IMPACT OF PRIMARY TEACHERS' INCENTIVE PAY ON GIRLS' EDUCATIONAL PERFORMANCE

CASE STUDY: JUBA SOUTH SUDAN

A POSTGRADUATE DISSERTATION PRESENTED TO THE FACULTY OF AGRICULTURE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE MASTER OF SCIENCE IN MONITORING AND EVALUATION

UGANDA MARTYRS UNIVERSITY

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2016-M302-20108

AUGUST 2018

DEDICATION

I greatly thank God the Almighty Father for the gift of life full of commitment, wisdom, strength and compassion He gave me.

I dedicate this work to my dear sister Ifua Hellen, father Akilleo Allam, late uncle Tito Ohia and my mother Mama Oryaju Martina.

You are the reason for who I am

ACKNOWLEDGEMENTS

I wish to expose my profound gratitude to God who enabled me accomplish this work.

I extend further appreciation to my supervisor Dr. Richard Awichi for his kindness and brilliant academic guidance.

Extended gratitude goes to Ms. Ifua Hellen Small, Hon. Lopuke under secretary ministry of general education Government of South Sudan, Mr. Joseph Owiro, Koboss Milton, Fr. David Taban, and Mr. Telson Ohisa.

In special way, I thank all the staff of the faculty of agriculture Uganda Martyrs University and the ACALISE team.

Special thanks also go to colleagues Col. Anguzu Jimmy, Kabagambe Zack, Edea Suzan, Namukasa Leonard and Doreen Musimwee for being my first family in UMU.

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ABBREVIATIONS

PLE: Primary Leaving Education Certificate

SPSS: Statistical Package for Social Science

GOSS: Government of South Sudan

GESS: Girls Education South Sudan

EU: European Union

UPE: Universal Primary Education

UMU: Uganda Martyrs University

NCLBA: No Child Left Behind Act

NCLB: No Child Left Behind

PACT: Performance Assessment for California Teachers

CLASS: Classroom Assessment Scoring System

MET: Measures of Effective Teaching

VAM: Value added Model

CENTA: Centre for Teacher Accreditation

ABSTRACT

The major objective of the study was to evaluate the impact of primary school teachers' incentive pay program on girls' educational performance. By paying incentives to teachers IMPACT, a European Union founded program aims to provide vital support to the education sector. By enabling teachers to continue to teach, schools to function, increase teachers' attendance, improve teaching standard and support thousands of children in South Sudan to go to school. The following objectives guided the study; to establish extent of teachers' attendance rate on girls' performance in PLE and end of term school exams, to examine the level of teachers' professional quality to improve the standard of teaching and to assess the extent of teacher to girl problem support mechanism at school to ease and effect interaction, problems sharing and solving for better learning.

The survey used the sample seize table of Krejcie & Morgan (1970) to determine the sample size of 105 teachers. The study also used views of key informants from among the teachers who participated in an interactive interview. Univariate analysis was carried out where frequencies and corresponding percentages were run for both explanatory and outcome variables. Bivariate analysis was done using the chi-square to test the strength of association between variables based on p-values. Multivariate analysis was also done and linear regression model was applied. Findings showed that primary teachers incentive pay impacted teachers' rate and improved girls' educational performance rated at 52.4%, benefited 61.0% professionally trained teachers to improve teaching quality for better pupils' learning with the rest hoping go for training. The teachers' incentive pay program also impacted and improved teacher-pupil relationship by 44.8% majority of teachers. The study recommended the government and key stakeholders to ensure teachers welfare and pay as priority to achieve girls' good performance and prosperity build teachers capacities and key stakeholders need not to compromise their roles/duties on teachers' shoulders to support pupils'.

CHAPTER ONE

INTRODUCTION

1.0 General Introduction

This study was an evaluation of the impact of primary teachers' incentive pay on girls' educational performance in Juba. The centrality of teachers to the learning process is well established according to (Glewwe, 2002). However, in many low income countries, teachers' incentives are low, as evidenced in part by extremely high absence rates and by low student performance. Most often, teachers are paid based on their experience and education rather than on their performance. This phenomenon has led to increased interest in giving incentives to teachers with the hope that it will have a positive effect on teacher effort and on student achievement. As a result, there has recently been a push towards studying and implementing performance pay systems, both in the developed world (particularly in the United States) as well as in low income countries including South Sudan. Incentivizing teachers is generally framed in the context of performance pay (bonuses), and is often based on annual evaluations. However, the use of performance pay for teachers is not widespread, particularly in the developing world. At the moment, promotions remain the primary source of incentives for teachers in many contexts. It is important, therefore, to study the impact of teachers' incentive pay on girls' educational performance in Juba.

1.1 Background of the study

The background of this study, on the evaluation of the impact of primary teachers' incentive pay program on girls educational performance in Juba was structured into four subsections; the historical background, theoretical background, conceptual background and contextual background respectively. Incentives in general and teacher incentives in particular have been

the subject of much academic and policy debate. According to (Prendergast, 1999), it is clear that incentives do matter, for better or for worse. That is, incentives have direct implications on teachers' characteristics and behavior. However, it is much less clear how incentives work and under what conditions they create the types of changes desired (Clotfefter et al. 2004). Similarly, it is intuitively clear that teaching quality affects student learning, but it is less clear what qualities make a good teacher or what precise behavior composes good teaching (Darling-Hammond 2000). The real standard measure of teacher quality has never been designed and defined. Below is explanation of performance pay and pupil attainment.

Type of performance-related pay and pupil attainment

Research on performance-related pay based on pupil attainment generally shows that pupil outcomes are not significantly improved. Recent research on the performance for pay reform in the US has analyzed its impact on pupil achievements in reading and mathematics (Sojourner, A.J. 2014). It is reported that performance-related pay can succeed in education when it promotes a process of locally negotiated goal setting. The researchers did not find any evidence that districts linked rewards to 'value-added' measures of teacher effectiveness. The fact that changed professional development and evaluation procedures as well as compensation criteria may help explains why it was effective, in contrast to reforms focused exclusively on compensation reform. Financial incentive schemes have had little impact on pupil attainment. A study in 2004 examined the influence of specific teacher evaluation and reward policies on the teacher-pupil relationships (Barile 2004). The research analyzed data from the Educational Longitudinal Study of 2002. None of the teacher evaluation or reward policies was found to be significantly related to school math achievement or the probability of pupil dropout. A recent review of financial incentive schemes suggested that teachers given financial incentives to improve pupils' value added scores learnt how to 'game' the system (Berliner, 2013). A further study on US teachers compared the end-of-year mathematics

achievements of pupils whose teachers were offered financial incentives with those of pupils whose teachers were not offered the incentives (Springer 2010). The study found that pupils with mathematics teachers who were offered the financial incentives exhibited mathematics achievement growth that was no better or worse than pupils with teachers who were not offered the financial incentives. Similar findings were found in a study of teachers in Kenya. Glewwe, Ilias and Kremer (2010) researched a Kenyan program that rewarded teachers on the basis of pupils' examination scores, with penalties for pupils missing the exam. The study reported little evidence that teachers in the program schools made more effort to reduce dropouts or promoted broader learning. There was evidence of greater preparation of pupils for tests. Studies of performance-related pay that compared individual and school-wide incentives in the US and India found some positive links between performance-related pay and incentives. First, in Dallas Independent School District, incentivizing schools and individuals with financial rewards for improving pupil outcomes was found to be successful (Alger, 2014). Second, in India, an evaluation of a teacher performance pay program implemented across a large representative sample of government-run rural primary schools in the state of Andhra Pradesh found that individual teacher incentives improved pupil outcomes (Muralidharan and Sundararaman, 2011a, 2011b, 2012). It must be noted that primary teachers in India are very low paid, so it would be expected that an incentive for further reward would result in a positive impact in pupil performance and/or teaching practice. Findings, therefore, have limited transferability. Brown (2010) studied the effect of the introduction of individual teacher incentives in all public-sector schools in Portugal based on pupil performance. A team-based incentive scheme for teachers in New York was found to have no overall impact on pupil achievements (Goodman and Turner, 2013), neither did an incentive scheme in the Metropolitan Nashville Public School District (Springer et al., 2010). Two other studies of US schools that had implemented a team-based performance pay

program evidenced a slight increase in mathematics, as well as language and reading scores (Sojourner, Mykerezi and west, 2014) and over& performance rates (Hendricks, 2014). In the US, a small scale study or, the impact of teachers' merit pay found that course completion rates (which was specifically rewarded by the scheme) increased from around half to almost three quarters of pupils (Eberts, Hollenbeck and Stone, 2002). Another study of merit pay found no significant relationship between the teacher evaluations or reward policies analyze and pupil outcomes (Barile et al., 2004). In Israel, a national merit pay system was implemented to improve pupil grades and pass rates, as well as improve teacher performance. This unique competition based pay system in place for Israeli teachers showed that the incentivizing scheme was more likely to change teacher _behavior. The overall results of the Israeli incentive program showed that the pay incentives resulted in more pupils taking a matriculation exam, increased the pass rate and improved mean test scores (Lavy, 2009, 2013). The increase in pupil results were found to be the result of teaching taking place in smaller groups and the teacher's being able to track pupils' by ability and respond to pupil needs (Lavy, 2009). The changes in teaching methods and pedagogy were supported by the incentive program. The study concluded that in order to measure teachers' performance multiple outcomes need to be measured, which is a complex determine. For instance, it is difficult to determine whether teachers are teaching to the test in order to improve exam results. Finally, in the US, a value added model for teachers pay was found to improve pupil outcomes and teachers' performance (Chetty, Friedman and Rockoff, 2014). These models were developed on the implementation of pay systems that offered financial incentives to teachers whose pupils had good exam results. They were also about saving costs to help manage the school budget. The study found that value-added teachers who raise their pupils test scores improve pupils' outcomes in adulthood (defined as more likely to attend college, earn higher salaries and are less likely to have children as teenagers). Analysis of

administrative data also noted positive results through a study of value added teachers in Texas (Hendricks 2014). It was argued that paying teachers more improves pupil achievement through higher pupil retention rates. It was, therefore, suggested that adopting a level salary schedule was a cost effective approach to improving pupil performance. Because no evidence that pay effects vary by the teacher's gender or subject taught was reported. Value added models can be considered unfair as pupil performance and test scores can be influenced by a number of factors. Teachers who opt to work in more deprived areas will be penalized, as they are more likely to work with less-able pupils whose progress will be slower. There are concerns about what and how outcomes are measured and over what period. For instance, measuring outcomes in terms of teacher effort, pedagogy and teaching methods are difficult. Value added models have been criticized for failing to take into account other factors that impact on pupil performance, such as special educational needs, ethnicity, socio-economic status and frequent movement by pupils between schools (Rivkin 2013). The research from the US illustrates how pupil attainment and test scores are widely used in performance-related pay systems. Poor implementation of such systems has had a detrimental impact on teachers, schools and the teaching profession. The evidence that does suggest pay incentives for teachers can result in improved pupil outcomes is weak. This is due to the measures used and the number of factors affecting pupil attainments, which are difficult to measure. These pay systems are more likely to be effective in countries were teaching salaries are low. None of the schemes considered the equality impact of the arrangements.

1.1.1 Historical background

This historical background gives details of the evolution of education (primary teachers) incentive program.

At the turn of the twentieth century, American public education entered a societal progressive era. Elementary and secondary schools had a purpose: to unite society and to produce effective citizens. Teaching, as a profession, began to evolve and new ideas on compensation arose. Primarily, two types of teacher compensation were practiced: the ugrade based" compensation model and the "single salary" schedule (Prostik, 1995). The former paid teachers based on which grade or school level they taught with additional pay for annual performance reviews written by school administrators. The grade-based compensation model was highly inequitable as it granted merit pay-like bonuses unfairly and discriminatorily to females or anyone other than White male teachers (Adkins, 1983). Secondary school teachers earned more pay than female elementary school teachers. Half of the schools in the United States in 1918 compensated teachers similarly to the grade-based pay programs (Fenwick, 1992).

In 1921, Des Moines and Denver school districts implemented the "single salary schedule" acknowledging unfairness among administrative evaluations and discriminatory pay practices for women (Odden & Kelley, 2002). Developed almost a century ago, this is the most widely used compensation system for teachers today. This system rewarded teachers based on years of service and degree held. At the time, these scales provided a level of stability for equal pay across the lines of race and gender and grade level taught. Additionally, this single salary schedule provided some relief in the strained relationships between school boards and teacher unions during contract negotiations (Springer, 2009).

