixed methods. Quantitative research offers the advantage of generalisability because of the greater sample size, though it hardly gets deeper information about a phenomenon. Qualitative studies, on the other hand, may supply detailed information, however, the reduced number of participants hinders the possibility to generalise the findings. Therefore, the researcher's choice of a mixed-method approach is because of this design, combining qualitative and quantitative data offers a holistic view. A quantitative design for generalisability of findings, while qualitative results provided a deeper insight into the research issue.

The studies revealed that transformational school leaders enhance collaboration to improve teachers' job performance. School principals have the responsibility to foster collaboration with and among teachers (Msonge & Lekule, 2024). Research revised globally revealed the relevance of collaboration among teaching staff but failed to study its impact on teachers' job performance, though two of them used mixed methods and provided a comprehensive understanding of the issue under investigation (van Schaik et al., 2020;

Sliwka et al., 2024). Moreover, the latter study recommends further cross-cultural studies, where a centralised education system may yield different results. Thus, the contextual gap is outstanding as these studies took place in different countries than Sudan. The reviewed studies in the region used either quantitative or qualitative designs and investigated secondary schools, leaving a knowledge gap since studies involving public primary schools are missing and a methodological gap exists as a mixed-method approach could yield a more exhaustive understanding of the subject studied. The existing local studies were realised in an urban setup and involved secondary schools but not rural public primary schools. To cover the gaps, the present study investigated the influence of principals' TL on teachers' job performance in public primary schools in Heiban County, Sudan.

The new demands of education in our time need innovative responses from teachers who take up the challenge supported and stimulated by their leaders. The reviewed literature indicates that school principals foster innovation in their schools to enhance teacher performance (Ersozlu et al., 2022). The global revised studies used either quantitative or qualitative designs and some excluded the school principals' voices and others the teachers' voices, providing in this way, a limited understanding of the subject. Through a mixed-method design that includes both teachers and principals a more thorough grasp would be obtained. The regional studies too are either qualitative or quantitative, for instance, (Ramasimu, 2023) investigated innovation implementation in rural secondary schools using a quantitative method and the participants were only school principals. The local existing studies reviewed showed that the available data is infrequent and the scope of the study was on ICT implementation in a kindergarten in Khartoum and not in public primary schools in a rural area, leaving a contextual gap. Thus, this study sought to bridge methodological, contextual and conceptual gaps by studying the influence of innovation on teacher job performance in public primary schools in Heiban County, Sudan.

The literature reviewed (Okaforcha et al., 2023; Shava & Heystek, 2021) evidenced that transformational school principals empower teachers by delegating tasks according to their knowledge and skills. Teachers display higher performance when they are entrusted with responsibilities connected to their duties (Limon, 2022). The global literature reviewed, (Huang et al., 2021; Limon, 2022) however, employed only quantitative methods and included the mediation of a third variable, with contradictory findings regarding the direct relationship between the two variables. Furthermore, the regional studies did not focus on job performance or did not involve primary schools. Finally, the local study was not conducted in an educational setting and consequently, the aim, variables, and target population are unrelated to the focus of the present study.

In summary, most of the reviewed studies (Huang et al., 2021; Mesele & Orkaido K., 2021; Shava & Heystek, 2021) employed quantitative designs and one qualitative method. Some other studies failed to include teachers among the participants, while others were conducted in a context other than Sudan, leaving methodological, knowledge and contextual gaps. To bridge them, this investigation delved into the influence of principals' teacher empowerment on teachers' job performance in public primary schools in Heiban County, Sudan.

In the reviewed literature (Alredaisy et al., 2023; Fitria & Eddy, 2021) it was found that leaders' TL has a positive influence on motivation and teacher performance. When principals recognise teachers' efforts in carrying out their duties, teachers' motivation is boosted impacting their performance positively (Lukumay, 2021). The global literature revealed nevertheless, that the focus was on higher learning institutions, while regional studies involved private and public secondary schools. For example, in their research, Fitria and Eddy (2021) had the participation of only junior school teachers. The local studies were

also conducted in a university, revealing thus, a contextual and knowledge gap as research involving public primary schools is missing.

Most of the studies used quantitative methods (Alredaisy et al., 2023; Saqib et al., 2022), leaving a methodological gap as qualitative data can complement the quantitative one. Thus, this study covered the methodological gap by using mixed methods. The reviewed literature exposed an empirical gap since public primary schools are not included in previous studies and a contextual gap as the existing local studies were done in another geographical area. By investigating the influence of principals' motivation on teachers' job performance in public primary schools in Heiban County on teachers' job performance, this study sought to bridge the exposed gaps.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology that the study used. It discusses the research design, study location, target population, sample size and sampling techniques, data collection instruments, validity and reliability, credibility and dependability of qualitative instruments, analysis procedures and ethical considerations observed during the whole research process.

3.2 Research Design

A research design provides a framework for the research. Creswell and Guetterman (2021) describe it “as the specific procedures involved in the research process: data collection, analysis and report writing” (p.44). This study adopted a mixed-method research approach, specifically a convergent parallel design because it is a combination of both quantitative and qualitative data that offers the researcher a comprehensive understanding of the problem (Cohen et al., 2018).

The convergent parallel research design consists of collecting both qualitative and quantitative data simultaneously. The researcher after collecting the data analysed both datasets at the same time but separately. When interpreting the results for each research question, the researcher observed if there were convergencies to support each other or divergencies to be explained. The rationale for adopting this design was that qualitative and quantitative data are complementary and could yield a comprehensive picture of the research subject in its specific context and cross-verifying the results.

3.3 Location of the Study

Sudan is divided into eighteen states and South Kordofan is the state that borders to the South with South Sudan. Heiban is one of the seventeen counties in

which the state is subdivided. It borders Habila and Rashad to the North; Talodi to the South; Reif Ashargi and Umm Durein to the West and Abu Jubaiha to the East. It is a semi-arid area which is politically and militarily controlled by the SPLMN. The choice of Heiban is due to the underperformance of school heads and teachers which is reflected in poor student outcomes displayed in the National Learning Assessment (World Bank, 2021). The public primary schools included in the sample size are distributed in the five Payams in which Heiban County is subdivided.

3.4 Target Population

According to Creswell and Guetterman (2021), the target population consists of individuals whose characteristics are the same as those the researcher identifies and wants to investigate. Cohen et al., (2018) point out that a mixed-method investigation requires the researcher's careful consideration. In this enquiry, the target population were all the public primary schools in Heiban, the Primary Education Director, public primary school principals and, teachers in Heiban County, Sudan. The study targeted a total population of 715 participants distributed as follows: one Primary Education Director, 93 school principals, and 686 primary school teachers from 93 public primary schools in Heiban County.

The rationale for including the Primary Education Director in Heiban County among the participants is that he holds a general overview of the public primary schools in the location. The school principals were included because due to the role they play as school leaders they possess individual experiences and views that shed light on their leadership practices and the teachers' job performance, helping in this way understand better the problem under investigation. Teachers participated as key information holders because they are implementers of the daily teaching activities and recipients of principals' leadership.

3.5 Description of the Sample and Sampling Procedures

According to Creswell and Guetterman, (2021), the sample is a subset selected from the target population that the researcher is to study to generalize about the target population. Consequently, the sample size must guarantee the representativeness of the population. The process includes the technique for selecting the elements that would compose the sample which can be probability or non-probability (Cohen et al., 2018). This study employed probability and non-probability techniques.

3.5.1 Sampling of Schools

There are 93 public primary schools in Heiban distributed in five payams which are the administrative subdivisions of a county, all of them are mixed, day-schools. Since all the schools have the same characteristics, the researcher used stratified sampling based on the payams to allow the representativeness of each of them. Newton (2012), suggests that between 10-20% of the population should be selected, therefore 19 schools out of the 93 were selected resulting in 20% of the total number of schools. As there are five payams in the county, four schools from four payams and three schools from the smallest one were selected using a simple random technique. From the list of all schools in a Payam, each school was assigned a number and written on small papers. Then, the papers were put in a basket, thoroughly mixed to equally stand a chance to be selected and drawn on four pieces corresponding to the chosen schools from that Payam. The procedure was repeated for each Payam.

3.5.2 Sampling of Primary Education Director

The County Director of Education was selected following a purposive sampling method termed critical case sampling. According to Cohen et al., (2018) and Creswell and Guetterman, (2021), this technique is usually employed when the researcher wants to get enlightening views about the subject under investigation from a particular individual. Due to

his role in dealing with school principals and overall teachers' performance, the County Director of Education may hold key information that can aid the researcher in getting a better understanding of the research problem.

3.5.3 Sampling of School Principals

School principals were selected through purposive, criterion sampling. According to Gay et al. (2012), individuals are selected intentionally to learn more comprehensively about the subject under investigation. Since the purpose is to get an in-depth understanding, ten school principals who met the criteria of having at least two years of experience as school principals were selected. The minimum of two years of experience assured the researcher that the school heads were familiar with their leadership role and had enough time to exercise it to share their experiences, to have their insights on the matter shared.

3.5.4 Sampling of Teachers

The teachers' sample size was determined using Yamane's (1967) formula. This was to ensure a proportional representation of the total population of 686 public primary school teachers and to know the number of teachers per school.

The sample size was calculated as follows:

$$n = N / (1 + N * e^2)$$

Where:

n = is the sample size

N = is the size of the population (686)

e = is the desired level of confidence (0.05)

The sample size was computed as follows:

$$n = 686 \div (1 + 686 \times 0.05^2)$$

$$n = 686 \div (1 + 1.715)$$

$$n = 686 \div 2.715$$

n = 253 teachers

Stratified random sampling was used to select teachers from each school, with the number of participants being proportional to their total number. A total of 253 teachers was sampled across the 19 schools in Heiban County. The researcher ensured that both male and female teachers were included in the study in proportion to their respective numbers.