However, the lock and step method was unacceptable to many progressive educational stakeholders at the time, as it did not reward for performance. Earlier forms of merit pay evolved in the early twentieth century following Frederick Taylor's "scientific management" movement (Mitchell, et al 1989). According to Moehlrnan (1927), these advocates of Taylor's theory were proponents of teacher compensation such as to provide scientifically possible best returns to the society for the increasing public investment by approaching salaries from their economic and social aspects and not in terms of their sentimentality.

Despite the growing number of school districts that attempted to maintain this pay system experiment, administrative evaluations of performance were filled with abuse, contaminating the intent of merit pay for teachers (Viscardi 1933). The single salary scale essentially replaced nearly all of American public school districts' compensation systems by the 1950s (Protsik, 1986). In the 1960s, with the Cold War underway, a "Sputnik provoked" era of merit pay proposals resurfaced. In 1983, A Nation at Risk and in 1986, A Nation Prepared were published, highlighting the need for standards-based reform based on underpaid teachers affecting poorly achieving students and recognizing that measurable inputs that appear simple have a limited effect on the output of student achievement. Throughout the 1980s and 1990s, reformers proposed legislation tied to educational inputs and processes. In various forms, these merit pay movements have disappeared and have been reinvented through a rebranding of some sort of the times (Ballou & Podgursky, 1997).

Murnane and Cohen (1986; pp.1-18) recount several reasons for the failure of pay-for performance programs in the past. Among the contributing factors is a profound one: an absence of "transparency" between administrators and teachers through the evaluation process. Murnane and Cohen describe an evaluation process in which teachers were unaware of the behaviors indicative of performance worthy of attaining bonuses. This lack of clear direction, along with an unstable source of funding for these programs, not only did not

incentivize teachers to enhance their teaching practices, it created an acrimonious and exasperating relationship between teachers and administrators.

Johnson and Papay (2009) also add that performance-pay-programs have failed largely due to a "one size fits all" mentality. Empirical research stands on the premise that not every school district operates the same way and the "political, cultural, and organizational realities" (p. 12) of local school districts play a significant role in the success and/or failure of compensation programs.

In 2001, the No Child Left Behind Act changed the game dramatically for accountability in public education. This legislation supported the standards- based reform and required states to administer standardized tests in which achievement was measured as Adequate Yearly Progress. Test scores had to improve progressively each school year per cohort of students, or schools risked losing federal funding. The early twenty-first century also witnessed a push in the charter school and school choice movements, proving to create a truly competitive arena for public schools (Rockoff, 2004).

By 2003, there was a 25% increase in the use of pay-for-performance bonuses reported from 1999 (Podgursky& Springer, 2007). School districts like New York City designed their own pay for performance programs centered on the single salary scale with incentive bonuses for test scores (Gootman, 2007).

In 2009, President Obama enlisted the Secretary of Education, Arne Duncan, on a mission to improve American public education. The president stated in a 2009 speech, Bazinet (2009) suggests that it's time to start rewarding good teachers, and stop making excuses for bad ones. In a similar speech, he proclaimed that teachers should be rewarded for student test scores: While president Obama (2009) proposed success should be measured by a result . . . That's why any state that makes it unlawful to link student progress to teacher evaluation will have

to change its ways. Shortly thereafter, the president made billions of dollars available in discretionary funds, under the auspices of Duncan, for Race to the Top. This legislation's primary mission, although an increase in charter schools and development of common core academic achievement and assessment systems flourished, was to create widespread merit pay programs for teachers (Hunter, 2010). Likewise in South Sudan, the common interest of the incentive is to see teachers providing quality education for the prosperity of the pupils.

1.1.2 Theoretical Background

This theory background below gives ideological in-depth of Principal-Agent theory of employers designed compensation schemes to set agents for example employees to work in the interest of their employers.

Principal—Agent Theory has been a dominant economic theory concerning how principals, such as employers, design compensation structures to get agents, such as employees, to work in the principals' interest (Ross,1973). In education, the principal—agent relationship can take multiple forms in the sense that teachers, as agents, can be considered as working on behalf of multiple principals, including parents, school principals, or education officials. Principal—Agent Theory rests on the assumption that the interests of principals and agents are frequently not aligned. Instead, employers want high employee productivity and efficiency while employees want high compensation for little effort. Principal—Agent Theory states that employers design schemes to motivate their employees to behave in certain ways that employers believe will result in high productivity and efficiency. Those schemes are often, but not exclusively, monetary incentives that reward or sanction specific behaviors (Prendergast, 1999).

To what extent an agent will alter his or her behavior, theorists claim, depends, in part, on the agent's degree of risk aversion, his or her assessment of the risk involved in the behavior, and

the desirability of the reward or aversion to the sanction (Prendergast,1999). A teacher offered a potentially large reward is more likely to put substantial effort into changing his or her behavior than a teacher offered a small reward. Likewise, a teacher offered a reward based on behavior that requires little effort or risk is more likely to change his or her bel1avior than a teacher offered a reward for behavior that requires substantial effort or involves significant risk. The success of incentive schemes depends on the employers' ability to accurately determine and evaluate the desired behavior of employees. Making this determination is one of the foremost challenges in designing incentive schemes. Principals use a variety of measures of agent output, effort, or input depending on the type of work, facility of measurement, and outcome goals. Measures can be quantitative, such as student test scores, or qualitative, such as in-class teacher evaluations (Murnane and Cohen 1986).

Teacher incentive pay schemes designs have quite wider range of pay types varying across contexts. Below are the some of the well known ones used across many contexts.

i. Individual merit pay rewards individual teachers with pay bonuses that are based on particular outcomes or behaviors, such as improvements in student test scores.

ii. Group performance-based incentives reward or sanction a group of teachers, frequently a school, on the basis of some measure(s) of performance.

iii. Competitive incentives, such as tournaments, put teachers or schools in competition with one another for a limited prize, such as job promotion or cash.

iv. Automatic incentives are incentives such as seniority pay or job security that teachers receive irrespective of performance measurements. Many incentives are not exclusively monetary; they may offer educational and training opportunities, increased

decision making authority, or other nonmonetary rewards or sanctions (Prendergast, C. 1999).

As does any influential theory, Principal—Agent Theory has received much attention and critique over the past 30 years. Below are some of the arguments against the Principal-Agent Theory the study has recognized.

First, some argue that the assumptions that underlie Principal—Agent Theory are faulty, specifically in that they fail to address agents' intrinsic motivation. Advocates of this critique argue that incentives, as they are designed when following Principal—Agent Theory, actually undermine worker productivity (Bénabou, and Tirole 2000) assert that extrinsic incentives can damage agents' perception of their own capacity, as well as damage interest in the desired task or behavior. Kohn, A. (1993) posits that rewards and punishments in the workplace undermine worker interest, discourage risk-taking, ignore the underlying reasons for suboptimal performance, and damage work relationships. In an influential paper, Murnane and Cohen (1986) argue that this critique is particularly applicable to the work of teachers. They assert that individual merit-pay plans harm the important multidimensional and cooperative aspects of teachers' work.

Second, others hypothesize that although the idea behind creating incentives for employees may be a good one, in practice identifying and measuring employees' work is too difficult, complex, or expensive to be able to create the appropriate incentives for the desired behavior. Weaknesses in measurement and evaluation make incentives particularly vulnerable employee manipulation and 'gaming' (Prendergast 1999).

Holmström and Milgrom (1991) write: "Given a highly incomplete set of performance measures and a highly complex set of potential responses from the agent, how can the agent be motivated to act in the social interest?" Most employees have multiple tasks and

responsibilities, many of which are difficult or expensive to measure. In many cases incentives that are meant to increase a desired behavior or outcome may result instead in unintended behavioral responses on the part of employees, such as a reallocation of effort, a change in use of resources, or other gaming of the incentive scheme to receive greater compensation. Findings on manipulations of merit pay and undesired behavior responses by teachers to merit pay includes behaviors such as cheating on exams (Jacob and Levitt 2002), increasing student caloric intake on the day of the exam (Figlio and Winicki 2002), offering out-of-class test preparation tutorials (Glewwe, et al. 2003). And removing low-achieving students from the classroom according to Murnane and Cohen (1986). Those findings suggest that merely looking at changes in the measured output, such as improvements in student test scores, may not tell the whole story of the effect of incentive reforms. More important, changes in the measured output do not necessarily correlate with changes in the desired outcome. Rather, observed and measured output changes may mask unintended effects, such as damage to assets, reallocation of effort, or manipulation of measurement indicators. Although some authors have theorized that broadening or changing how and what Indicators are measured could overcome this problem, Prendergast (1999) argues that "dysfunctional behavioral responses" may be impossible to overcome. She reviews impact studies of responses to both objective and subjective measurement systems and concludes that objective measurements are often too rigid, making them vulnerable to efforts at gaming. Simultaneously, subjective measurements can damage working relationships and are subject to biases. Holmström and Milgrom (1991) suggest that in fields where performance of any of the activities of workers is difficult to measure, fixed wages and salaries may themselves be the most optimal and appropriate incentive structure. They point out that the costs to quality teaching—which may be manifested, for example, in a reallocation of effort toward test; taking skills and away from creative and critical thinking skills, in damage to teachers'

intrinsic motivation and collaborative efforts, or in increased cheating— may far outweigh any potential benefits, such as increased teacher effort or accountability. They suggest that this countervailing effect may explain why, despite the promise of the Principal—Agent Theory, most occupations do not use performance incentives.

Murnane and Cohen (1986) report that although the 1960s and 1970s witnessed a surge of interest in teacher merit-pay reforms in the United States, by the 1980s more than 99 percent of teachers were back to being paid on the basis of uniform salary scales. In recent years, however, concern has revived regarding the implicit incentives in rigid salary structures, seniority pay, and high job security in the teaching profession. Those concerns have prompted renewed interest in and experimentation with alternative compensation structures such as merit pay and skill- or behavior-based pay (Ballou and Podgursky 1993).

In summary, Principal—Agent Theory has begun to unearth the complex dynamics of how employers affect employees' work. On one hand, incentives clearly do affect agents' behavior. On the other hand, incentives frequently do not succeed in generating the specific behaviors desired by employers.

The study finally sticks to Prendergast 1999 who claimed it is clear that, incentive matter, for better or for worse. The incentives have direct implications on teachers' characteristics and behavior. The study found the theory helpful in coming up with variables that the incentives or merit pay is attached to. The variables use to study the incentive award are; experience, students performance, teacher academic grade, additional training attained, subject of teaching, position, extra duties and assignments. The mentioned variables are so much related to the following studies;

A study in 2004 examined the influence of specific teacher evaluation and reward policies on the teacher-pupil relationships (Barile, 2004) recent review of financial incentive schemes

suggested that teachers given financial incentives to improve pupils' value added scores learnt how to 'game' the system (Berliner, 2013). Glewwe, Ilias and Kremer (2010) researched a Kenyan program that rewarded teachers on the basis of pupils' examination scores, with penalties for pupils missing the exam. First, in Dallas Independent School District, incentivizing schools and individuals with financial rewards for improving pupil outcomes was found to be successful (Alger, 2014). Second, in India, an evaluation of a teacher performance pay program implemented across a large representative sample of government-run rural primary schools in the state of Andhra Pradesh found that individual primary teacher incentives improved pupil outcomes (Muralidharan and Sundararaman, 2011a, 2011b, 2012). Brown, (2010) studied the effect of the introduction of individual teacher incentives in all public-sector schools in Portugal based on pupil performance. A team-based incentive scheme for teachers in New York was found to have no overall impact on pupil achievements (Goodman and Turner, 2013), neither did an incentive scheme in the Metropolitan Nashville Public School District (Springer et al., 2010). Two other studies of US schools that had implemented a team-based performance pay program evidenced a slight increase in mathematics, as well as language and reading scores (Sojourner, et al 2014) and overall performance rates (Hendricks, 2014). In the US, a small scale study on the impact of teachers' merit pay found that course completion rates (which was specifically rewarded by the scheme) increased from around half to almost three quarters of pupils (Eberts, et al. 2002). Another study of merit pay found no significant relationship between the teacher evaluations or reward policies analyze and pupil outcomes (Barile et al., 2004). In Israel, a national merit pay system was implemented to improve pupil grades and pass rates, as well as improve teacher performance. This unique competition based pay system in place for Israeli teachers showed that the incentive scheme was more likely to change teacher behavior. Those

incentive scheme analysis strategies mentioned above seconded the study to adopt and implement in the study of South Sudan teacher incentive pay program.

1.1.3 Conceptual background

Girls' educational performance is a dependent variable on primary teachers incentive pay. Girls' education is a strategic development priority (World Back Education 2017). The study examined girls' educational performances in various ways using the following variables;

The extent of teachers' absenteeism on girls' performance in PLE and end of terms school exams. According to the study by Bruno (2002), he found that, "When there is a high teacher absence, it tends to lower the morale of remaining teachers resulting in high teachers' turnover" (p.1). Other teachers tend to feel more burdened because they may have to plan for the absent teacher. For that reason that impact is always realized on the pupils performance which will be lowered.

Levels of teachers' professional qualities to improve the standards of teaching, studies generally confirm common knowledge that teachers are extremely important in children's success or failure in schools. Yet studies on the determinants of teacher quality have not been able to agree on what specifically makes a teacher successful. Research by Darling-Hammond, L. (2000) similarly, found it is intuitively clear that teaching quality affects student learning, but it is less clear what qualities make a good teacher or what precise behavior composes good teaching.

The extent of teacher to girl problems supports mechanisms at school to ease and effect interaction, problems sharing and solving for better learning. According to Rogers (2006) argument, he suggested that to create a good learning environment, teachers need to foster three elements in their relationships with students: genuineness, caring, and empathic

understanding. Students in classrooms with these teacher attitudes will develop more self confidence and 'learn more significantly' Rogers, 1979, p.7).

1.1.4 Contextual background

As he clearly said it in 1999, Prendergast argued incentive matter, for better or for worse. Since incentives have direct implications on teachers' characteristics and behavior. While according to Clotfelter, at al. (2004), it is much less clear how incentives work and what conditions they create the types of changes desired. He is uncertain of whether incentive can realized the intention they are created for. For example, the main aim of the teacher incentive pay program of South Sudan is to give pupils quality education, increase teachers' attendance, access etc. However, it is very unclear yet whether, incentive can be the right strategy to achieve the desired outcome lied by the founders of the program. The study outcome variable of interest is the impact of teacher incentive pay on girls' educational performance. The study aims to find out how teachers incentive can solve the problem of girls' not performing well and get promoted to the next class in South Sudan. The study presumed that teachers low earning could be the prime factor for such girls' poor performance.

1.2 Problem Statement

By paying incentives to teachers, IMPACT aims to provide vital support to the education sector; to enable teachers to continue to teach, schools to continue to function, increase teachers' attendance, improve standards of teaching and support thousands of children in South Sudan to go to school. The IMPACT is a European Union (EU) funded program which aims to pay monthly incentives worth $40 US dollars to each primary teacher, over a period of 18 months, to 30,000 primary school teachers in South Sudan. It officially started on 10 April 2017 and is planned for 36 months.

According to UNICEF, less than one percent of girls complete primary education. One in four students is a girl and South Sudan maintains the highest female illiteracy rate in the world. It is estimated that more than one million of children eligible for primary school are not enrolled, with secondary school enrollment being even lower than 10% among those eligible. Despite the efforts of Government, IMPACT and other development partners; teachers absenteeism is yet high, standard of teaching is poor, no improvement in learning as students performance are poorer and barriers to girls education in South Sudan still remains a challenge to the designed interventions.

This study therefore evaluates whether the teachers' incentive pay program impacted teachers' attendance rate, professional quality and teacher to girl support mechanism to improve girls' educational performance in Juba. Good practice and lessons learnt will provide basis for government, IMPACT and the other development partners to engage primary teachers' incentive pay program in educational development.

1.3 General Objectives

The major objective of the study was to evaluate the impact of primary teachers' incentive pay program on girls' educational performance in Juba South Sudan.

1.3.1 Specific objectives

The study was guided by the following specific objectives;

1. To establish the extent of teachers' attendance rate to improve girls' performance in PLE and end of terms school exams.
2. To examine the level of teachers' professional quality to improve standard of teaching quality.

3. To assess the extent of teacher to girl problems support mechanisms at school to ease and effect interaction, problems sharing and solving for better learning.

1.4 Hypotheses

There is significant relationship between primary school teachers' incentives and girls' educational performance in South Sudan.

Ho; There is no significant relationship between teachers' attendance and girls' performance in PLE and end of terms school exams.

Ho; There is significant relationship between teachers' professional qualification and standard of teaching quality.

Ho; There is significant relationship between teacher to girl problems support mechanisms and better learning.

1.5 Scope of the Study

1.5.1 Geographical Scope

The study was carried out in Juba City area and surrounding suburban areas with higher rate of schools. Juba is the capital city of South Sudan.

1.5.2 Content Scope

The study was limited to the extent of teachers' attendance rate on girls' performance in PLE and end of terms school exams, professional qualification to improve standard of teaching and extent of teacher to girl problems support mechanisms at school to ease effective interaction, problems sharing and solving for better learning.

1.5.3 Time Scope

The study analyzed impact of primary teachers' incentive pay program on girls' educational performance in Juba South Sudan from the period of its implementation in April 2013 to June 2018.

1.6 Justification of the study

The study was intended to evaluate and clearly report the impact of primary teachers' incentive pay program on girls' educational performance.

The study drew key lessons from the design and implementation of primary teachers' incentive pay on girls' educational performance which is currently being promoted by different sectors of the government. Government through its ministries and development partners were promoting development engaging and paying primary teachers incentives to offer quality teaching standard to pupils and improve girls' educational performance but there is no information on how effective. The study therefore, will provide accurate information on how the primary teachers' incentive pay were being implemented, to Government, IMPACT and other Development partners.

1.7 Significance of the Study

The study will contribute to knowing the extent of teacher attendance rate on girls' performance in PLE and end of terms school exams, extend of teacher professional qualification to improve the standard of teaching and extent of teacher to girl problems support mechanisms at school to ease effective interaction, problems sharing and solving for better learning. The study also will enhance researcher's knowledge and skills of data collection, coding, editing, analysis, interpretation and information presentation.

It will further shape the researcher's career competency in projects monitoring and evaluation.

1.8 Conceptual framework

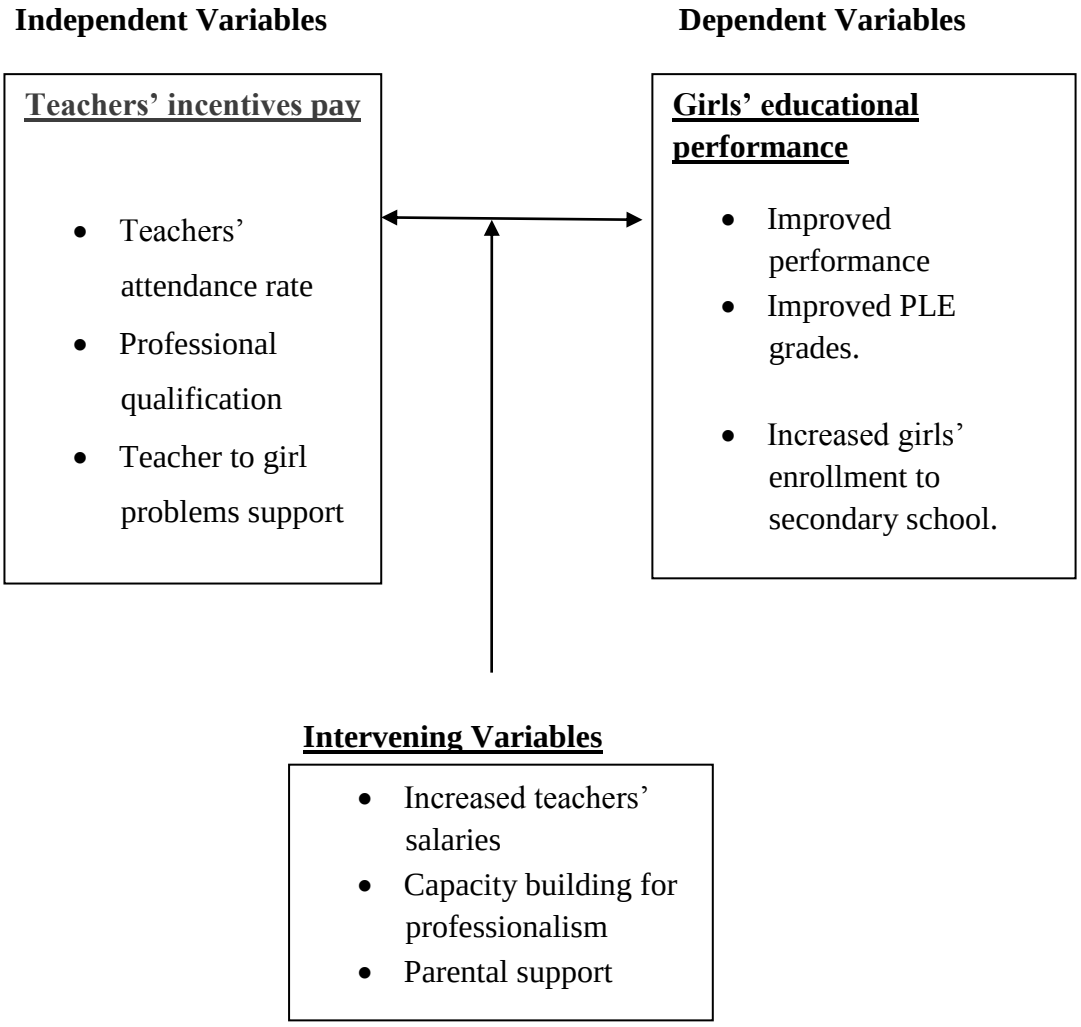

Figure 1. 1: Conceptual framework

The study will find out whether primary teachers' incentive pay program has impacted teachers' to improve girls' educational performance in Juba the capital city of South Sudan. The relationship between the independent variables and dependent variables can be affected by the intervening variables which are increased teachers' salaries, capacity building of teachers' for professionalism and parent support to girls' for better learning and performance.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter of the study explores the general body of literature that has been produced by scholars concerning the study topic. For easy analysis, it has been drawn in line with the objectives of the study.

2.1 Teachers' attendance rate to improve girls' performance in PLE and end of terms school exams.

Several studies have found that there is correlation between teacher attendance and student achievement, especially in those schools ranked with average student achievement. Student achievement is also affected in schools ranked both high and low as well when teacher absenteeism is over 7.5% in US (Madden, Flanigan, Richardson, 1991). While in South Sudan the teacher absenteeism rate is over 60%. Current teacher absenteeism averages between 8-10% (Staffing Industry Report, 1999). This equals to over one full year of every child's elementary education being taught by a substitute teacher. Substitute teachers do not always measure up to the regular classroom teachers' routine and methods to stimulate students to Learn (Darling-Hammond, 1995). One statewide study indicated 71% of personnel directors deemed absenteeism as one of the leading problems in schools (Norton, 1998). Additional research suggests that economically disadvantaged students who desperately need continuity of instruction get it least (Pitkoff.1993). The situation of economically disadvantage students agrees to the above research findings of Pitkoff (1993).

A report by the Pennsylvania School Board association (1978) stated, "Studies indicate substitute teachers are not as effective in the classroom as regular teachers because of the

Lack of continuity in the educational program."An alarming finding is that teacher absenteeism and substitute teaching may be highest in those school districts that need the consistent attendance of permanent teachers the most. Schools with students' performances were poor and failing the most academically, teachers tend to be absent more often. In one study, the percentage of students reading below grade level was found to be the greatest predictor of school employee absenteeism, followed by the percentage of students eligible to receive free lunch. (Pitkoff,1993). South Sudan teacher absenteeism varies from state to state as well as pupils' performance mostly attached to factors of insecurity. Therefore substitute teaching doesn't exist in rural area but rather one teacher covering many subjects in all the classes making them over burdened at the end of the day.

A study by Elliott and Manlove (1977) found that the overall performance of a school was negatively affected by high teacher absenteeism. In their study, the rating of a school, on a number of both academic and administrative dimensions, declined with increased teacher absenteeism. Newer research has found a correlation between teacher attendance and student achievement. The study do assume so as well regardless of the correlation strength. In a 1997 study involving third grade classes, teachers who had the greatest number of absences, individual standardized test scores were lowered, student rank in class was lowered, and over all school scores were down as a result of frequent absences (Jacobs and Kritsonis, 1997). Woods and Montagno (1997) purport, that the teacher attendance rate has a negative effect on student achievement. The study looked at students in grade three in schools in the states of Indiana and Wyoming. They discovered that in classes where teachers had the greatest number of absences, individual standardized test scores were lowered, student rank in class was lowered, and over all school scores were down as a result of frequent absences. The most cited absenteeism model that is used in a multitude of studies on teacher absenteeism was the Steers and Rhodes' (1978) model. They used a multi- variable approach

that encompasses psychological as well as personal characteristics of teachers. Based on the ideas of Steer and Rhodes (1978), demographic variables such as personal and family-related characteristics are slated as well as psychological variables such as job satisfaction, motivation to be absent, and the ability to attend work. The model emphasizes that attendance is highly influenced by the practices of the organization, an absence of school culture, and employee attitudes, values, and goals. The number one factor identified by Steers and Rhodes was job satisfaction.