For this purpose, the researcher used folded papers written “yes” and “no” and teachers were asked at random to pick one, ensuring the participation of both males and females. Those who picked yes were the respondents.

Table 1

Sample Matrix

Category	Target population	Sample Technique	Sample Size	%
Primary Education Director		Critical case	1	100%
Schools	93	Stratified and Simple Random	19	20%
Principals	93	Purposive Criterion	10	10%
Teachers	686	Simple Random	253	37%

Note. Data was obtained from the Heiban County Director of Education Office.

3.6 Description of Data Collection Instruments

A research tool is an instrument used to collect the type of information needed in the study and in the form that is to be used (Newton, 2012) in the investigation. This study used questionnaires and interview guides to collect the needed data. Questionnaires offer advantages such as reliability, and validity, and they are useful to collect large amounts of information. Questionnaires are cheap, quick and easy to fill in (Cohen et al., 2018). Interviews, on the other hand, can provide useful, in-depth information as the participants express their experiences without the constraints of pre-determined answers by the

interviewer. Furthermore, the interviewer can elicit further information when considered necessary (Gay et al., 2012).

3.6.1 Questionnaire for Teachers

The questionnaire for teachers contained open-ended and closed-ended questions divided into sections A, B, C, D, E, and F. Section A corresponds to the demographic information and included, gender, age set, years of experience and, academic qualification; section B gathered information about the principals' collaboration. It included the aspects of clear goals communication, regular meetings and teamwork, and teachers' job performance; section C was about principals' innovation practices and teachers' job performance. The innovation aspect revolved around critical thinking in problem-solving of school matters and ICT adoption in teaching; section D focused on principals' teacher empowerment through delegation of tasks and duties apart from classroom duties and teachers' job performance and section E, principals' motivation and teachers' job performance. Motivation included teachers' access to upgrading their skills and knowledge as well as awarding and recognition; lastly, section F concerned teachers' job performance. Sections B to E collected relevant information involving the four independent variables while Section E gathered the teachers' rating about their job performance which is the dependent variable and embraced all the indicators that the study intended to measure.

3.6.2 In-depth Interview Guide for Principals

Qualitative data collection from the principals was obtained through an in-depth interview. This allowed the researcher to meet face-to-face with the interviewee to probe further. The guide was structured into: Section A which collected data regarding principals' gender and years of experience; Section B was on principals' collaboration and teachers' job performance; Section C contained principals' innovation and teachers' job performance';

Section D dealt with principals' teacher empowerment and teachers' job performance and section E included principals' motivation and teachers' job performance.

3.6.3 In-depth Interview Guide for the Primary Education Director

Qualitative data from the Primary Education Director was collected using an interview guide. The instrument was divided into five sections distributed as follows: Section A included general questions about experience and role as County director of Education; Section B dealt with principals' collaboration and teachers' job performance; Section C was on principals' innovation and teachers' job performance'; Section D was about the ways principals empower teachers and its effect on teachers' job performance and section E concerned principals' motivation and teachers' job performance.

3.7 Validity of the Research Instruments

Validity in research is crucial because a study without assuring the validity of its instruments is worthless. According to Cohen et al., (2018, p. 243), "validity is a demonstration that a particular instrument, in fact, measures what it intends" so that the results obtained from them yield valid scores. Content validity reflects how much the test contains the fields of interest concerning the study's objectives and their inclusiveness (Gay et al., 2012). To ensure the content validity of the research instruments, the researcher referred to the supervisors whose expertise in the field of education and research was instrumental in making the necessary adjustments. Where ambiguities, lack of focus on relevant information and inconsistencies were detected and amended improving thus, construct validity and face validity.

3.8 Pilot Testing of Research Instruments

When an instrument is self-constructed, it is necessary to determine its validity and reliability (Gay et al., 2012), this is done through pilot testing. It means that the instrument is used for a similar group as the sampled population so that deficiencies are detected and

corrected. Cohen et al., (2018), suggest that a group of eight to 10 individuals are enough. To pilot test the interview guide of the Primary Education Director, the researcher interviewed the Deputy Primary Education Director of Heiban County. The pilot test for teachers and principals was conducted in two public primary schools in Heiban County, but not among the sampled ones and included 10 teachers and two school principals for the interviews. Teachers and principals were asked to point out unclear questions. In this way, this pre-test assisted the researcher in identifying vagueness and lack of clarity in the instrument and adjusting them accordingly.

3.9 Reliability of the Study Instruments

Reliability is the steadiness in which an instrument measures what it measures. In other words, when such an instrument is given to similar respondents over time, it should yield similar data (Cohen et al., 2018). The numerical reliability value of a research tool is expressed as a correlation coefficient and it is obtained through correlation statistical analysis. This study used the split-half reliability method to collect data once. The data collection instrument was divided into two halves, odd and even numbers and given to two similar groups of respondents simultaneously. The research tool used a Likert scale from 1 to 5, the obtained scores were then analysed.

Through Cronbach Alpha analysis using SPSS Version 21, the correlation coefficient showing the degree of the instrument reliability was calculated. According to Gay et al. (2012), the closer the coefficient value is to one, the better. In this study, the coefficient obtained was 0.885 and therefore was considered reliable enough to be used in the study.

3.10 Credibility and Dependability of the Qualitative Instruments

Scholars prefer to use terms such as credibility, dependability, and trustworthiness when referring to reliability in qualitative research and it is “a fit between what researchers record as data and what actually occurs” (Cohen et al., 2018, p. 270). Several techniques are

used to validate qualitative research. Methodological triangulation refers to the use of different methods of data collection, which was done in this enquiry. Through the use of quantitative and qualitative data collection, the researcher gathered information from different points of view, i.e., school principals and teachers. The researcher sought to minimize bias and enhance accuracy in reporting the results by asking some participants such as principals and the Primary Education Director to check the results quoted as suggested by Creswell & Guetterman (2021).

3.11 Description of Data Collection Procedure

The researcher obtained a cover letter from Tangaza University. With it, the Heiban County Office of Education was approached to attain the required permit to access the selected schools. Then, the researcher visited the schools, presented the cover letter and made the necessary arrangements with the school principals. Before administering the questionnaires, the consent letter was read and signed by the participants. Finally, after agreeing with the principals upon the fittest time for the in-depth interview, the researcher proceeded to collect the qualitative data. A similar procedure was followed with the Primary Education Director before the interview.

3.12 Description of Data Analysis Procedure

This investigation adopted a convergent parallel design and therefore the data analysis involved both numerical and qualitative data.

The quantitative data analysis was done using SPSS software Version 21 and presented through frequencies, percentages, and bar graphs. The correlation analysis was carried out through Spearman Rank Correlation. This type of approach yielded a correlation coefficient for each independent variable in relationship with the dependent variable. Thus, it allowed the researcher to establish the relationship between the independent and dependent variables, their direction and strength (Gay et al., 2012). That is, the correlation coefficient (r)

indicates which variable ranks first in strength and whether the relationship is positive or negative with the dependent variable.

The qualitative data obtained through in-depth interviews was first recorded and transcribed manually, together with the researcher's notes on observations done in each school. Once this step was done, a general reading allowed the researcher to make sense of the data. Followed the coding process in which the text was divided and classified into themes and subthemes (Creswell & Guetterman, 2021). In this process, the interview questions were a guide to identify the section relevant to each objective and recognise repetitions of similar information by the participants and so reduce them. Then proceeded to the data interpretation taking into consideration each research question to be answered. Validation was executed through member checking whereby the participants read the text to verify that what they expressed aligns with what was reported. Finally, the findings were reported through direct quotes and narratives.

3.13 Ethical Considerations

Educational research needs to be conducted following the ethical standards required. For this purpose, and in adherence to the institution's guidelines, the researcher sought a recommendation letter from the Department of Post-graduate Studies at Tangaza University. The authorisation letter allowed the researcher to obtain further the necessary permission from the relevant authorities in the County Office of Education in Heiban County to conduct research in the area. With the necessary approvals granted, the researcher proceeded to introduce herself to each of the selected schools and their principals and arrange for the most appropriate time and places within the school premises to meet the respondents. Participants were informed about the nature and purpose of the study, assuring them of the confidentiality and anonymity of the information they would provide. They were told about the right they have to withdraw at any time they wish without a negative consequence to their job. A letter

of informed consent was provided for them to sign before completing the questionnaire or interview.

Regarding academic ethical standards, the researcher followed the APA 7th edition format to write the report. Moreover, referencing sources of information were adequately cited. According to (Cohen et al. (2018), ethical educators should not spare any effort in honestly reporting the findings, without favouring any interest or group even if the findings contradict previous research findings. Therefore, the researcher emphasized reporting results without alteration and observing provided guidelines to meet the required standards.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND DISCUSSION OF THE FINDINGS

4.1 Introduction

This chapter presents the participants' response rate, demographic details including gender distribution of teachers and principals as well as distribution of teachers by academic qualification. It concludes with the analysis, interpretation and discussion of the obtained data, in line with the study variables and objectives.

4.2. The Response Rate of the Participants

The quantitative data for this enquiry was obtained through a questionnaire administered to the teachers. In contrast, qualitative data was obtained through interviews with school principals and the Primary Education Director. Table 2 presents the response rate of participants.

Table 2

The Response Rate of Participants

Participants	Sample participants	Actual Participants	Response Rate
Teachers	253	188	74%
Principals	10	10	100 %
Primary Education Director	1	1	100%

Table 2, indicates that the study's target population was 253 teachers. The response rate was lower than expected due to the teachers' lack of confidence as it was the first time for many of them to do such exercise. Consequently, 188 questionnaires were administered. Out of these, one questionnaire was wrongly filled. Thus, the response rate of the teachers was 74%. According to Gay et al. (2012), "Anything above 50% will increase the confidence in the results," (p.193). Thus, the response rate was considered robust enough to proceed to

data analysis. Additionally, the response rate from principals and the Primary Education Director was 100%. The researcher ensured this response rate by carefully making appointments according to the respondents' availability and insisting on meeting them whenever the need arose. Besides, this high response rate also reflected the participants' attributed importance to the study and their willingness to contribute to improving educational leadership in the region.

4.3 Demographic Information of Participants

Some demographic features analysed concerning the investigation objectives were teachers' and principals' gender, academic qualifications and years of experience. By including these, the researcher enhanced the reliability of the results, avoided bias, and tailored the recommendations to address the specific needs of various presented groups. This comprehensive approach ensured a more accurate and generalisable understanding of the research topic, reflecting the full spectrum of perspectives within the population. The data from the respondents was obtained through questionnaires and interviews. The findings are next presented.

4.3.1 Gender Distribution of Teachers, Principals, and Primary Education Director

The study sought to find out the gender of the participants. The purpose of gathering this information was to explore whether there was a difference in gender participation in leadership roles. Additionally, it could shed light on how principals' TL influences teachers' job performance in public primary schools in Heiban County, Sudan. The findings are presented in Figure 2.

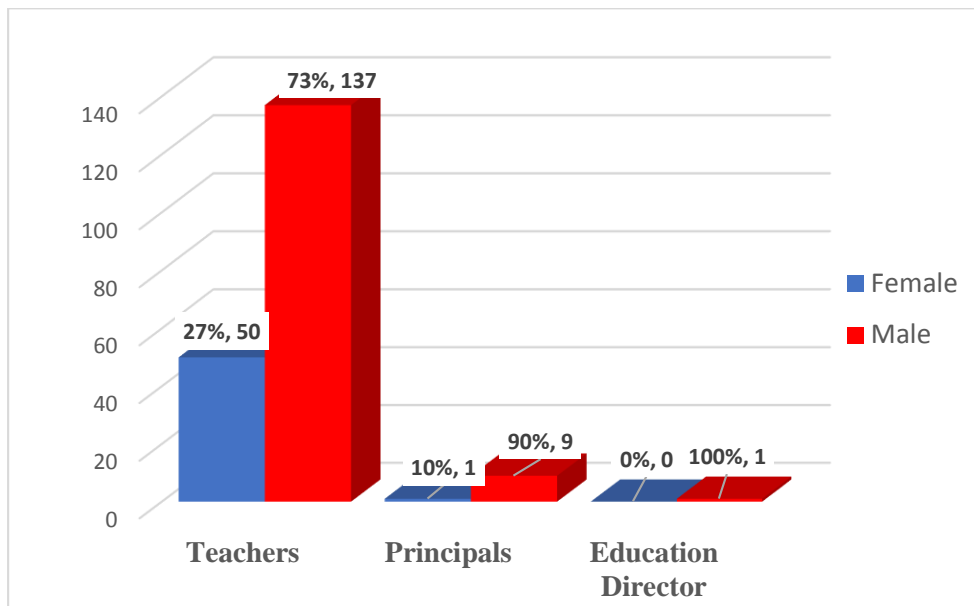
Figure 2***Distribution of Teachers, Principals, and Primary Director of Education by Gender***

Figure 2 indicates the gender distribution among the 187 teachers in the sample and it reveals a lopsided representation, with female teachers comprising (50) 27% while male teachers make up (137) 73%. This unbalanced distribution is an indication of the dominant presence of male teachers over female ones in public primary schools in Heiban County. Furthermore, out of 10 principals interviewed, only one was a female, evidencing in this way, their underrepresentation in school administration and a huge gap in gender balance. Additionally, the study included one male education officer, the Director of Primary Education in Heiban County, further emphasizing the male dominance in teaching, administrative and leadership roles within the educational context. The overall findings are indicative of differences in gender representation across teaching and leadership roles, suggesting potential areas for further exploration regarding gender balance and its impact on school dynamics and leadership effectiveness. According to Martinez and Molina (2020), global data surveys indicate that females are associated with higher administration qualities. Gender bias and cultural practices in the region might exert an influence. The researcher

observed during fieldwork that there is a strong impact of Islamic cultural characteristics in the area as a result of long years of northern Arab domination in Heiban which may be linked to societal trends such as gender bias and cultural values.

4.3.2 Distribution of Teachers by Academic Qualification

The study considered teachers' academic preparation to determine whether the teaching personnel have the necessary knowledge and skills to exercise their teaching role effectively. In presenting the respondents' academic qualifications distribution, the researcher provides a concise overview of the teachers' and principals' educational backgrounds. This overview helps contextualise the study by showcasing the respondents' level of expertise, ensuring that the data is both valid and relevant. A summary of the collected data is presented in Table 3.

Table 3

Distribution of Teachers by Academic Qualifications

Academic Qualification	Teachers		Principals		Education Director	
	F	%	F	%	F	%
Certificate	21	11	8	80	1	100
Diploma	16	9	1	10	0	0
Secondary School Certificate	150	80	1	10		
Bachelor degree	0	0	0	0	0	0
Master's degree	0	0	0	0	0	0

The majority of the sampled teachers, 150 (79%), have attained a secondary school certificate, followed by 21(11%) who had a certificate in education qualification, while a smaller number, 16 (9%), held a diploma level education. Out of the 10 participant principals, the majority, 8 (80%) were holders of the certificate of education qualification, while the remaining 2(20%) had a diploma and a secondary school level of education, respectively. The sole education director in the sample possessed a certificate in education.

The large number of teachers with a secondary school certificate is unsurprising, as the region has chronically suffered from unequal resource allocation from the central government, there is no Teacher Training College (TTC) available at the time of writing. In previous years, this kind of service was offered by NGOs and churches. The services stopped in 2022 so teachers are no longer trained before being posted, besides, of those who have undergone TTC some were secondary school dropouts. Secondary school certificate is generally the minimum qualification required for teaching in primary schools and there is a dire need for them in public schools.

Pan (2022), affirms that through research it has been demonstrated that “perceptions of instructional preparedness are linked to increased efficacy which leads to favourable student and teacher outcomes” (n. 4918). It is important to note that qualified educators are skilled in employing diverse strategies to enhance their job performance. They adapt their teaching to accommodate different learning styles, ensuring all students can engage effectively with the material. This is a crucial point conducing to positive teacher and student outcomes which might be affecting teachers’ job performance in Heiban County.

Moreover, qualified teachers foster positive classroom environments that promote student well-being and motivation. They also collaborate with colleagues to share best practices and solve common challenges, strengthening the overall school environment. Furthermore, qualified educators are committed to ongoing professional development, staying updated on the latest educational trends, pedagogical innovations, and curriculum changes, which enables them to continuously refine their teaching practices and maintain high standards in the classroom.

4.3.3 Distribution of Principals and Primary Education Director by Years of Working Experience

By collecting data on the principals' working experience, the researcher envisaged that this factor may influence the study's results to understand how varying years of experience might affect the research outcomes. Table 4 provides a summary of this data.

Table 4

Distribution of Principals and Primary Education Director by Years of Working Experience

Working Experience	Teachers		Principals		Education Director	
	F	%	F	%	F	%
Less than 2 years	21	11	0	0	0	0
2 - 5 years	67	36	2	20	0	0
6 - 10 years	68	36	6	60	0	0
11 - 15 years	20	11	1	10	1	100
Over 15 years	11	6	1	10	0	0

Out of the ten respondent principals, 6 (60%) had 6-10 years of years of working experience according to the established criteria of a minimum of two years in the leadership role suggesting that they possessed enough practice to accurately shed light on the relationship between the principals' TL and teachers' job performance in public primary schools in Heiban County, Sudan. It is also worth noting that 2 (20%) and 1 (10%) of the other sampled principals had working experience of 2 to 5 years and 11 to 15 years, respectively, and were therefore instrumental in information sources for the research.

Experience can better equip principals with valuable skills, insights and strategies for managing schools. Brauckmann, et al. (2023), suggest that principals need to be context-sensitive and capable of combining management practices in the particular school context to exercise leadership efficiently. The interviewed principals are natives of the region and have

exercised their role in more than one school, this might be an aspect that has enabled them to know the contexts in the school where they work notwithstanding the lack of leadership training. They show familiarity with the school surroundings and host community which equips them with a deep understanding of teachers' needs and human dynamics which gain their trust in leading them. Furthermore, years of experience may have helped them sharpen their leadership skills to inspire and motivate teachers despite material resource constraints. Experience allows them to be confident in guiding teachers in their teaching roles. Thus, as the findings suggest, there might be a positive link between experience and general school management.

4.4 Principal's Collaboration Practices and Teachers' Job Performance

To answer the question, about the extent to which principals' collaboration practices influence teacher job performance in public primary schools in Heiban County, Sudan, teachers were requested to choose the response that best represented their opinions on a five-point Likert scale: The scores of the scale are strongly agree (SA); agree (A); not sure (NS); disagree (D) and strongly disagree (SD). The findings are summarised in Table 5.