Yolles. et al. (1975) contend that 90% of absenteeism is caused by 10% of the workforce. Based on the research of Unicomb et al (1992), gender and life stage plays an important part in determining the profiles of teachers who are absent from the instructional environment. It was discovered that female teachers tend to be absent more as they increased with age. Male teachers were out more days in their thirties than at any other time in their teaching career.

In another study by Scott and McClellan (1990), male teachers tend to miss fewer days than women by a ratio of 3.39 days to 5.29 days per academic year. Additionally, elementary school teachers missed far more days of work than secondary school teachers by a ratio of 6.63 days to 3.32 days. Secondary school employees tend to remain at work more.

Unicomb, et al (1992) found that Wednesdays were missed more than any day per week and that Mondays had the fewest number of days missed from work. A common misconception is that employees will miss work on Friday. The research indicates that teachers tend to stay at school in anticipation for the weekend.

In a study by Pitkoff (1993), teachers who received low performance markings tend to miss a larger number of days than those who did not. Teachers with low marks do not feel a connection to the workplace and believe that they are ineffective in the classroom. This gives an impetus for school administrators to develop teacher growth plans early in the academic

year for low performing teachers than later in the year. Scott and McClellan (1990) write that the school level taught and the level of the teaching license was two primary predictors of teacher absences. Through their investigation, it was discovered that the higher the degree obtained by the teacher, the higher the number of days they were absent from the classroom. Elementary teachers missed the most days.

Bruno (2002) purports that "when there is a high teacher absence, it tends to lower the morale of remaining teachers resulting in high teacher turnover" (p.1). Other teachers tend to feel more burdened because they may have to plan for the teacher who is absent. In addition to teacher morale, urban teachers tend to become frustrated with poor resource allocations in their schools and tend to desire to disconnect from the inner city campus with high rates of minority children who families are labeled as low- income. Because of this, Bruno (2002) emphasizes that "teaching at low- income area schools increases the propensity of teachers to be absent". According to a 2006 study in North Carolina, rural, urban, and suburban districts were analyzed and it was determined that each 10 days of teacher absence reduced "student achievement by one or two percent of a standard deviation.

The financial costs of teacher absenteeism costs primarily associated with substitute teacher salaries and expenses required to maintain a substitute teaching pool are a major concern (Etrenberg and Rees, 1991). In a recent analysis of the costs of substitute teacher pay, three individual school districts in northern Indiana were surveyed. The results showed that nearly 1% of the total operating budget for these school districts was consumed by substitute teacher costs (Wood, 1996). It is not uncommon for average size districts to spend millions for substitute teachers. Kanawha County School District in West Virginia spent $6.4 million for substitute teachers last year, with an average teacher absenteeism rate of 8.3%. Kanawha County has 29,000 students, 2,150 instructional staff, and a substitute pool of 275 (Eyre, 2000).

Absenteeism is a complete lost to the educational system. According to Jacobs and Kritsonis (2004), “teachers average approximately two weeks out of the classroom per year due to sick days, personal days, and other excused absences” and “districts pay for substitute salaries, recruiting, administrative tasks, and absent teacher salaries.” Nationally, based on findings from the same study using NCES statistics from 2000, the total cost of teacher absenteeism is $25.2 billion dollars. Considering the costs associated with teacher absenteeism. It is critical to actively address the issue. Before any action is taken to address teacher absenteeism, the problem should be carefully addressed. Next, a comprehensive plan of action should be taken to lower teacher absenteeism.

Below are some of suggested strategies that a district including the government can use to determine the extent of its teacher absenteeism problem by looking at such factors as:

- Job dissatisfaction,
- Teacher burnout, and a
- Decrease in teacher morale (Lewis, 1981).

Once the problem of teacher absenteeism has been assessed in a particular school or school district, a comprehensive plan of action should be created (Lewis, 1981 and Norton, 1998). To implement a comprehensive and systematic attendance improvement program consider the following: review board policy, appoint an attendance improvement coordinator, construct attendance guidelines, buy back of unused sick leave should be considered, develop an attendance recognition plan, discuss sick leave use and abuse with employees improve work conditions provide an incentive for experienced teachers who volunteer for assignments in failing schools, and hold administrators accountable for administering policies and site administrators for any abuse of the policies (Lewis, 1981 and Norton, 1998).

Alleviating teacher burnout can contribute to Lowering teacher absenteeism. One of the highest predictors of teacher absenteeism is the percentage of students reading below grade level followed by the percentage of students eligible to receive free or reduced lunch (Pitkoff, 1993). Such circumstances may contribute to teacher burnout. When absenteeism is related to teacher burnout consider:

Helping individual teachers identify short term signposts of progress in meeting their own and the school's improvement goals, rotating teachers' classroom assignments so as to ensure that the same teachers do not always have, year after year, difficult students, and provide adequate financial and material resources (Pitkoff, 1993).

Increasing teacher morale is a substantial factor in increasing teacher attendance. There are several factors that contribute to high morale in a work environment. Teachers must feel they are: Treated fairly and equally valued and appreciated for their work recognized for their work paid a fair wage for their work, and doing work that is important (Pitkoff, 1993)..

In recent years, a variety of strategies throughout school districts have been implemented to reduce teacher absenteeism.

The Merrick School District in Long Island, New York, used an awareness program to successfully reduce teacher absenteeism. The emphasis was a professional approach toward making all employees aware of the problem. By setting attendance goals and closely monitoring adherence to those goals were being met on an individual basis, the absentee rate was cut in half (Gendler, 1977).

The King William County School District in King William,Virginia, used a salary supplement to successfully reduce absenteeism. The district offered a S2000 salary supplement for teachers missing three or fewer days during the preceding year (Stainback&Winborne, 1984).

In Sugar Hill, New York, the Sugar Hill Central School District used a small salary supplement combined with recognition to successfully reduce teacher absenteeism. The district reduced the average rate from 7.24 days in 1985-86 to *5.90* days in 1986-87, a decline of 18.5% per teacher. The salary bonus represented a 1.08% pay increase for perfect attendance (Jacobson, 1989).

In Iowa Des Moines, Iowa, schools recently negotiated the option to convert unused sick leave into retirement benefits, cash, or health insurance benefits. Some other schools have paid out the personal leave days not used in cash if the employee requested it (Smith, 1999).

Standardized Testing

Standardized testing is a subject that many people feel strongly about. Most people either think that it is the best way to assess students' abilities or it is a stress-invoking nightmare for everyone involved. However, if you step back and look at it objectively, it becomes clear that it is neither.

Standardized testing has both positive and negative aspects and when used effectively can play a significant role in bettering the education of our students. The key, of course, is using the results effectively (American Educational Research Association, 1999).

Below are the positive aspects of the Standardized Testing as a standard of measure students and teachers performance.

Positive Aspects of Standardized Testing Standardized testing gives teachers guidance to help them determine what to teach students and when to teach it. The net result is less wasted instructional time and a simplified way of timeline management (American Educational Research Association, 1999).

Standardized testing allows students' progress to be tracked over the years. When students take the same type of test yearly (adjusted for grade level) it is easy to see if a student is improving, losing ground academically, or staying about the same (American Educational Research Association, 1999). (For example, if a child is taking a norm-referenced test and scores in the 75th percentile in the sixth grade and the 80th percentile in the seventh grade, you can see that the child is gaining ground in school.) This helps determine how a child is doing academically.

Since all students in a school are taking the same test (with respect to grade level) standardized tests provide an accurate comparison across groups. (For example, this makes it easy to see how boys are performing as compared to girls in a particular school or district.) Over the years great improvements have been made with regards to test bias, which has led to more accurate assessments and comparisons (American Educational Research Association, 1999).

Though suggested as one of the best measure/test students learning abilities, Standardized Testing has its weakness as well as mentioned below.

2.1.1 Negative Aspects of Standardized Testing

Many teachers are (unjustly) accused of teaching to the test. Most do not do this, but some feel so much pressure for their students to achieve a specific score that they do end up teaching to the test, whether they want to or not. This can make school drudgery for students and steal teachers' enjoyment of teaching (American Educational Research Association, 1999).

Standardized tests can place a huge amount of stress on students and teachers alike. This can lead to negative health consequences as well as feelings of negativity directed at school and learning in general (American Educational Research Association, 1999).

As much as test creators try to do away with testing bias, it may be impossible to rid tests of it altogether. I once tutored a 5th grader who did not know what a recipe was. If a standardized test was to ask questions directed at a recipe, that child would have been at a huge disadvantage because most fifth grade students know and have had at least some experience dealing with recipes, but she did not. There is just no way to know for certain that every child being tested has a fair amount of knowledge going into the test (American Educational Research Association, 1999).

Primary teacher incentive pay program of South Sudan to realize its desires, Standardized Testing can be the best, because all students in a school will be taking the same test (with respect to grade level) that will provide an accurate comparison of performance across groups. (For example, boys Vs girls in a particular school or district.)

No Child Left Behind (NCLB)

No Child Left Behind is an American education policy that cuts across all and advocates for education as a right for all regardless of sex of the pupils. It is relevant as well in the education system of South Sudan and the study of teacher incentive program student (U.S. Department of Education, 2003).

On June 10, 2003, President Bush announced that every state had to have an accountability plan in place that strives to achieve the goals set forth by the No Child Left Behind Act (NCLBA) (U.S. Department of Education, 2003). When President Bush took office, only 11 states were in compliance. In fact, Alabama was one of the last of the 17 states to have their accountability plan approved by the federal government student (U.S. Department of Education, 2003). Under the plan Alabama had to describe how every student would achieve academic regardless of the academic or economic level of the student (U.S. Department of

Education, 2003). Alabama, along with the other 49states, was responsible for submitting an annual progress report every summer between 2003 and 2006 to document the state's progress in meeting the requirement of every child being taught by a highly qualified teacher (Education News in Alabama, 2003a). The Alabama Association of School Administrators estimated that *15%* of the current teachers in the state do not meet the highly qualified standards; ii was originally predicted that 40% of the current teachers would not meet the standards (Education News in Alabama, 2003b). Of these estimated 15%, there are two groups. The first group is comprised of teachers who are not teaching in their field. The second group identifies those who lack one or two college credits in their core subject area (Education News Alabama, 2003c). Unfortunately, many teachers in Alabama are under-certified. In Mobile County alone, approximately one-third of the teachers are under-certified. In fact, Mobile County employs 4,000 teachers and 1,500 of these teachers are considered under-certified. Also, the middle schools are facing tremendous problems. The state requires teachers to complete 33 semester hours of college credit in the subject they are teaching. Many middle school teachers hold a general education certification; therefore, they do not meet requirements in Alabama to be considered highly qualified. If these teachers worked in an elementary school they might be considered highly qualified. Two problems identified with the middle schools are that many are departmentalized and teachers are responsible for a variety of subjects (Catalanello, 2003).

Recently, Alabama received additional funding to ensure quality educational services. In 2003, Alabama received $722.3 million to aid local schools, which is an increase of $87 million over the previous year. Title I funding increased to $182 million which is an increase of $34 million from the previous year. To support Alabama's goal to have highly qualified teachers in every classroom, the federal government is providing *$45.4* million to train and keep teachers in the classroom. To help recruit math and science teachers in Alabama, the

state has offered a financial incentive for students majoring in education. If the student commits to teach either math or science in a high poverty school the student is eligible for additional financial aid. In the fall of 2002, the program had only 24 applicants but there are hopes that there will be increased interest in the program in the near future (Alabama Education News, 2003a). The federal government provides approximately $4.5 million to after school programs for children who are found to be at risk and $199.5 million is provided in the form of Pell grants to assist students from a poor economic background to attend college. Furthermore, according to the Bush White House, $6.1 million has been provided to local school districts to assess students on their achievement level (Rough, 2003).

Problems with NCLB Standardized Tests

Though it sounded to be one of the systems No Child Left Behind Standardized tests has its own weakness which faced immense criticisms as follows;

Since states set their own standards and write their own standardized NCLB tests, states can compensate for inadequate student performance by setting very low standards and making tests unusually easy (U.S. Department of Education, 2003). Many contend that testing requirements for disabled and limited-English proficient students arc unfair and unworkable. Critics allege that standardized tests contain cultural biases and that educational quality can't necessarily be evaluated by objective testing (U.S. Department of Education, 2003). Failure to Address Reasons for Lack of Achievement At its core, NCLB faults schools and curriculum for student failure, but critics claim that other factors are also to blame, including: class size, old and damaged school buildings, hunger and homelessness, teacher absenteeism, and lack of health care (Alabama Education News, 2003a).

Like the United States, South Sudan has 10 states of which states can set their own standards and write their own standardized NCLB tests, but states can compensate for inadequate student performance by setting very low standards and making tests unusually easy.

2.2 Teachers' professional quality to improve the standard of teaching

Teacher quality assessment commonly include reviews of qualifications, tests of teacher knowledge, observations of practice, and measurements of student teaming gains (Darling-Hammond 2000). Assessments of teacher quality are currently used for policymaking, employment and tenure decisions, teacher evaluations, merit pay awards, and as data to inform the professional growth of teachers. Teacher qualifications include a range of variables affecting teacher quality, including: type of teaching certification, undergraduate major or minor, undergraduate institution, advanced degree(s) or certifications (such as certification through the National Board for Professional Teaching Standards AND Centre for Teacher Accreditation (CENTA)), type of preparation program (traditional or alternate route), test scores (various subject matter, licensure, or verbal skills tests), and years of teaching experience (Goe, L. 2007). In many countries, teaching credentials represent the main measure of teacher quality (Sciafani, S at al 2009). In the United States, one goal of the No Child Left Behind law is to ensure that all teachers meet state-defined standards of highly qualified teachers. Demographic characteristics such as a teacher's gender, race, ethnicity, or socioeconomic background may also be characterized as elements of teacher quality as variables impacting student outcomes (Zumwalt, et al 2005). These indicators of teacher quality are relatively straightforward to ascertain, as opposed to the student achievement and teacher observation measures described below. Teacher quality with regard to student achievement—also known as "teacher effectiveness"—is measured in terms of student achievement gains. Most extant research on teacher quality pertains to observable attributes, preparation, and credentials (Goldhaber, 2002). Probably the most widely studied attributes

are experience and education levels, in part because the data can be readily obtained because of their use in salary placement (Goldhaber, 2002). There is mixed evidence, however, that experience and education levels are associated with student learning (Goldhaber, 2002). Student achievement is measured through the use of standardized tests to determine the academic growth of students over time. Recently, a type of analysis of this growth termed "value-added modeling," following the 1971 approach of (Eric Hanushek 1971), has sought to isolate the fraction of student achievement gains attributable to individual teachers, or in some cases groups of teachers. However, it has been argued that student achievement measures do not necessarily correlate entirely with teacher quality, given that there are various factors that influence a student's performance which are not under the control of a teacher.

Assessments of teacher quality may also draw upon evidence collected from observations of teachers work that lead to the empowering of effective teachers. This evidence may be collected from in-person or video recorded observations of teaching, pre- and post-observation conferences with teachers, and samples of teachers' work with students. Assessments of teacher practice may examine teacher quality for a single lesson or over an entire school year. Such assessments may be holistic or narrative in form, but in rubric-based systems of teacher assessment like the Framework for Teaching, (Danielson 2007) and Classroom Assessment Scoring System (CLASS), (CLASST eachstone.org.) have become increasingly more common in the United States in order to align with state and federal accountability requirements. Many school districts have developed their own rubrics for this purpose, such as the IMPACT system used in the District of Columbia public schools. Other practice-based assessments of teacher quality require teachers themselves to assemble evidence and self-assess their own indicators of teacher quality according to rubrics as part of the process. Examples include the Performance Assessment for California Teachers (PACT), (.pacttpa.org.) and its national successor the edTPA, according to (American Association of

Colleges for Teacher Education) and the Oregon-based Teacher Work Sample and the collection of assessments required by teachers seeking certification from the National Board for Professional Teaching Standards.

The way that most current teacher compensation systems are set up is to reward teachers with salary increases for every year of additional experience they gain. The research literature on the predictive power of teacher experience for student achievement gains, however, reveals modest effects of experience limited to the first few years of a teacher's career, (Jacob 2012). Research by Kane et al. (2006), suggests that teacher effectiveness grows in the initial four or five years in the classroom and then begins to level off.

Teacher evaluation is a process used to measure teacher effectiveness based on students learning and success. Evaluations of teachers over the years have changed. In earlier years, teacher evaluations were based on personal characteristics of the teacher; however, starting in the early 1950s until the 1980s, teacher evaluations took a shift and started to focus on teachers' teaching, observed through students' outcomes (Ellett et al. 2003). After the 1980s, teacher evaluations were measured based on increased professional development, accountability, and school improvement (ElIett et al. 2003).

Teacher evaluation has taken numerous approaches that observed teacher practices. Measures of Effective Teaching (MET), Danielson's Framework Model, Classroom Assessment Scoring System (CLASS), and the Value added Model (VAM) are all evaluation tools that aim to measure student achievement using teacher evaluation. MET evaluates teacher effectiveness through five measures: students' gains in standardized testing, recorded classroom sessions and teacher reflections afterwards, teachers' knowledge in the pedagogical content, students views of the classroom and instruction of the teacher, and the teachers own views on their working conditions and the support of the school (MET Project. 2010).

While the MET approach uses five measures to evaluate teacher effectiveness, the Danielson Framework model evaluates teachers using four domains: planning and preparation, classroom environment, instruction, and professional responsibilities (Danielson, 2013). In this framework of evaluation, teachers are evaluated through a rubric that contains these four domains. They can either be ranked or measured as unsatisfactory, basic, proficient, or distinguished. In this rubric, teachers are being evaluated through critical attributes and examples when being observed.

The CLASS approach, by Robert Pianta, evaluates teachers based on their interaction with students. To do this, the CLASS model evaluates teachers' interactions using three domains: emotional support, classroom organization, and instructional support (MET Project. 2010). It should be noted that this approach is much more flexible, as the domains used within the approach vary based on students' grade levels.

On the other hand, the VAM approach uses students test score gains to reflect teachers' effectiveness. Unlike the other approaches that evaluate particular characteristics or style of teaching for teacher evaluations, VAM does not directly evaluate the teacher. Although many of the approaches for teacher evaluations are debated, VAM is said to be inconsistent in its approach due to variation in classes, years, or test since its effectiveness measures are not based on teachers, (Darling-Hammond, et al 2012). However, it said that VAM measures are retroactively effective due to teacher practices that influence learning of students, (Darling-Hammond, et al 2012).

Finally, an organization in India called Centre for Teacher Accreditation (CENTA) uses two main steps in teacher certification and evaluation. The first step is an Objective Test which is based on the subject chosen, classroom practice, logical ability, communication etc. The second step is a Practical assessment which consists of an e-portfolio submission and a

proctored assessment + interview. This evaluation and certification is based on CENTA standards (http://centa.org/centastandards) that have been developed after several years of research and feedback. A large body of literature investigates the role of teachers and the characteristics and behaviors of teachers that are most beneficial to student learning. Studies generally confirm common knowledge that teachers are extremely important in children's success or failure in schools. Yet studies on the determinants of teacher quality have not been able to agree on what specifically makes a teacher successful. The lack of any clear measurable variables that predict teacher quality makes it difficult and problematic to design pay structures and compensation schemes that are based on measurable indicators. That good teachers are one of the pillars of student success is intuitively obvious but statistically difficult to prove. The easily observable variables logically linked to teacher quality, such as years of experience or educational level, are often not clearly associated with improved educational outcomes. Measuring the effect of individual teachers using techniques such as value- added modeling or matching requires largely unavailable detailed panel data. Several recent studies have used just such data and techniques to test the hypothesis of a teacher quality effect (Hanushek, and Kain 1998). All of the studies indicate both that a teacher effect exists and that the effect is potentially quite large. Those studies take advantage of panel data in China and in New Jersey, Tennessee, and Texas in the United States. Their methods vary somewhat, as do their findings of the size of the teacher effect. Rivkin, Hanusbek, and Kain (1998) find that at a minimum teachers account for 7.5 percent of the variation in student achievement. Sanders and Rivers (1996) conclude that teacher sequencing from grades 3—5 accounts for differences in student achievement of 50 percentile points. Wright, Horn, and Sanders (1997) find that teacher effects are the single largest factor affecting student academic gain in 20 of 30 analyses in Tennessee. Sanders and Rivers (1996) study two metropolitan districts in Tennessee and find that teacher effects are not only large but also cumulative— observable 2

years later, regardless of the effectiveness of later teachers. They also find that on the scale of teacher effectiveness, low-performing students are the first to benefit from more-effective teachers. This last finding, however, has been methodologically questioned (McCaffrey et al 2003). Most of the empirical literature investigating the specific factors that affect teacher quality is limited to looking at the effect of measurable variables of teacher characteristics. Typically, studies look at variables such as years of schooling, years of experience, Salary levels, and certification. Although most of this research has found that one or more variables tested are positively associated with student achievement, no common thread among the studies indicates that certain variables are undeniably linked to teacher quality (Hanushek 1986). Although the evidence is mixed, certain teacher attributes do tend to be more likely to emerge internationally as significant in education production functions. Those attributes include teacher experience, educational level, subject preparation, certification, time-on-task, and test scores (Hanushek 1986). Yet, Hanushek (1986) reviews 147 studies of the determinants of student achievement and finds that no teacher characteristics are consistently significant and unidirectional in explaining student performance. Although the quality of education production function studies varies significantly, Hanushek suggests that the major inconsistencies in findings indicate that teacher quality is not easily pinned down by observable characteristics. In a later piece, Hanushek (1995) reports on education production function studies in developing countries arid finds again that results across studies are inconsistent. Similarly, Velez, Schiefelbein, and Valenzuela (1993) in a review of education production function studies in Latin America find that observable teacher characteristics are only statistically significant about 50 percent of the time. Studies that look at both teacher effect and teacher characteristics support the hypothesis that unobservable teacher characteristics, such as effort in the classroom, may have a greater effect on student achievement than the variables we can commonly observe. Golhaber, Brewer and Anderson's

(1999) study of U.S. teachers finds that teacher quality explains only 8.4 percent of the variation in student achievement and that only 3 percent of this 8.4 percent is attributable to observable teacher characteristics. In their study in Texas, Rivkin, Hanushek, and Kain (1998) also find that observable characteristics represent very little of the variation in teacher quality. Their finding suggests that policies or reforms that target selecting teachers with certain characteristics or increasing a certain teacher input (that is, providing ongoing professional development) may not result in improvements in teaching quality. Some researchers argue that large investments in improving teacher characteristics are not a cost-effective means of increasing student achievement Jacob and Lefgren (2004), for example, look at the effect of in-service teacher education using regression discontinuity and find that it has no significant effect on elementary math and reading test scores in Chicago. But Angrist and Lavy's (1998) paper on in-service teacher education in Jerusalem came to the exact opposite conclusion—that in-service trainings are an effective and relatively inexpensive means of improving teacher practice. Those two studies are one example of the conflicting reports on what matters for good teaching. The different findings could result from methodological or data differences, from differences in the Chicago and Jerusalem settings, or from differences in the content or quality of the in service trainings. (Tatto, 2002; pp.637-657). Some evidence also shows that, even with additional resources, those employers hiring teachers may not be able to identify high-quality teachers in order to hire them. Hanushek, et al (2004) used data from Texas to show that school districts with higher salaries and more attractive working conditions do not systematically hire teachers with better track records of improving student test scores. Still others suggest that perhaps researchers are looking at the wrong teacher characteristics. In response to the difficulty in isolating specific teacher background characteristics that are associated with teacher quality and in recognizing the importance of classroom teacher practices, researchers have begun to investigate classroom practices as

determinants of teacher quality. Those variables, such as one-on-one interactions with students, assignment of homework, and parent- teacher conferences, are costly to observe and difficult to measure accurately. Darling-Hammond (2000) reviews findings of U.S. production function research on classroom practices and reports that creative, flexible teacher practice that adapts to students and teaching context frequently will tend to result in higher student learning. Ingersoll (2003) argues that whereas teacher educational level may not be a determinant of teacher quality, whether or not a teacher was educated in the same field that he or she subsequently teaches is critical to how well a teacher can teach. He finds that although most U.S. teachers have bachelor's degrees, many teach subject areas that they did not study the 1999/2000 school year, 38 percent of all 7th—l2th graders were taught math by a teacher who did not major or minor in math or a math-related field. He warns that this situation has seriously detrimental implications. Villegas-Reimers and Reimers (1996) report that largely because of the lack of clarity on what characteristics make a good teacher, education reforms in recent decades have tried to circumvent the work of teachers. They criticize this tendency while hypothesizing that the lack of coherent findings on teacher quality does not reflect the irrelevance of teacher attributes so much as it reflects the methodological and data limitations of the analyses. It also reflects the critical significance of the quality and context of teacher characteristics and practices. Methodologically, they highlight a frequent lack of variation, of confounded and unobservable variables, and of mediating conditions. Practically, they assert that unless education is designed to function without the central role of the teacher, the question should not be whether teachers affect learning but how to maximize their effect. The debate on teacher quality aside, Latin America and many other parts of the world face a serious problem in education and teaching quality (Glewwe and Kremer 2003). There is evidence that teacher quality may be declining because of increased employment opportunities for women outside of education, low salaries, and rigid pay structures

(Hansuhek and Rivkin 2006). In the United States, for example, lakdawalla (2001) demonstrates that between 1900 and 1950 the relative educational level of teachers compared to non-teachers declined approximately 3 years. Despite their internal challenges, many of the ministries and secretariats of education in Latin America are actively researching the barriers to high teaching quality in their countries and are developing policies to combat them.