Table 5***Teachers' Responses on Principals' Collaboration Practices and Their Performance***

Statement	SA		A		NS		D		SD	
	f	%	f	%	f	%	f	%	f	%
Teachers (n = 187)										
All teachers in this school know the goals of our institution communicated by the principal	128	68%	42	22%	7	4%	6	3%	4	2%
Our principal and teachers work together to achieve the school's goals	137	73%	46	25%	1	1%	2	1%	1	1%
Teachers are inspired by the principal to work together	116	62%	57	30%	10	5%	3	2%	1	1%
In this school, we hold regular meetings for teachers to share ideas	105	56%	70	37%	7	4%	4	2%	1	1%
I improve my teaching through the collaboration with my colleagues	106	57%	68	36%	7	4%	6	3%	0	0%
Our principal fosters a collaborative environment in the school	95	51%	58	31%	17	9%	15	8%	2	1%
Teachers generally improve their teaching through collaboration and support from my principal	113	60%	50	27%	15	8%	4	2%	5	3%

From the summary of responses in Table 5, it can be observed that out of the 187 teachers who completed the research questionnaire, more than half were in strong agreement with the stated principal's collaboration practices as positively influencing their job performance. The results of this enquiry coincide with previous studies in that providing opportunities for teachers to work as a team to achieve educational goals, enhances their performance and collaboration (Sabitu & Abdul, 2023; Taha & Hussen, 2023; van der Vyver & Geduld, 2022). The details of principals' collaboration practices and teachers' responses are presented.

Notably, regarding the principals' collaboration practice of working with the teachers to achieve the school's goals, 73% of the teachers strongly agreed and 25% agreed that the practice influenced their job performance, while only 1% disagreed or strongly disagreed, respectively. The data identifies teamwork and collaboration as key factors in improving

teaching work performance. In line with this, a principal replied smiling when asked about the importance of collaboration in his school:

In this context, you can't survive if you don't learn to work together. Teachers and learners conduct some activities together, like watering and tree planting, school fencing or cleaning the school environment, teachers divide the work and monitor it. Regarding the running of the school, we have duty rosters, class teachers, debate master, sports master and others (Principal A, 26/Nov/2024).

Another principals' collaboration practices that elicited a high agreement from the teachers as positively influencing their job performance was the support of the view that all teachers in the school know the goals of the institution communicated by the principal, with 68% strongly agreeing, 22% agreeing, and only 3% and 2% disagreeing and strongly disagreeing, respectively. Sliwka et al. (2024), state that once teachers know the institution's goals, all their energies are directed toward achieving them and that the principal plays a key role in communicating the goals effectively. The confidence that the teachers in Heiban have in their principals' guidance and the clear aims in the school might be one of the reasons for teachers commit themselves to attaining the goals. Principal B, explains the importance of communication during staff meetings to achieve goals:

First, I ask teachers to write down what [they think] we need to do, I give the list to my deputy who will call us, and then we sit and discuss, and decide on what and how we are going to do. (Principal B, 3rd Dec. 2024).

It is important to consider that the collective culture of this area dwellers might be an aspect that favours the importance of consulting teachers' opinions about school priorities. Sabitu and Abdul (2023), explained that the team members experience ownership in goal setting when they are involved in this process. Once teachers are aware of their responsibility and role in achieving the goals set, they direct their work to attain them.

The collaboration practice of the principal inspiring teachers to work together also resonated well with the teachers as a strategy that influences their job performance, and which elicited responses of strongly agree (62%), agree (30%), disagree (2%) and strongly disagree (1%). Most principals have years of experience as school leaders, they are aware of the importance of promoting harmonious relationships among teachers and in the school as a basis for enhancing collaboration and goal achievement. Probably, the numerous challenges they encounter in ensuring the smooth running of their schools have influenced their capacity to promote teamwork. The Primary Education Director stated that:

It is the principals who can promote good relationships with the teachers, but if they are rude or authoritarian, you cannot create a positive environment. A principal needs to be transparent to the teachers. In anything they want to achieve they have to call the teachers to work together (Primary Education Director, 1st December, 2024).

One of the means of enhancing collaboration is the provision of regular meetings where teachers can express themselves and share ideas. To the question, of whether regular staff meetings were in place, teachers strongly agreed (56%), agreed (37%), 2% disagreed and only 1% strongly disagreed. Principal J, had this to say:

We come together so that we agree on what to do, for example when we have meetings regarding academics or before the exam period, or if there is a need in the school for things to be repaired, or if we are missing school materials. All these things are discussed when we come together, we sit and discuss to find solutions (Principal J, 13th December 2024).

The teachers' view about their principals' collaboration practices to achieve desired goals was positive. Understandably, the statement, that teachers generally improve their teaching through the collaboration and support from their principal was also highly rated. The

results show 60% in strong agreement, 27% in agreement, and only 2% and 3% in disagreement and strong disagreement, respectively.

Teachers expressed their views on principals' collaboration practices which add information to the Likert scale questions. The importance of staff meetings is underlined by a teacher: "Our principal encourages us to collaborate by holding regular meetings, encouraging transparency and soliciting for staff ideas." Another teacher writes, "he listens to every teacher's view in an effort to work together." Their views align with the views expressed by their principals.

4.5 Principals' Innovation Strategies and Teachers' Job Performance

The study sought further to answer the question about the influence of principals' innovation strategies on teacher job performance in public primary schools in Heiban County, Sudan. To answer this question, teachers rated their principals' innovation strategies on a five-point Likert scale: The scores of the scale are strongly agree (SA); agree (A); not sure (NS); disagree (D) and strongly disagree (SD). The findings are presented in Table 6.

Table 6

Teachers' Responses on Principals' Innovation Strategies and Their Performance

Statement	SA		A		NS		D		SD	
	f	%	f	%	f	%	f	%	f	%
Our principal encourages teachers to find new ways of solving old problems in our school	103	55%	60	32%	11	6%	8	4%	5	3%
My principal constantly invites teachers to use new teaching methods	76	41%	74	40%	16	9%	15	8%	6	3%
Teachers' work is supported by the use of digital technology	17	9%	25	13%	26	14%	23	12%	96	51%
My principal supports the use of new technology (ICT) in lesson delivery	24	13%	18	10%	17	9%	36	19%	92	49%
Our principal involves the teachers in problem-solving in school matters	102	55%	64	34%	7	4%	10	5%	4	2%
Our school leader provides training to use digital tools	21	11%	18	10%	17	9%	47	25%	84	45%

From Table 6 it is observed that 55% of the teachers strongly agreed that the principals encourage creativity in school problem-solving, 32% agreed, while 4% and 3% disagreed and strongly disagreed respectively. The data suggests that principals encourage their teachers to find new ways of solving school problems in Heiban County with a positive influence on their job performance. These findings are similar to results found in previous research on TL innovation and its connection with teachers' job performance (Landa et al., 2023; Vermeulen et al., 2022).

Concerning principals' encouragement to use new teaching methods, teachers responded that 41% strongly agreed and 40% agreed with the statement while 8% disagreed and 3% strongly disagreed. Although school resources are scarce, principals encourage teachers who are trained to assist those who need it. A Principal explains:

Because we are in war zone, some of the teachers are from 4 leavers. They have not gone to college, and they are brought to the field. These are people who need to be assisted because they have the knowledge but have no tools. They lack training and psychology to approach the learner and that's why we try to teach them or to pair them with the trained ones (Principal B 26th November 2024).

However, the question involving the use of digital technology in teachers' work was strongly agreed only by 9% and agreed by 13% while 12% disagreed and 51% strongly disagreed. The low rating for this question is probably because the unequal resource distribution in the country hinders public schools from having even essential school materials, a problem which is exacerbated by the remoteness of the area. A school principal explained that:

There are no technological resources, that's why we try to use the local resources as much as we can. In our school, we have only two teachers with a smartphone which is not even enough. So, in terms of technology, we are still at a very low level. Even

with school materials, sometimes the chalk that we are teaching with becomes difficult to get (Principal D, 7th December 2024).

It becomes evident that principals spend much of their energy and time searching for essential teaching materials. While waiting outside a Payam Education Office, the researcher came across a principal of a public primary school. In the course of interacting with him, the researcher realised that the principal had left school early that morning as his location was more than 10 km away from the office. This principal had spent half of the morning hours walking trying to get some chalk and was expected to walk back the remaining school hours. Thus, the school day would be over by the time he returned. It is understandable then that if a principal could use a full school day to get essential teaching materials, the principal could not get any interest in technological advancement in a zone where internet connectivity is extremely scarce, missing out on ICT benefits in enhancing teachers' job performance.

Another innovation practice that elicited clear views from the teachers, was a question asked about the adoption of ICT in lesson delivery. Only 13% strongly agreed and 10% agreed contrasting the 19% who disagreed and 49% strongly disagreed with the statement. It is important to recall that public schools in the region were opened as a result of the local community initiative in conjunction with the SPLM/N. Heiban County and the whole of the Nuba Mountains have been isolated for many years, the roads to access the area are not asphalted, and there is no electricity supply or mobile network accessibility. Only a few organisations have a private connection to the internet, as one of the principals explains:

We have internet near the school from an NGO, their antenna is in the school land, and in exchange, they give us access. Even in such precarity the school leader tries to do as much as he can, the principal continues: We actually don't have anything available here, where teachers can learn. Some may have a laptop, personally, I have one and maybe a teacher needs. I can help him to practice. Even on the phone, you

can download some of the things that can be useful, then you put it down in the notes, it can help (Principal C, 29th November 2024).

Regarding principals' teacher involvement in problem-solving of school matters 55% of the respondents strongly agreed and 34% agreed, while only 5% disagreed and 2% strongly disagreed with the statement. As principals expressed, the staff meetings provide teachers with the space to discuss problems, and their solutions as well as get involved in their implementation. One principal explains:

Teachers know what is going on in the class and out. In case of any problem, they will also let me know that there's a problem, we call all the teachers, we sit down and discuss how we are going to solve the problem. Roles are clear, we have a disciplinary committee, senior teachers and PTA, and a deputy (Principal A 26th November 2024).