2.3 Teacher to girl problem support mechanism at school to ease and effect interaction, problem sharing and solving for better learning.

Teacher characteristics influencing the student relationship

Cornelius-White (2007) equates the area of teacher-student relationships to person-centered and learner-centered education models based on humanistic and constructivist theories. Both models emphasize teacher qualities such as empathy and warmth (Cornelius-White, 2007). Learner-centered education is influenced by client-centered therapy founded by Carl Rogers who claimed that positive teacher-student relationships are necessary for effective learning (Cornelius-White, 2007). Rogers (1979) argued that in order to create a good learning environment, teachers need to foster three elements in their relationships with students: genuineness, caring, and empathic understanding. Students in classrooms with these teacher attitudes will develop more self confidence and 'learn more significantly' (Rogers, 1979, p. 7). Similarly, in literature exploring qualities of good, ideal, talented, or expert teachers, such teachers are described as caring (Arnon and Reichel, 2009). For example, two studies conducted in Israel (Arnon and Reichel, 2009) and Finland (Uitto, 2012) asked the general public what a good teacher is. The Israeli study identified desirable teacher qualities as being empathetic, attentive, caring, and authoritative (Arnon and Reichel, 2009). The Finnish study analysed 141 people's written memories of their teachers in which good teachers were described as showing an active interest in students' thoughts and interests; making students

feel that they were seen and appreciated (Uitto, 2012). Further, Gentry, Steenbergen and Choi (2011) observed and interviewed 17 American teachers, identified as exemplary by their students, to establish what these teachers had in common. The study found four things describing these teachers: they took a personal interest in their students and knew them well; they had high expectations; they made teaching meaningful and relevant; and they enjoyed being teachers (Gentry et al., 2011). Similarly, in Nurmi's (2012) meta-analysis of 19 studies, good teachers were seen as giving praise and having high expectations of their students. Another quality that is highly valued by students is that teachers use humour to make learning more fun (Arnon and Reichel, 2007). Humour serves a social function, and can reduce individuals' stress levels (Stuart and Rosenfeld, 1994). Therefore, classroom relationships are strengthened when teachers and students laugh together (Uitto, 2012), for example, when funny stories or jokes are told (Gentry et al., 2011). Likewise, teachers' smiling at students is essential for students feeling that their teacher Likes them (Newberry, 2010). In addition to smiling, other types of body language mentioned in research are tone of voice, gestures, facial expressions, and frequent eye contact with students (Knoell, 2012). Such positive use of humor and body language, making students feel that the teacher likes them, increases students' feelings of self-esteem and motivation (Crossman, 2007). However, both humour and body language can be used in a hostile way (Stuart and Rosenfed, 1994). Research demonstrates that memories of being laughed at and humiliated by teachers can be strong (Uitto, 2012). Students can be painfully aware of how teachers feel about them, which again affects their motivation, as demonstrated by an American first-grader in Daniels, Kalkman, and McCombs (2001) who had observed that 'she smiles at other kids, but not at me' (p. 268). Thus, an important foundational skill of teachers is emotional self-regulation; that teachers are calm and avoid showing anger and frustration (Aultman et al., 2009). In particular, it is important that teachers treat all students fairly and avoid criticism, blame and ridicule (Knoell

2012). Instead, teachers should strive to have a non-judgmental and forgiving attitude (Arnon and Reichel, 2007). In other words, teachers' socio-emotional competence, including being able to read students' emotions, is a prerequisite for good teacher-student relationships (Jennings and Greenberg, 2009). The characteristics of good teachers described so far: being empathetic, warm, caring, and fair, can be interpreted as an ethics of care approach to teaching. Ethics of care theory posits that it is part of teachers' duty to be caring (Noddings, 1995). Noddings distinguishes between two types of caring. First, teachers can display ethical caring performed out of duty, or teachers can exhibit natural caring, which is a natural feeling of liking of a student (Newberry, 2010). Noddings' (1995) argument is that by practicing ethical caring, teachers can go through a process leading to feelings of natural caring for students. In other words, teachers' attitudes to students and the quality of teacher-student relationships can change as teachers develop empathy for students through getting to know them better (Cooper, 2010). Two in-depth American case studies Newberry (2010) illustrate such a process. The studies reveal that moving from a level of ethical caring to natural caring is made possible by the teacher actively taking the role of a reflective practitioner (Schön, 1983) of own behaviors and student responses. However, developing good relations with students requires hard work on behalf of the teacher (Hattie, 2009), because teaching is emotional work. It is especially challenging when working with children who are either seeking conflict or avoiding contact, as outlined above. Noddings (1992) explains that for a good teacher-student relationship to develop there must be a response from the student to the teacher in some way, for example by 'asking questions', 'showing effort', or simply 'cooperating' (p. 68). Although asymmetrical, the teacher-student relationship is bidirectional and the two parties in the relationship both need to feel respected by each other (Noddings, 1992). Newbery (2010) theorizes that teachers can feel rejected by students who avoid contact with them, and therefore it takes emotional work to overcome this rejection and make contact

with unresponsive students. It can also be difficult for teachers to know how to respond to avoidant students (O'Connor and McCartney, 2006). However, as an adult in a more powerful position, the teacher is the main driver of the quality of the relationship (Davis, 2003). This highlights the importance of awareness-raising of teacher interpersonal behaviour in teacher education programmes. One tool that might help increase awareness of teacher behaviour is the Model of interpersonal Teacher Behaviour (MITB), which was first developed in the Netherlands in the 1980s (Wubbels, 2013). The model categorizes eight types of teacher behaviour: steering, friendly, understanding, accommodating, uncertain, dissatisfied, reprimanding, and enforcing (Wubbels, 2013). Research stretching over a period of three decades using the MITB model shows that teachers who foster high learning achievement among students have a combination of steering (high in control) and friendly (high in closeness) characteristics (Wubbels, 2013). Such teachers are supportive of students, but at the same time take control of the classroom (Wubbels and Brekelrnans, 2013), reflecting an ethics of care approach towards students (Noddings, 1995). Cornelius- White (2007), established a significant effect between 32 positive teacher-student relationships and achievement among teachers with more years of teaching experience.

Talking with students and getting to know them

Students describe teachers they value as teachers who know them, who talk and explain, and who listen (Pomeroy, 1999). A starting point for developing good relationships with students is getting to know them in terms of their academic and personal needs, as well as their interests and talents (Arnon and Reichel, 2009), through talking with them. Getting to know students is important in enabling teachers to move beyond labeling students by superficial characteristics. Equally, if teachers have misleading and low expectations, the danger is that this will negatively affect students learning (Hattie, 2009), especially if students internalize negative labeling (Ercole, 2009). This is because students who are negatively labeled tend to

feel that they do not belong at school, and respond by disengaging further (Ercole, 2009). Labeling theory is supported by syntheses of effectiveness research showing a strong influence of teacher expectations and labeling of students on academic performance (Hattie, 2009). 'The evidence indicates that the fewer teachers know about their students, the stronger the effect of labeling and stereotyping on learning (Hattie, 2009). For example, if teachers know about the difficult home situation of a disruptive student, they are more likely to develop empathy for the student (O'Connor and McCartney, 2006). Consequently, teachers become more patient and 'frustration tolerant' (Driscoll and Pianta, 2010, p. 38), and are less likely to refer such students to special education arrangements (Pianta et al., 1995). However, getting to know students and developing empathy for them is a process (Cooper, 2010), and finding time to talk with students individually can be challenging with large class sizes, although synthesized research has only detected a small effect of class size on learning achievement (Hattie, 2009). In other words, teachers need to practice active listening when talking with students (Pomeroy, 1999), because students equate being listened to as a sign of respect (Johnson, 2008). Thus, the type of talk teachers engages students in, which can be either academic or personal/non-academic (Newberry, 2008), makes a difference. Engaging with teachers in non-academic conversations can lead to closer relationships (Newberry, 2008).

Managing student behavior

Some theorists argue that developing good relationships with students is the best approach to reducing problem behaviour (Driscoli and Pianta, 2010): 'if you solve the relationship problem, you solve the misbehavior problem' (Tauber, 2007, p. 199). Indeed, evidence suggests that students' lack of belongingness is a primary cause' of behavior problems (Baumeister and Leary, 1995, p. 511), consistent with the need for belonging outlined in self-determination theory (Deci and Ryan, 2000). For example, Marzano, Marzano, and Pickering

(2003, cited in Jennings and Greenberg, 2009) found that teachers with good relationships with students had 31 percent less misbehavior during one school year than teachers with lower quality relationships. However, basing discipline on developing good relationships with students does not mean that teachers should not set and enforce rules. Students report that they want caring and friendly teachers, but also teachers who are strict; providing clear rules and routines (Pomeroy, 1999). However, if enforced discipline is not fair in the eyes of the students, the authority of the teacher crumbles (Uitto, 2011). Thus, finding a balance between care and control in the classroom is a recurrent dilemma for teachers (Aultrnan et al., 2009). Getting to know students better can enable teachers to find such a balance by preventing and managing student behaviour (Flores and Day, 2006) better through the use of relationship power. Romi, and Roache (2012) list relationship-based discipline techniques that have been found effective as having conversations with misbehaving students; recognizing students' appropriate behavior; and involving students in decision-making. Good teacher-student relationships, in which the teacher and students know each other well, are likely to lead to students agreeing with the teacher's rules of behaviour because they have internalised the teacher's values about schoolwork (Martin and Dowson, 2009). Coercive discipline strategies on the other hand, can cause harm by disrupting students from their work, not promoting responsibility in students for their behaviour, and increasing angry student responses (Lewis et al., 2008), as well as teacher stress (Clunies-Ross et al., 2008). The difference between relationship-based and coercive discipline strategies can be categorised as proactive versus reactive strategies (Clunies-Ross et al., 2008; Jennings and Greenberg. 2009). Proactive classroom management strategies aim to prevent disruptive behaviour from occurring, mainly by helping students with behaviour problems self-regulate their emotions (Jennings and Greenberg, 2009; Pomeroy, 1999). In Pomeroy (1999), a student described how a teacher could read his mood and help him control his anger through one-on-one conversations and

adapted working tasks. Such a proactive approach requires that teachers know students well (Pomeroy, 1999).

In conclusion, the reviewed literatures were on the teachers' absenteeism, teachers' professional qualification and teacher to girl problems support mechanisms at school.

Several studies have found that there is correlation between teacher attendance and student achievement, especially in those schools ranked with average student achievement. Student achievement is also affected in schools ranked both high and low as well when teacher absenteeism is over 7.5% (Madden, Flanigan, Richardson, 1991). The study used variables like; absenteeism, reason for absenteeism, missed period/lesson compensation strategies as an indicator to establish pupils' performances at the end of school term and PLE. The variables were in agreement with models used by other scholars reviewed in literature. For example the most cited absenteeism model that is used in a multitude of studies on teacher absenteeism was the Steers and Rhodes' (1978) model. They used a multi- variable approach that encompasses psychological as well as personal characteristics of teachers. Based on the ideas of Steer and Rhodes (1978), demographic variables such as personal and family-related characteristics are slated as well as psychological variables such as job satisfaction, motivation to be absent, and the ability to attend work

Levels of teachers' professional qualities to improve the standards of teaching, studies generally confirm common knowledge that teachers are extremely important in children's success or failure in schools. Yet studies on the determinants of teacher quality have not been able to agree on what specifically makes a teacher successful. Research by Darling-Hammond, L. (2000) similarly, found it is intuitively clear that teaching quality affects student learning, but it is less clear what qualities make a good teacher or what precise behavior composes good teaching. However, the study adopted observable variables linked to teacher qualification such as years of teaching experience, educational level, salary scale

attachment, teaching training acquired and additional training for improvement of teaching skills. Though, those are not clearly associated with improved educational performances, but in-line with measuring the effect of individual teachers using techniques such as value-added modeling or matching requires largely unavailable detailed panel data. Several recent studies have used just such data and techniques to test the hypothesis of a teacher quality effect (Rivkin, Hanushek, and Kain 1998). Most of the empirical literature investigating the specific factors that affect teacher quality is limited to looking at the effect of measurable variables of teacher characteristics. Typically, studies look at variables such as years of schooling, years of experience, salary levels, and certification.

Teacher to girl problems supports mechanisms at school to ease and effect interaction, problems sharing and solving for better learning. Rogers (2006) argued that in order to create a good learning environment, teachers need to foster three elements in their relationships with students: genuineness, caring, and empathic understanding. Students in classrooms with these teacher attitudes will develop more self confidence and 'learn more significantly' Rogers, 1979, p.7). In-line with scholars reviewed in the literature, the study used the following variables as indicator of teacher to girl problem support mechanisms; allocation of extra marks, additional attention in class, counseling, pay less tuition than boys, extra lessons , offer sanitary pads, free school meals and lobby for more support. However, the literature was outside and beyond the context where the study was to be conducted. Hence there was need for the researcher to study and provide evidence of the analysis of primary teachers' incentives program impact on girls' educational performance in South Sudan to strike balance with the reviewed literatures.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the research methodology which consists of the research design, study population, sampling size and sampling technique, data collection methods, instruments, analysis, limitations and delimitations and ethical considerations. Both qualitative and quantitative data collection methods to explore primary school teacher's incentives pay on the girls' education performance in Juba South Sudan were used.

3.1 Research design

The research design involved a case study that adopted both exploratory and survey design. Exploratory research is flexible often used to generate formal hypotheses and develop more precise research problems (Catalano, and Walker. 2002). Qualitative and quantitative methods of data collection were employed. Qualitative approach was used to collect specific confidential information which couldn't be captured by questionnaire from teachers' knowledge the incentive pay towards girls' educational performance. While the quantitative approach was to find out the extent of primary teacher incentive pay to improve girls'

3.2 Study Population

The study population was 150 and included both male and female primary teachers in Juba city area and its informal places.

3.2.1 Sample size

The study us appropriate sample size of 105 participants' (primary teachers) in accordance with Krejcie & Morgan (1970) sample size table. According to them, when the study

population is 150 the sample size can be 103 or slightly more. The study was conducted in 20 schools in Juba city.

3.2.2 Sampling techniques and procedures

Schools sampling was non-probability and was based on their functionalities. 20 schools were found to be operational within Juba city. Probability sampling was used, basically the simple random sampling method for teachers. Teachers who received the incentive were selected using the following selection criteria;

→ Willingness to participate; Participants were interviewed willingly and with sufficient understanding of what the study necessitates.

→ Informed consent; Consent was sought from all the study participants. They were made aware of the rationale of the study.

3.3 Data type and Collection Methods

3.3.1 Questionnaire

The research used only primary data. The following primary data instruments were used to answer each of the objectives and test hypothesis.

Questionnaire was the major instrument used in the study. In this method, the researcher asked the individual randomly selected teachers questions following a pre-designed questionnaire and the responses were recorded on the questionnaire.

Key informant interviews were also conducted to group of teachers after to capture some qualitative information which couldn't be captured in the questionnaire.

3.4 Data Processing and Analysis

The data collected were compiled, edited, coded and tabulated to ensure that it was complete, accurate and uniform. The data was then analyzed using both qualitative and quantitative techniques, interpreted in line with the research objectives and literature reviewed to ensure that this report improves on the understanding of the impact of teachers incentive pay on girls' educational performance in South Sudan. Data was analyzed at three levels, univariate, bivariate and multivariate using Statistical Package for the Social Science (SPSS) and categorization method of creating themes from related topics or major concepts and grouping of similar responses from those topics.

3.5 Univariate Analysis

This was the first stage in the data analysis and it involved running frequencies and corresponding percentages for all the study variables both exploratory and outcome variables. Results were represented in tables and graphs.

3.6 Bivariate Analysis

Chi-square test was used at this stage to assess the relationship between each independent and dependent variables. It is a statistical test that pictures presents of relationship between variables. Strength of association was determined using p-values. If p-value was less than 0.05, statistic was considered significant with researcher's 95% confidence of relationship between two variables not due to chance.

3.7 Multivarate Analysis

Under multivariate analysis, the joint effect of the independent variables on girls' educational performance was investigated. Linear regression was done to establish the impact of all the independent variables on girls' educational performance.

3.8 Ethical Consideration

The study adhered to academic ethical standard for public support and believes, such as human rights, animal welfare, compliance with the law, conflicts of interest, safety and health standards. Those greatly impact the integrity of the research project and scored public assurance.

3.9 Limitations and Delimitations

However, since the study dealt with incentive and girls education, it was sighted as political spy given current security status of South Sudan. Much explanation and the introductory letter from Uganda Martyrs University were in return offered to capture respondents' confidence.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

4.0 INTRODUCTION

This chapter provides data analysis of the study using SPSS. Analyzed data were presented as univeriate, bivariate and multivariate. The study evaluated primary teachers' incentive pay on girls' education performance in Juba. The presentation and discussion of the findings were guided by the following research objectives; to establish the extent of teachers' attendance rate on girls' performance in PLE and end of terms school exams, to examine the level of teachers' professional quality to improving the standard of teaching, to assess the extent of teacher to girl problems support mechanisms at school to ease and effect interaction, problems sharing and solving for better learning. The findings were presented in form of tables, figures, charts and statements

4.1 Description of the respondents

A total of 105 primary teachers in Juba city were interviewed using questionnaire designed to find out whether the primary teachers incentive pay had resulted into improved teachers' attendance rate to improve girls' performance in PLE and end of term school exams, improved level of teachers' professional quality to improve standard of teaching quality and improved teacher to girl problem support mechanism at school to ease and effect interaction, problem sharing and solving for better learning.

4.2 Univariate Analysis

This was the first stage in the data analysis and it involved running frequencies and corresponding percentages for all the study variables both exploratory and outcome variables. These were objectively represented in tables and graphs.

4.3 Extent of teachers' attendance rate to improve girls' educational performance in PLE and end of term school exams.

This measures the impact of the teachers incentives pay on the attendance rate of teachers to improve the performance of girls both in PLE and end of term school exams. By measuring, teachers' absenteeism rate from work and girls' exams performance.

Table 4. 1: Teachers absenteeism from work

Absenteeism from work

	Frequency	Percent
Yes	82	78.1
No	23	21.9
Total	105	100.0

Source: Primary data, 2018

Table 4. 1 when the respondents' were asked to establish whether they had been absent or not from the work? 78.1% confirmed to have been absent due to personal, home, side jobs and workplace issues. Most of them sighted little pay which could not fulfilled half of their basic needs demands and forced them to absent in search of side jobs to earn extra pay. But the incentive pay program had motivated attendance rate. While 21.9% noted that they had never

been absent. In an interactive interview, they confirmed that they were professional teachers who love their work and make to pupils' pass with flying colors in both PLE and end of term school exams. Thanks to the primary teachers' incentive pay program they confirmed.

4.3.1 Girl educational performance

Table 4. 2: Girl educational performance

Girls exams performance

	Frequency	Percent
Very good	9	8.6
Good	55	52.4
Poor	23	21.9
Don't know	11	10.5
Fair	7	6.7
Total	105	100.0

Source: Primary data, 2018

From Table 4.2 majority 52.4% of the beneficiaries of the incentive pay program rated girls' educational performance as good. They noted that the incentive pay program accounts greatly for the good performance of girls and it motivated teachers to concentrate much on their teaching duties. Also 8.6% of them rated girls' educational performance as very good, citing the incentive program as a stimulator of love for teaching to help pupils pass their exams. While 21.9% lamented that girls performance in exams is still poor relative to boys though teachers put much effort to uplift girls' performance. They argue the parents and other stakeholders to also not compromise their roles to ensure girls perform well. On the other hand, 10.5% don't know anything about girls' performance because they were still newly employed and had no knowledge about the schools records. Finally 6.7% rated girls'

performance fair. They said since the program was introduced, they had seen fair improvement in girls' performance. From the key informant interview, they said the incentive pay is attached to attendance rate and pupils' performance. For that reason teachers always compensated for missed periods/lessons by ether asking their colleagues/fellow teachers to teach for them during their absentia or apply for extra period during the weekend/after classes in the evenings.

4.4 Level of teachers' professional qualifications to improve the standard of teaching quality.

This measures the impact of the teachers incentives pay on level of teachers' professional quality to improve the standard of teaching quality by looking at occupation, teaching background and years of teaching experience.

4.4.1 Respondents' occupation

Table 4. 3: Respondents' occupation

Respondents Occupation

	Frequency	Percent
Teacher	91	86.7
Others	9	8.6
Student	5	4.8
Total	105	100.0

Source: Primary data, 2018

Table 4.3 confirmed majority (86.7%) of the respondents who got paid the incentive were teacher by occupation and were teaching. While 8.6% were of other occupations like doctors, accountants etc., but were also teaching and helped the local schools which lacked enough

teachers. 4.8% reported that they were student teachers who were yet studying at higher institutions while practicing teaching with the aim of becoming teachers. From the key informant interview conducted, it was noted that teaching profession lacks teachers and only few students' shows interest of becoming teachers due to the low pay attached to it. Students in the higher institutions study other courses of different professions with good salary scales.

Table 4. 4: Teaching background

Teaching background

	Frequency	Percent
Trained	64	61.0
Untrained	38	36.2
Missing	3	2.9
Total	105	100.0

Source: Primary data, 2018

Table 4.4 show that 61.0% of the beneficiaries of the incentive pay program were professionally trained as teachers. They confirmed that, the higher the level of qualification and additional training attained the higher the salary scales. Because well trained teachers were valued most crucial for their competency and good pupils' performance. 36.2% of the beneficiaries reported to have not attended any teaching training but were educated and wishing to go for training once there was opportunity to improve on their teaching skills to deliver right inputs to pupils to performance well. 2.9% of them didn't give any response but rather confirmed it confidential and private to share out.

4.4.2 Respondents' years of teaching experience

Table 4. 5: Respondents' years of teaching experience

Years of teaching experience

	Frequency	Percent
1-5yrs	36	34.3
6-9yrs	45	42.9
10yrs and above	24	22.9
Total	105	100.0

Source: Primary data, 2018

Table 4.5 show most respondents' (42.9%) who had received the incentive pay had years of teaching experience between 6-9 years. The study considered years of experience because the incentive pay program considered it as one of the requirements a teacher must have for skillful teaching and better pupils' educational performance to earn the incentive. While 34.3% of them had teaching experience between 1-5 years, consisting mostly of young aged teachers who were ether practicing or had newly joined teaching profession. 22.9% mostly consisting of old aged beneficiaries confirmed to have taught for more than 10years. Teachers with more years of teaching experience were considered important in many schools and always praised by the public many said during interactive interview. Greater numbers of the respondents' were yet midway in their teaching career with experiences of 6-9 years to improve standard of teaching in schools.

4. 5 Teacher to girl problem support mechanism at school to ease and effect interaction, problems sharing and solving for better learning in schools.

This measures the impact of the teachers incentives pay on teacher to girl problem support mechanism at school to ease and effect interaction, problems sharing and solving for better learning in schools. By considering looking at support offered to girl when in problem.