One concrete example was narrated by a teacher when the researcher was escorted to the school gate. The school's fence is made up of sticks which are often broken down by the goats, invading and dirtying the school premises. For a long, learners and teachers kept on repairing it and cleaning the droppings. The principal and teachers also appealed to the community to take care of their herds but no effective solution was found. In a staff meeting, a member came up with the idea of involving the PTA to find a solution. Finally, the creative solution was that parents took turns guarding the school facilities to prevent the fence from being broken by the goats. This action impacted teachers' work positively as time saved in cleaning could be used now for lessons, as well as the time spent in meetings discussing the problem. On the other hand, the stress of seeing the premises dirty and not finding an effective solution was reduced significantly, which was a positive outcome in their job performance.

The innovation practice that involves teachers training in the use of digital tools provided by their principals, shows 11% of respondents strongly agreed and 10% agreed

while 25% and 45% disagreed and strongly disagreed respectively. The low rating for this question is aligned with the previous ones regarding the use of digital technology in the area once more confirming the unavailability of technology. The deficiency of basic resources, such as textbooks, adequate facilities, teachers' training, and other needs may force principals to invest time and energy in trying to meet basic needs to keep schools running. When teachers lack teaching resources, for instance, textbooks and teachers' manuals, their confidence in subject mastery is negatively affected and exacerbated by their lack of adequate training. Thus, the quality of lesson delivery is deemed, resulting in low job performance.

4.6 Principals' Teacher Empowerment Practices and Teachers' Job Performance

The study further sought to investigate how principals' teacher empowerment practices influence teacher job performance in public primary schools in Heiban County. To answer this point, teachers were asked to express their views on a five-point Likert scale: The scores of the scale are strongly agree (SA); agree (A); not sure (NS); disagree (D) and strongly disagree (SD). The findings are summarised in Table 5. The summary of the responses is presented in Table 7.

Table 7***Teachers' Responses on Principals' Empowerment Practices and Their Performance***

Statement	SA		A		NS		D		SD	
	f	%	f	%	f	%	f	%	f	%
Teachers (n = 187)										
The principal entrusts teachers with leadership roles within the school	106	57%	61	33%	7	4%	9	5%	4	2%
Our principal encourages teachers to take responsibilities apart from classroom teaching	112	60%	50	27%	7	4%	13	7%	5	3%
Generally, the principal delegates duties according to teachers' skills and experience	98	52%	71	38%	7	4%	5	3%	6	3%
I feel that when I am entrusted with some responsibilities I grow in my teaching profession	101	54%	57	30%	9	5%	10	5%	10	5%
The delegation of tasks by my principal makes me feel encouraged to perform better	118	63%	52	28%	8	4%	5	3%	4	2%
I am encouraged to be a committed teacher when my principal delegates me some responsibilities	121	65%	54	29%	3	2%	5	3%	4	2%

As Table 7 indicates, in the first statement, 57% of the teachers strongly agreed that their principals entrust teachers with leadership roles, 33% agreed while only 5% disagreed and 2% strongly disagreed. In the interviews, the principals exhibited awareness of the need to delegate tasks in the school to achieve educational objectives. Besides, there is a policy requiring that each school should have an adequate role structure. The Primary Education Director states that:

For activities in and out of the classroom the principal delegates, he has a senior teacher, sports master, curriculum master, a deputy, and the rest of them. They can sit together, for example, if the principal is not there the deputy will handle issues, or although he is around, he delegates the others (Primary Education Director, 1st December 2024).

The principals' empowerment through encouraging teachers to take responsibilities apart from classroom duties elicited a high agreement among the respondents where 60% strongly agreed and 27% agreed, while only 7% disagreed and 3% strongly disagreed with the statement. Shava and Heystek, (2021) stated that principals' teacher empowerment is crucial to bring about positive change in schools. During fieldwork, the researcher observed that the structure of different roles assigned to the teachers, such as sports master, member of the disciplinary committee and so on, are similar in all the schools and this could be the reason why all teachers in one way or another are delegated with duties outside classroom responsibilities.

Concerning principals' consideration of teachers' interests and skills when delegating duties, 52% of the respondents strongly agreed to this statement 38% agreed while only 3% disagreed and 3% strongly disagreed. Teacher empowerment does not only depend on organisational structure but on other aspects such as adequate management of the talent pool. To that effect, the principal in the daily interactions with each teacher can identify skills, experience and interests that could be maximised to their full potential by allowing teachers to develop their talents and interests and delegating them accordingly. Once identified, principals delegate teachers. One principal explained that:

First of all, I must have a meeting with the teachers. Each person expresses what they are good at. Even from the look and observation, you see somebody playing in the field, you might know that person is good at football, they know themselves
(Principal E, 10th December 2024).

Concerning interests and experience another principal adds that:

All of them are delegated, according to their interest. Normally I don't just give full responsibility to somebody who has no experience. For instance, those who have

experience, we put in charge and the new teacher will be an assistant (Principal A, 26th November, 2024).

Regarding the growth in their profession that teachers feel when they are entrusted with responsibilities by their principals, 54% of them strongly agreed with the statement, 30% agreed while only 5% disagreed and strongly disagreed respectively. Teachers, on the other hand, feel that they learn and develop their capacities when they are entrusted by their principals, motivating them in their commitments to the school. When asked in an open-ended question to describe how their principals empower them, teacher A stated that; “Apart from assigning me to school activities and responsibilities, the principal has trust in me when he sends me to work with and assist other teachers.” Another teacher explained that; “The principal empowers me by allowing me to showcase my skills in providing services in the school.” Teacher C on the other hand explained that:

Delegation of duties is an opportunity to develop. My principal empowers me by sending me to other schools to represent him and therefore learn. The autonomy granted by my principal is a source of empowerment...by freely allowing us to perform our duties and to express our talents (Teacher C, 26th November 2024).

The question of whether the teachers feel encouraged to perform better when their principals delegate them with some tasks elicited agreement among the respondents with 63% strongly agreeing, 28% agreeing and only 3% disagreeing while 2% strongly disagreeing with the statement. The data suggests that there is a positive relationship between teacher empowerment and their job performance. Such findings are similar to previous investigations, affirming that task delegation allows teachers to grow professionally (Amalia et al., 2021; Okaforcha et al., 2023; Shava & Heystek, 2021), but contrast with Limon, (2022), who found that direct effect of teacher empowerment on their job performance is not significant. The result analysis identifies teacher empowerment as a key factor in teacher

commitment and job performance in Heiban. When a teacher experiences the trust given by the principal, this gives confidence in her or his capacity to do the job well.

Lastly, teachers were asked to express their feelings of encouragement to be committed to their work when their principals delegated them some responsibilities. The results display a high consensus, 65% strongly agree, 29% agree, 3% disagreed and 2% strongly disagreed. In Heiban public primary schools, the structural organisation allows teachers to be delegated by their principals, for instance, extracurricular activities, manual work, celebrations and other activities. Teachers' answers suggest that the autonomy in these activities, growth opportunities and confidence granted through task delegation might be behind teachers' feelings of encouragement to be committed in their schools. For instance, some teachers in the open-ended question about their how they feel when their principal delegates duties to them and how it helps them to improve in their job performance: "My principal empowers me by entrusting me with responsibility which helps me to grow in my teaching." Another teacher expresses his opportunities for growth, "by allowing me to showcase my skills in providing services in the school."

4.7 Principals' Motivation Skills and Teachers' Job Performance

The fourth question that the study sought to answer was, how principals' motivation skills influence teacher job performance in public primary schools in Heiban County, Sudan. To get information, teachers were requested to choose the response that best expressed their opinions on a five-point Likert scale: The scores of the scale are strongly agree (SA); agree (A); not sure (NS); disagree (D) and strongly disagree (SD). The findings are summarised in Table 5. The summary is presented in Table 8.

Table 8***Teachers' Responses on Principals' Motivation Skills and Their Performance***

Statement	SA		A		NS		D		SD	
	f	%	f	%	f	%	f	%	f	%
My principal provides opportunities for teachers to attend courses to refresh their skills	69	37%	44	24%	20	11%	26	14%	28	15%
My principal recognizes teachers' efforts and achievements	107	57%	58	31%	10	5%	6	3%	6	3%
I feel encouraged by the opportunities teachers have for training courses	83	44%	51	27%	14	7%	22	12%	17	9%
The principal motivates us teachers by offering awards for high performance	67	36%	52	28%	15	8%	19	10%	34	18%
I am more committed to improving my teaching because of the motivation from my principal	91	49%	58	31%	10	5%	18	10%	10	5%
The principal's recognition is motivating in my performing better	84	45%	76	41%	9	5%	8	4%	10	5%

The results show that the respondents have a divided opinion regarding the opportunities for refreshing courses offered by their principals. From the answers of the respondents, 37% strongly agreed and 24% agreed while 14% disagreed and 15% strongly disagreed. Notably, the country's system of education is characterised by a lack of resources for teacher development and insufficient teacher support. For instance, teachers receive as an incentive their daily meals provided by the parent's contribution in kind. Training courses are occasionally offered by NGOs with contents targeted to cover the most immediate needs as suggested by the Education Primary Education Director. During the interview, the Primary Education Director explained that:

Among my responsibilities is to coordinate with NGOs. We talk to them about the problems facing education and together we seek to solve them according to educational aims and our plans. For example, if they come, I tell them about the

problems and direct them to go where there's most need (Primary Education Director, 1st December, 2024).

Thus, the teachers have limited access to refreshing courses as their implementation depends on the services that church organisations and NGOs can offer. Principals, then try other alternatives such as mentoring inexperienced and untrained teachers or pairing trained teachers with untrained ones.

Concerning the motivation skill of principals' recognition of teachers' efforts and achievements, 57% strongly agreed and 31% agreed while 3% disagreed and strongly disagreed with the statement respectively. One characteristic of TL is the stress on intrinsic motivation which has a positive and significant relationship with job performance, the findings are similar to those found in previous investigations (Fitria & Eddy, 2021; Lukumay, 2021; Saqib et al., 2022). Principals in Heiban acknowledge that they have limited material resources and they recourse to verbal recognition. A principal described that: Even though you don't have anything you can appreciate what a teacher does. For instance, you may delegate a teacher and he or she does something which is appreciated, then you say Thank you for the wonderful job you have done (Principal D, 7th December 2024).

When asked about the motivation brought about by the opportunities teachers have for training courses, 44% of the respondents strongly agreed and 27% agreed while 12% disagreed and 9% strongly disagreed with the statement. Teacher training Institutes are practically non-existent in the Heiban area. In the past, some organisations and churches offered this service but they closed and the last batch graduated 2 or 3 years ago. It is understandable then, that not all teachers have the occasion to be trained, and even attendance to the training courses may be offered by NGOs is limited to 2 or 3 members per school. Therefore, the assistance received from these organisations is insufficient to provide adequate and enough teachers refreshing courses to upgrade and motivate all the teachers working in

the public sector in Heiban County.

Regarding the principals' motivation through offering awards for high performance 36% strongly agreed and 28% agreed while 10% strongly disagreed and 18% disagreed with the statement. The data suggests that there is an agreement that awarding teachers is an effective motivation skill. It is important to consider however that there is practically no salary provided by the central government. Some organisations' programmes support education in the region, by providing some school materials and a monthly incentive to the teachers. Therefore, in Heiban County teachers' awards are uncommon. One principal explained that:

When a teacher performs well, I know something is to be given to this person.

Sometimes maybe grain is brought by the learners or pens or a school bag when we have things brought by an organisation. Sometimes I just appreciate the teacher verbally because we don't have anything (Principal J, 13th December 2024).

Teachers expressed their motivation to be committed to their work through the motivation of their principals with 49% strongly, 31% agreeing, 4% disagreed and 5% strongly disagreeing with the statement. The data suggests that intrinsic motivation is the most effective form of motivation practised by the principals in Heiban. The researcher observed during fieldwork, that despite the poor school conditions, teachers and principals appear to enjoy harmonious relationships as well as motivation to attend to their duties. It can be said that principals use often verbal recognition and encouragement or little tokens of gratitude as one principal describes:

Even though we don't have anything we appreciate what a teacher does. For instance, you thank him in front of all the teachers. When there's something brought by an organisation, like school materials we give them; also, the community provides grain for their feeding. At the end of the month, we give pocket money, it isn't even called

an incentive (Principal H, 10th December 2024).

Concerning the motivation to perform better teachers feel when the principal recognises their work, 45% strongly agreed, 41% agreed while 4% disagreed and 5% strongly disagreed. This statement is echoed by the teachers. In the open-ended questions, one of the teachers stated that; “Our principal motivates us through encouraging words and appreciation, he advises us to put more effort in teaching.” Another teacher commented that; “I feel motivated by my principal by appreciating my work through the word of thanks and by being encouraged when our pupils perform well in class or in the national examinations.” Several authors coincide in the point that TL emphasises more on intrinsic motivation as an effective means to improve performance (Fitria & Eddy, 2021; Saqib et al., 2022).

5.0 The Correlation Between the Principals’ Transformational Leadership and Teachers’ Job Performance

The study aimed to determine principals' TL's influence on teachers' job performance in public primary schools in Heiban County, Sudan. To establish this cause-effect relationship, it was necessary to measure and analyse the extent of association between the independent variables of the principals' transformational leadership practices and the dependent variable of the teachers' job performance. The application of an inferential statistical analysis involving Spearman's rank correlation coefficient. The processed data relating to the Spearman's correlation coefficient is in Table 9, followed by an interpretation of the output.

Table 9*The Correlation Matrix of the Independent and Dependent Variables of the Study*

	Teacher Job Performance	Principal's Collaboration Practices	Principal's Innovation Strategies	Principal's Teacher Empowerment Practices	Principal's Motivation Skills
Teacher Job Performance	1.000				
Principal's Collaboration Practices	.497**	1.000			
Principal's Innovation Strategies	.370**	.400**	1.000		
Principal's Teacher Empowerment Practices	.474**	.500**	.290**	1.000	
Principal's Motivation Skills	.474**	.499**	.473**	.379**	1.000
	.000	.000	.000	.000	.000

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

From the data in the table of Spearman's correlation matrix between the independent and dependent variables of the study, the interpretation is that all the four indicators of the independent variable (Principal's Collaboration Practices, $r = +.497$), (Principal's Innovation Strategy, $r = +.370$), (Principal's Teacher Empowerment, $r = +.474$), and (Principal's Motivation Skills, $r = +.474$) have a positive association with Teacher Job Performance (Dependent Variable). This implies that the TL strategies undertaken by the principals (indicators of the independent variable) were found to have a positive influence on teachers' job performance in public primary schools in Heiban County, Sudan, according to

information gathered from the sample. Therefore, the study rejected the null hypothesis and failed to reject the alternative hypothesis.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings following each research objective. The conclusion of the investigation was drawn from the study's findings as well as the recommendations which follow, are based on the findings. The chapter concludes with suggestions for further studies.

5.2 Summary of the Findings

The research aimed to investigate the influence of principals' TL on teachers' job performance in public primary schools in Heiban County, Sudan. The hypothesis test established that there is a principals' TL have a positive influence on teachers' job performance in public primary schools in Heiban County. Finally, the four objectives' summary is presented.

The first objective focused on the influence of principals' collaboration practices on teachers' job performance in public primary schools in Heiban County, Sudan. The findings indicated that principals' collaboration practices with and among teachers are highly esteemed. Each school has an organisational structure where roles in extracurricular activities and other duties are distributed among teachers. In turn, they feel inspired to be committed to their role as educators and only very few of the participants opposed this view. Principals further explained that the workload is overwhelming to be carried out by a single individual and therefore it was necessary to delegate tasks. Principals' collaboration practices had the highest statistical significance ($r = .497$) on teachers' job performance among the four indicators of the independent variable.

The second objective examined the influence of principals' innovation strategies on teachers' job performance in public primary schools in Heiban County, Sudan. The findings

suggested a divided view. The statements related to collective innovative problem-solving and practices in teaching indicate a higher agreement compared to the ones related to the use of digital technology. The principals' light-shedding contribution to this issue was the explanation that school resources are very scant and practically there is no availability of digital gadgets or internet connectivity in the region. Therefore, principals' innovation strategies were the lowest ranked in terms of statistical significance ($r = .370$) among the four independent variable indicators.

The third objective concerned principals' teacher empowerment practices in public primary schools in Heiban County Sudan. The findings revealed a generalised sense of appreciation for their principals when they are delegated tasks. Teachers expressed that they see it as a growth opportunity and a motivation to be committed. However, a lower percentage of participants contrasted with this opinion. Experienced principals expressed that they consider individuals' interests, experience and skills in allocating duties to the teachers. Generally, the primary schools comprise between 7 to thirteen teachers, which makes it possible for the principals to establish personal relationships with each individual. This is crucial in identifying teachers' interests and skills in managing the talent pool effectively. In the Spearman correlation coefficient, teacher empowerment was ranked second in statistical significance ($r = .474$)

Lastly, the fourth objective studied the influence of principals' motivation skills on teachers' job performance in primary public schools in Heiban County. The findings highlighted intrinsic motivation as more commonly used by the principals as contrasting extrinsic motivation. The results suggest that the principals usually have few material resources to award prizes for positive teacher performance, and therefore, verbal appreciation is most used. Furthermore, opportunities for training and refresher courses are rare impacting negatively in their performance as they are miss opportunities to upgrade their knowledge

and skills. Educational authorities rely on various organisations to provide these services. Teachers, however, feel motivated to assist each other and make use of any available resource to improve their teaching role. Principals' motivation skills obtained a high rating among the teachers ($r = .474$).

Thus, there is a positive influence of principals' TL on teachers' job performance in public primary schools in Heiban County, Sudan.

5.3 Conclusions of the Study

The investigation aimed to establish the influence of principals' TL on teachers' job performance in public primary schools in Heiban County, Sudan. Several conclusions can be drawn based on the findings. Principal-teacher collaboration is enhanced through a structural arrangement in which the principal is aided by different teachers whose roles are determined from the beginning of the academic year and then followed up by the principal. This collaboration, in turn, enhances teachers' job performance as they feel trusted and learn from the roles given to them.

Regarding the innovation practices employed by the principals, it is concluded that the principal plays a central role in enhancing innovative practices and solutions among the teachers. In the schools, principals might encourage teachers to be creative and use a variety of teaching methods, however, essential school materials are missing in many schools. This precarity and the lack of teachers' training opportunities hinder teachers' innovative skills. Furthermore, ICT adoption is extremely difficult as the region is cut off from mobile networks and internet connection, apart from electricity supply.

In terms of teacher empowerment, it is concluded that school principals empower their teachers by delegating duties and holding teachers accountable for their duties outside the classroom. Before assigning duties, principals consider teachers' interests, experience and skills. Teachers feel motivated when their principal entrusts them with extra duties.

Regarding motivation skills, the last objective of the study, intrinsic motivation is more used than extrinsic motivation. This is because the principals do not have many material resources to award good performance to the teachers. Besides, some teachers may receive a monthly incentive from some organisations in the area. There are scarce opportunities for refreshing courses and teachers' training as the last existing ones were closed two years ago. Thus, intrinsic motivation is the most used by the principals.

5.4 Recommendations of the Study

Based on the findings of the study, some recommendations are presented, they are recommendations for practice, policy and future research.

5.4.1 Recommendations for Practice

Principals' innovation practices could be improved by offering principals workshops and training on critical thinking. As the SOE in the County counts on NGO support, the latter could be requested for such specific courses. Critical thinking abilities could equip principals with the necessary tools to guide the school communities into a culture of inquiry, analysis and creativity. The findings suggest a weak relationship between principals' innovation strategies and teachers' job performance. Therefore, educational authorities in Heiban County, through the Primary Education Director and Payam Education Coordinators, should continue to encourage practices such as principal-teacher collaboration, teacher empowerment and motivation skills as they have indicated a positive relationship with teachers' job performance in Heiban County.

5.4.2. Recommendations for Policy

The County Education Secretariat should ensure that structures are created in such a way as to offer teachers the opportunity to be trained, either in the pre-service or training on the job modality to enhance their job performance. The investigation found that there are policies in place which enhance collaboration and teacher empowerment practices.

Additionally, according to UNICEF (2021), gender parity and equity policy exists in the country, and it is the responsibility of the regional education sector to implement it. It is recommended that the Primary Education Director and Payam educational officers promote equity in gender representation in both school leadership and teaching roles when deploying individuals since the findings suggest an underrepresentation of females in administrative and teaching roles.

5.4.3 Recommendations for Further Research

The study recommendations are that other practical measures to solve the teachers' job performance inadequacies could be found through further investigation using a different theoretical framework. This is because the findings do not fully yield solutions to the research problem. Furthermore, given the precarity of the region, Heiban County and other neighbouring counties in the region could be examined separately to either challenge or confirm the findings presented. The enquiry's contribution to the body of knowledge is that it confirms that there is a positive link between TL and employees' performance in a contextual set-up scarcely investigated as Heiban County, Sudan is.

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APPENDICES

Appendix I: Letter of Introduction

TANGAZA UNIVERSITY

CHRIST THE TEACHER INSTITUTE FOR EDUCATION

NAIROBI, KENYA

Dear Participant,

RE: DATA COLLECTION

I am a Tangaza University student pursuing a master's degree in Educational Leadership and Administration. I am researching to investigate the influence of principals' transformational leadership on teachers' job performance in public primary schools in Heiban County, Sudan. I kindly request you to respond to the research instrument. The only purpose of the instrument is to collect the data required for this study. Be assured that the information you provide will be treated with the utmost confidentiality and be used only for this study.

You are requested to kindly assist by filling in the questionnaire and providing true information.

Blessings, yours faithfully,

Beatriz Cristina Mata CMS

Appendix II: Informed Consent for Participants

This study aims to investigate principals' transformational leadership and teachers' job performance in public primary schools in Heiban County, Sudan. It is in partial fulfilment of the requirement of a master's degree in educational leadership and administration at Tangaza University.

The benefit of participating in the study

By participating in this study, you will help us collect data on how principals exercise transformational leadership in public primary schools in Heiban. The improvement of leadership will benefit Heiban County and its inhabitants in realizing the goals of education. Therefore, your participation is very important.

Cost or Payment Involved

Your participation is free and voluntary and you can withdraw any time you wish. There is no remuneration whatsoever for your involvement in this study.

Rights of participants

You have a right to call the researcher for any clarification or any concerns related to this study. Any information you give will be kept anonymous and confidential. The results will be published in an academic journal. If you have any questions about the study, please contact the researcher.

Beatriz Cristina Mata

Comboni Missionary Sisters Gidel Mission.

Consent and signature

I have read and I accept to participate in the study under the conditions described.

Signature: Date **Thank you for your participation!**

Appendix III: Teachers Questionnaire

Please read the following questions and tick (✓) your appropriate response.

Section A:

- 1) Your gender: male () female ()
- 2) Your age bracket 20 - 30 () 31 - 40 () 41 - 50 () 51-60 () 61
and above ()
- 3) What is your highest level of education? Secondary school () Diploma ()
Bachelor's degree () Master's degree () Any other (specify)
- 4) How long have you served as a teacher? Less than two years ()
1-5 years () 6-10 years () 11-15 years () 16 years and above ()

Section B. Principal's teacher collaboration and teachers' job performance.

Please indicate the extent of agreement or disagreement with the following statements. Tick (✓) in the column that best fits you: Strongly Agree (SA), Agree (A), Not Sure (NS) Disagree (DA), and Strongly Disagree (SD). **There is no right or wrong answer.**

No.	Statement	SA	A	NS	DA	SD
i	All teachers in this school know the goals of our institution communicated by the principal					
ii	Our principal and teachers work together to achieve the school's goals					
iii	Teachers are inspired by the principal to work together					
iv	In this school, we hold regular meetings for teachers to share ideas					
v	I improve my teaching through the collaboration with my colleagues					
vi	Our principal fosters a collaborative environment in the school					

	Teachers generally improve their teaching through the collaboration and support from my principal.					
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viii. In what ways could your principal foster collaboration to help you improve your job performance?

.....

Section C. Principals’ innovative practices and teachers’ job performance.

Please indicate the extent of agreement or disagreement with the following statements. Tick (✓) in the column that best fits you: Strongly Agree (SA), Agree (A), Not Sure (NS), Disagree (DA), and Strongly Disagree (SD). **There is no right or wrong answer.**

No.	Statement	SA	A	NS	DA	SD
i	Our principal encourages teachers to get new ways of solving old problems in our school					
ii	My principal constantly invites teachers to use new teaching methods					
iii	Teachers’ work is supported by the use of digital technology					
iv	My principal supports the use of new technology (ICT) in lesson delivery					
v	Our principal involves the teachers in problem solving in school matters					
vi	Our school leader provides training to use digital tools					

vii. In what ways has your principal assisted you to be innovative in your teaching role?

.....

.....

Section D. Principal’s teacher empowerment and teachers’ job performance.

Please indicate the extent of agreement or disagreement with the following statements. Tick (✓) in the column that best fits you: Strongly Agree (SA), Agree (A), Not Sure (NS) Disagree (DA), and Strongly Disagree (SD). **There is no right or wrong answer.**

No.	Statement	SA	A	NS	AD	SD
i	The principal entrusts teachers with leadership roles within the school					
ii	Our principal encourages teachers to take responsibilities apart from classroom teaching					
iii	Generally, the principal delegates duties according to teachers' skills and experience					
iv	I feel that when I am entrusted with some responsibilities I grow in my teaching profession					
v	The delegation of tasks by my principal makes me feel encouraged to perform better					
vi	I am encouraged to be a committed teacher when my principal delegates me some responsibilities					

vii. In what other ways could your principal empower you to help you improve your job performance?.....

.....

Section E. Principal's motivation and teachers' job performance.

Please indicate the extent of agreement or disagreement with the following statements. Tick (✓) in the column that best fits you: Strongly Agree (SA), Agree (A), Not Sure (NS) Disagree (DA), and Strongly Disagree (SD). **There is no right or wrong answer.**

No.	Statement	SA	A	NS	DA	SD
i	My principal provides opportunities for teachers to attend courses to refresh their skills					
ii	My principal recognizes teachers' efforts and achievements					
iii	I feel encouraged by the opportunities teachers have for training courses					
iv	The principal motivates us teachers by offering awards for high performance					
v	I am more committed to improving my teaching because of the motivation from my principal					

vi. In what ways has your principal motivated you in your teaching role?

.....

.....

Section F. Teachers' job performance.

How would you rate the school teachers' job performance in the aspects described below:

Excellent (E), Good (G), Fair (F), Poor (P), Very Poor (VP)

No.	Statement	E	G	F	VP	PV
i	Teachers are punctual in attending their lessons and other school duties					
ii	Teachers prepare schemes of work regularly and ahead of time					
iii	Teachers feel confident with the knowledge needed in the subjects they teach					
iv	Teachers regularly mark the classwork of their learners					
v	Teachers rarely miss school days					
vi	Teachers have enough skills to assess learners' progress					
vi	Teachers usually prepare my lessons and notes					
viii	Teachers use a variety of methods in my teaching					

THANKS FOR YOUR PARTICIPATION

APPENDIX IV: Interview Guide for Principals

Thank you for your participation in this study. The purpose is to understand the influence of your Transformational Leadership practices on the teachers' job performance. You can be confident that your responses will remain confidential.

SECTION A

- i. Gender Male () Female ()
- ii. To what age set do you belong? Below 25 years () 26 – 35 years ()
36 – 45 years () Over 46 years ()
- iii. What is your highest level of education? Secondary School () Diploma ()
Bachelor's Degree () Master's degree () Other (specify)
- iv. For how long have you served as a principal? Below 5 years ()
5-10 years () Above 10 years ()

SECTION B: Principals' collaboration and teacher job performance

- v. In your opinion, is teamwork important?
- vi. How do you promote collaboration among teachers? Probe further
- vii. What examples can you share when collaboration between principals and teachers has improved teachers' job performance
Probe further.....

SECTION C: Principal's innovation on teacher job performance

- viii. How do you encourage teachers to use creativity in their daily teaching and solving of school problems?
Probe further
- ix. How has the use of technology improved teachers' job performance?....
Probe further.....

SECTION D: Principal's teacher empowerment on teacher job performance

x . How do you engage teachers in sharing school responsibilities with you?.....

Probe further

xi . In your opinion, how do delegating duties with your teachers make them grow as individuals?

Probe further ...

SECTION E: Principal's motivation on teacher job performance

xii . How do you reward and recognise teachers' efforts?

Probe further

xiii . Can you share some examples where motivation has helped teachers to improve their performance?

Probe further

Section F: Teachers' job performance

xiv. Do teachers have the necessary knowledge for the subjects they teach?

xv. How do you provide courses for them to get additional training?

xvi. How often do you check the teachers' scheme of work? What challenges do they face in preparing schemes of work?

xvii. How do you address teachers who are constantly absent or late for their work? Does it affect student performance?

xviii. How do you ensure teachers mark classwork and provide feedback to learners?

APPENDIX V: Interview Guide for County Director of Education

Introduction

Thank you for accepting this interview. Your contribution is important in understanding the influence of principals' TL on teachers' job performance.

Section A. General Questions

- i. How long have you been serving as County Education Office Director?
- ii. Can you describe your role and responsibilities as County Director?
- iii. To what extent do you think principals' role influences teachers' job performance?

Section B. Principals' collaboration and teachers' job performance.

- iv. As far as you are aware, how do principals encourage collaboration among their teachers?
- v. What challenges do you think principals face in collaborating with their teachers? Probe further...

Section C. Principals' innovation and teachers' job performance.

- vi. What new ways of solving school problems have you observed among principals and teachers?
- vii. In your opinion, has the adoption of ICT improved teachers' job performance?
- viii. In what ways do principals encourage creativity among their teachers? Probe further...

Section D. Principals' teacher empowerment and teachers' job performance.

- ix. How do principals share responsibilities and tasks with their teachers?
- x. How does it impact teachers' job performance? Probe further.....

Section E. Principals' motivation and teachers' job performance.

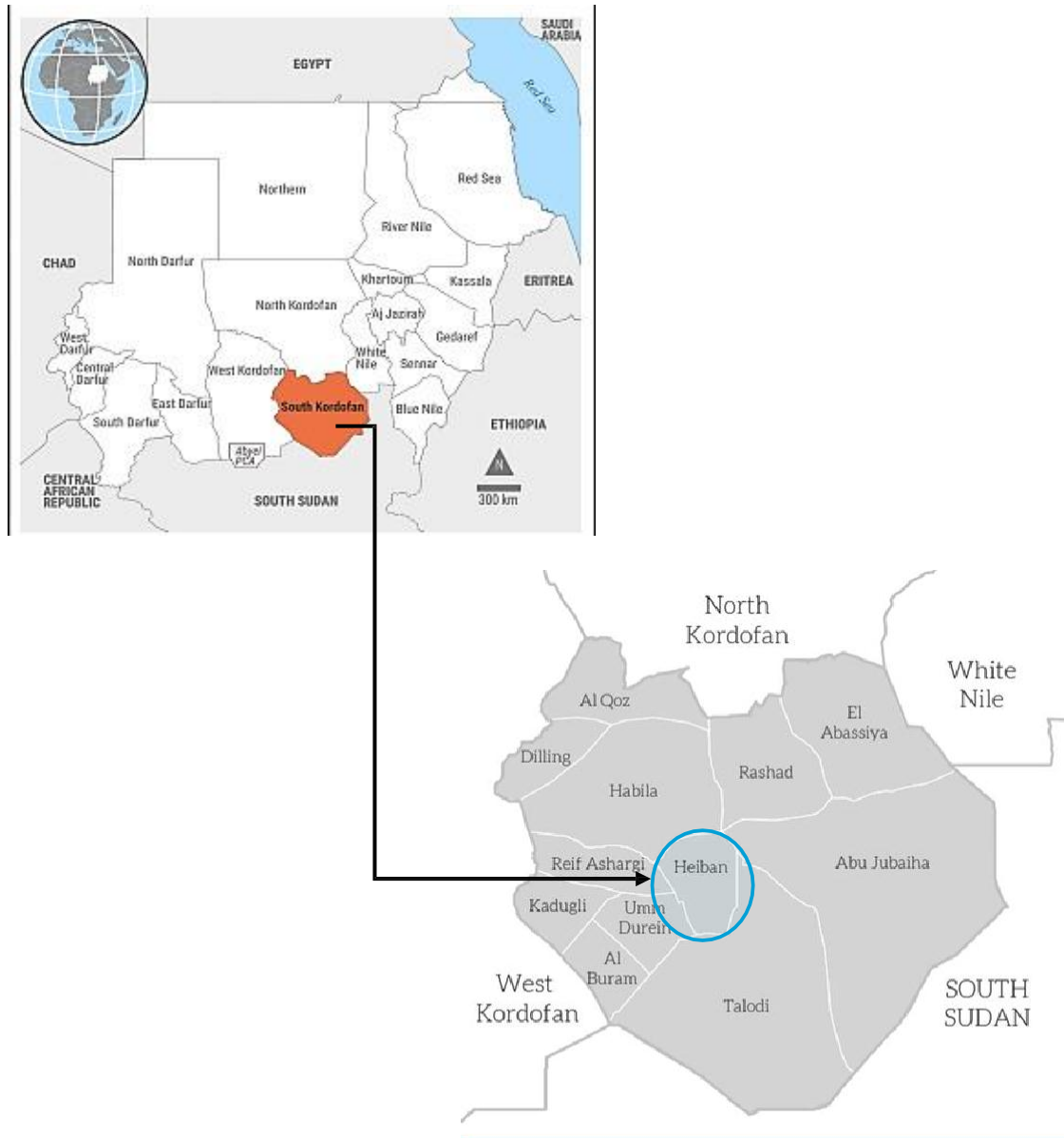
- xi. In your opinion do principals motivate their teachers effectively?
- xii . Can you share some examples of when principals motivated their teachers to improve job performance?

Probe further...

xiii. Is there any other information or suggestion you would like to add to improve teachers' job performance in Heiban public primary schools?

Thank you for your valuable insights, availability and time. Your collaboration on educational leadership in this study is much appreciated.

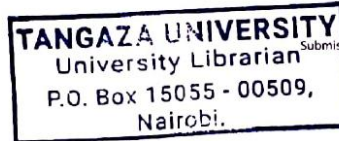
APPENDIX VI: Map of Heiban County, South Kordofan Sudan



Source

<https://www.unicef.org/sudan/media/8721/file/South%20Kordofan.pdf>

Appendix VII: Plagiarism Report Certificate



8% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

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Match Groups

- 77 Not Cited or Quoted 7%
Matches with neither in-text citation nor quotation marks
- 13 Missing Quotations 1%
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Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

Appendix VIII: Data Analysis Matrix

No	Title of the Research Objective	Data Collection Tools	Data Analysis Techniques
1	To determine the extent to which principals' collaboration practices influence teacher job performance in public primary schools in Heiban County, Sudan.	Questionnaires and In-depth Interview Guide	<p>The study used a mixed-method approach.</p> <p>Quantitative data was analyzed with the help of SPSS version 21 using descriptive statistics (presented in tables and graphs), and Spearman correlation coefficient analysis to determine the extent of the influence of the principal's collaboration practices on teachers' job performance.</p> <p>Qualitative data was organized into themes and presented in direct quotations and narratives.</p>
2	To investigate the influence of principals' innovation strategies on teacher job performance in public primary schools in Heiban County, Sudan.	Questionnaires and In-depth Interview Guides	<p>The study used a mixed-method approach.</p> <p>Quantitative data was analyzed with the help of SPSS version 21 using descriptive statistics (presented in tables, and graphs) and Spearman correlation coefficient analysis to investigate the influence of the principal's innovation strategies on teachers' job performance.</p> <p>Qualitative data was organized into themes and presented in direct quotations and narratives.</p>
3	To examine how principals' teacher empowerment practices influence teacher job performance in public primary schools in Heiban County, Sudan.	Questionnaires and In-depth Interview Guide	<p>The study used a mixed-method approach.</p> <p>Quantitative data was analyzed with the help of SPSS version 21 using descriptive statistics (presented in tables, and graphs) and Spearman correlation coefficient analysis to examine how principals' teacher empowerment practices influence teachers' job performance.</p> <p>Qualitative data was organized into themes and presented in direct quotations and narratives.</p>

4	To evaluate how principals' motivation skills influence teacher job performance in public primary schools in Heiban County, Sudan.	Questionnaires and In-depth Interview Guide	<p>The study used a mixed-method approach.</p> <p>Quantitative data was analyzed with the help of SPSS version 21 using descriptive statistics (presented in tables and graphs) and Spearman correlation coefficient analysis to evaluate the influence of the principal's motivation skills influence teachers' job performance.</p> <p>Qualitative data was organized into themes and presented in direct quotations and narratives.</p>
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Appendix IX: Research Authorisation from Tangaza University



TANGAZA UNIVERSITY

Teaching Minds, Touching Hearts, Transforming Lives.....

8TH November, 2024,

COUNTY DIRECTOR OF EDUCATION
KHALID KOJOLI
HEIBAN COUNTY
SUDAN

**RE: RESEARCH AUTHORIZATION LETTER FROM TANGAZA UNIVERSITY
ID No. OP 1056410**

I am writing to introduce to you Sr. Beatrice C. Mata who is a final Masters of Education Student at Tangaza University Nairobi- Kenya and to request you to assist her to accomplish her academic research requirements. Sr. Beatrice is specializing in Education Administration and Leadership and has completed all her course work requirements for this programme. It is a requirement for each student to conduct research and write a report/dissertation to be submitted during the final year of studies.

Accordingly, her research topic has been approved. She will conduct research on the following topic:

Influence of Principals' Transformational Leadership on Teachers' Job Performance in Public Primary Schools in Heiban County, Sudan.

Thanking you in advance for any assistance you give to Sr. Beatrice.

Rev. Dr. Anthony Amissah, SVD.

Dean of Student

The Dean of Students
Tangaza University
P.O.Box 15055 - 00509
Nairobi - Kenya
Email: deanofstudents@tangaza.ac.ke

Appendix X: Permission Letter, Heiban County, Sudan**SECRETARIAT
OF EDUCATION**
HEIBAN COUNTYNovember 25th, 2024.

To:

Sr. Beatriz C. MataTANGAZA UNIVERSITY
P.O. Box 15055
Nairobi, Kenya.**RE: Research authorisation**

I am pleased to inform you that you have been authorised to undertake research on "Influence of Principals' Transformational Leadership on Teachers' Job Performance in Public Primary School in Heiban County." The research will be conducted for a period ending on 13th December 2024.

On completion of the research, you are expected to send a soft copy of the research report to his office.

I wish you a successful research.

**Kamal Saad**
Primary Education Director
Nuba Mountains.