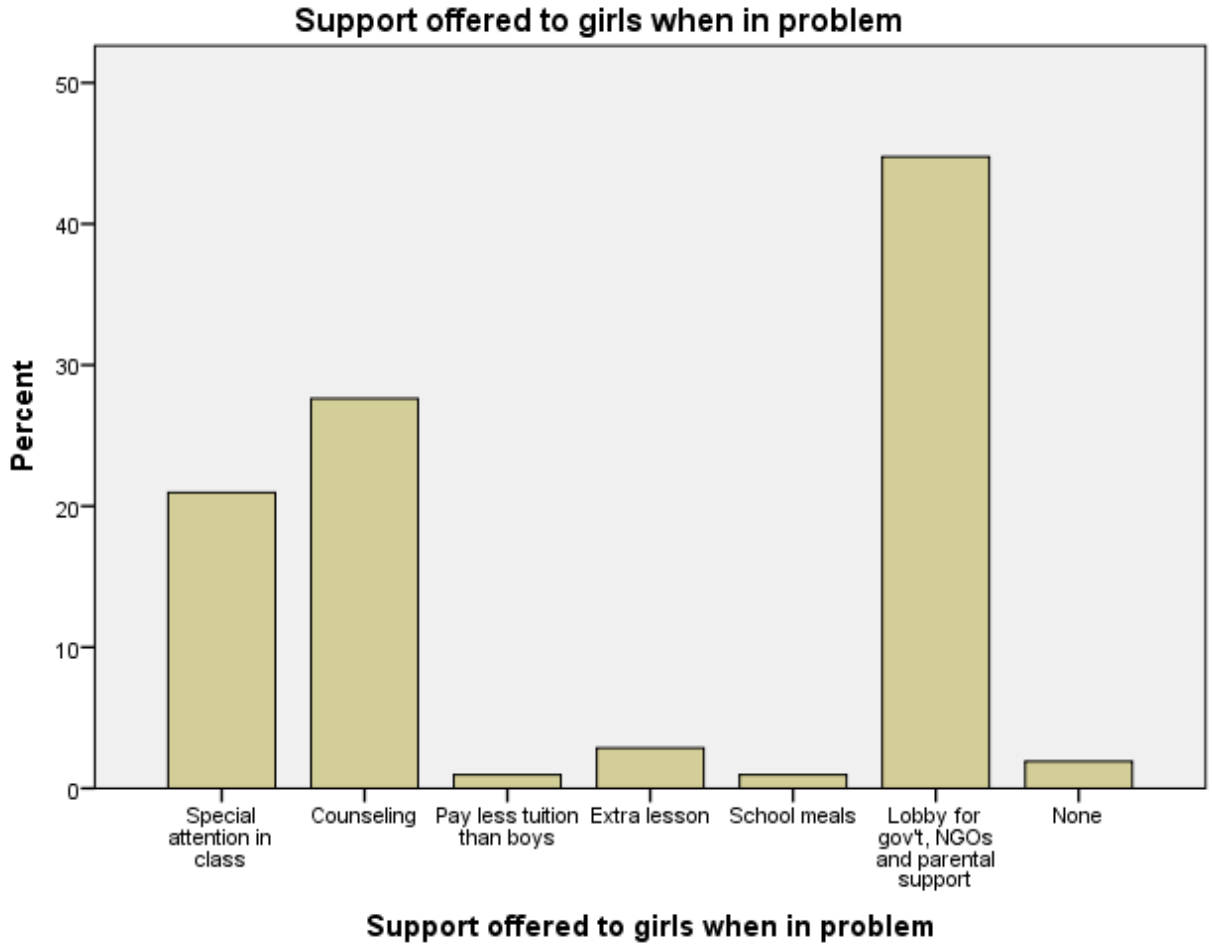

Figure 4. 1: Support offered to girl when in problem

Beneficiaries of the incentive pay program were randomly selected and asked to mention the sort of support they offered girls' when in problems. The study established their feedbacks as follows; 44.8% majority of them said they had always lobbied for government, NGOs and parental support because problems facing girls in their studies were so vast that could not be handled and solved by a single entity, hence there was need for collective effort of all the

stakeholders to ensure girls had better learning at school. 21.0% of them confirmed to have offered special attention to girls when in class to ensure they learned and performed equally as boys too. 27.6% praised the incentive pay program and noted that it helped boosted their moral to offer all necessary support to girls' through counseling when they learned a girl had problem. 1.00% confirmed that they made girls pay less tuition than boys, 2.9% noted they offered extra lessons to girls and 1.00% confirmed their schools offered free school meals to and boosted their learning interests.

4.6 Bivariate analysis

Cross tabulation was done with Chi-Square test to establish relationship between each independent and dependent variable. Chi-square was used because variables were categorical. Results are shown in the below tables.

4.6.0 To establish the extent of teachers' attendance rate to improve girls' performance in PLE and end of terms school exams.

The hypothesis was to test relationship between teachers' attendance rate and girls' educational performance in PLE and end of term school exams

The null hypothesis was, **'**There is no relationship between teachers 'attendance rate and girls' performance in PLE and end of term school exams'.

Table 4. 6: Relationship between teachers 'attendance rate and girls' educational performance in PLE and end of term school exams.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Chi-Square	4.028[a]		.402
Likelihood Ratio	3.658		.454
Linear-by-Linear Association	.014	1	.905
N of Valid Cases	105		

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 1.53.

Source: Primary data, 2018

Results from Table 4.6 rejected the null hypothesis "there is no relationship between primary teachers' incentive and teachers' attendance rate to improve girls' educational performance." There was significant relationship noted between the impact of the primary teachers' incentive pay with teachers' attendance rate at work place improved girls' performance both in PLE and end of term exams as shown by p-value higher than level of significant (0.05).

4.7.0 To examine the levels of teachers' professional quality, to improve the standard of teaching quality.

The hypothesis was to test relationship between teachers' professional quality to improve standard of teaching quality.

The null hypothesis was, 'There is significant relationship between teachers' professional quality to improve standard of teaching quality in schools.

Table 4. 7: Relationship between the levels of teachers' professional quality and standard of teaching quality.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.896[a]		.002
Likelihood Ratio	21.651		.000
Linear-by-Linear Association	10.971	1	.001
N of Valid Cases	105		

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .69.

Source: Primary data, 2018

Results from Table 4.7 have not rejected the null hypothesis "there is significant relationship between teachers' professional quality to improve standard of teaching quality in schools." That shows primary teachers' incentive pay program had impact on teachers' level of professional quality to improve standard of teaching quality in schools for better performance of girls in PLE and end of term school exams. There is significant evidence of p-value (0.002) less than 0.05, meaning primary teachers' incentive pay program had played role in teachers' level of professional quality to improve teaching standard quality for better girls' performance.

4.8 To assess the extent of teacher to girl problems support mechanism at school to ease and effect interaction, problems sharing and solving for better learning.

The hypothesis was test relationship between teacher to support mechanisms at school and better learning.

Null hypothesis was, **'**There is significant relationship between teacher to girl problems support mechanisms and better learning in school'.

Table 4. 8: Relationship between teacher to girl problems support mechanisms and better learning in school

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Chi-Square	38.896[a]		.003
Likelihood Ratio	25.142		.121
Linear-by-Linear Association	.547	1	.460
N of Valid Cases	105		

a. 23 cells (82.1%) have expected count less than 5. The minimum expected count is .04.

Source: Primary data, 2018

Results from Table 4.8 have not rejected the null hypothesis "there is significant relationship between teacher to girl problems support mechanisms and better learning in school." Primary teachers' incentive pay program had impacted teacher to girl problem support mechanism at school to ease and effect interaction, problem sharing and solving for better learning in schools in Juba. There is statistical significant evidence of p-value (0.003) less than 0.05. Hence, teachers' incentive pay program had contributed much role on teachers' to help girls' when in problem, fostered interaction, listened to them and installed better learning for better performance.

4.9 Multivariate Analysis

Multivariate analysis was carried out to establish whether the teachers' incentive program has significantly impacted girls' educational performance in Juba.

Table 4. 9:Show the results for linear regression model

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.521	.595		.875	.383
Ocupation of the respondance	.222	.229	.108	.970	.334
Educational level of the respondance	.057	.145	.040	.397	.693
Absent from work	.063	.257	.026	.247	.805
Years of teaching experience	.152	.139	.112	1.095	.276
Support school offers to girls when in problem	.002	.047	.004	.043	.966
Salary attachment	.079	.057	.153	1.388	.168

a. Dependent Variable: Girls exams performance

Source: Primary data, 2018

From Table 4.9 all variables namely salary attachment, education level, years of experience, support offered to girls when in problem, absenteeism from work and occupation had been impacted insignificantly by the primary teachers' incentive pay program to improve girls' educational performance. The evidence is their significant values being greater than p-values (0.05).

Table 4. 10: Model summary result of the linear regression above

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.247[a]	.061	.004	1.017

Source: Primary data, 2018

a. Predictors: (Constant), Salary attachment, Years of teaching experience, Support school offers to girls when in problem, Educational level of the respondance, Absent from work, Ocupation of the respondance

Table 4.10 show R value 0.247; represent simple correlation between teachers' incentive pay program and improvement of girls' educational performance. R Square value 0.061 highlights how much of girls' educational performance was explained by teachers' incentive pay program. Meaning 6.1% of girls' education performance in Juba was explained by primary teachers' incentive pay program. Other percentages left out by the primary teachers' incentive pay program could be on other factors beyond teachers' incentive program not captured by the study e.g. security, socio-cultural factors among others. Standard error of the estimate 1.017 and R adjusted Square 0.004 meant that primary teachers' incentive pay program predicted girls' performance dependence by 0.4%.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter present summary of findings inferred from data analyzed in chapter four, conclusions, recommendations and areas for further profound research. The findings are based on the research objectives and hypotheses. To establish the extent of teachers' attendance rate to improve girls' educational performance in PLE and end of term school exam, to examine the level of teachers' professional quality to improve the standard of teaching quality, and to assess the extent of teacher to girl problem support mechanism at school to ease and effect interaction, problem sharing and solving for better learning. Literature from chapter two had been employed to make analysis and discussion more plausible.

5.1 Summary of the findings

The main empirical findings are specific to the objectives and have been summarized in Chapter 4. This section synthesizes the empirical findings to the study's hypotheses derived from the study objectives.

5.1.0 To establish the extent of teachers' attendance rate to improve girls' performance in PLE and end of terms school exams.

The findings revealed that there had been significant impact of the primary teachers' incentive pay on teachers' attendance rate at work place to improve girls' performance both in PLE and end of term exams with p-value higher than level of significance (0.05) in Juba. Teachers' attendances have improved with less cases of absenteeism among teachers in Juba the capital city of South Sudan.

The study provides evidence that since the introduction of the primary teachers incentive pay, teachers always compensated for missed periods/lessons by ether asking their colleagues/fellow teachers to teach for them during their absentia or apply for extra period during the weekend/after classes in the evenings. That has resulted to improved performance of girls' in both PLE and end of term school exams.

The incentive pay program cited teachers' absenteeism Juba as a great threat to pupils' performance and agrees with Bruno (2002), when there is a high teacher absence; it tends to lower the morale of remaining teachers resulting in high teacher turnover. Other teachers tend to feel more burdened because they may have to plan for the teacher who is absent (p.1). The program has reduced on the factors behind absenteeism of teachers at workplace.

5.1.1 To examine the levels of teachers' professional quality to improve standard of teaching quality.

The study provides evidence that primary teachers' incentive pay program had impacted teachers' level of professional quality to improve standard of teaching quality in schools for better performance of girls in PLE and end of term school exams. Significant evidence of p-value (0.002) less than 0.05 revealed primary teachers' incentive pay program had played much role in teachers' level of professional quality to improve teaching standard quality for better girls' performance in Juba. 61.0% of the beneficiaries of the incentive pay program were professionally trained as teachers. They confirmed that, the higher the level of qualification and additional training attained the higher the salary scales/incentive.

The study also noted that primary teachers' incentive pay program didn't give clear measurable variables that predicted teacher quality, that makes it difficult and problematic to design pay structures, compensation schemes among others that can be relied on as measurable indicators. The study agrees with research by Darling-Hammon, L. (2000) it is

intuitively clear that teaching quality affects student learning, but it is less clear what qualities make a good teacher or what precise behavior composes good teaching.

5.1.3 To assess the extent of teacher to girl problem support mechanisms at school to ease and effect interaction, problems sharing and solving for better learning.

The study revealed that primary teachers' incentive pay program had impacted teacher to girl problem support mechanism at school to ease and effect interaction, problem sharing and solving for better learning in schools in Juba. Statistical significant evidence of p-value (0.003) less than 0.05 supported the evidence. Hence, teachers' incentive pay program had contributed much role on teachers' to help girls' when in problem, fostered interaction, listened to them and installed better learning for better performance.

The study agrees with Rogers (2006) who argued that in order to create a good learning environment, teachers need to foster three elements in their relationships with students: genuineness, caring, and empathic understanding. Students in classrooms with these teacher attitudes will develop more self confidence and 'learn more significantly' (Rogers, 1979, p. 7).

5.2 Conclusion of the study

The conclusion is made based on specific objectives of the research.

Overall objective was to evaluate the impact of primary teachers' incentive pay program on girls' educational performance.

5.2.1 To establish the extent of teachers' attendance rate to improve girls' performance in PLE and end of terms school exams.

The study revealed that a lot of progress had been achieved by introduction of the primary teachers' incentive pay program on teachers' attendance rate at work place to improve girls' performance both in PLE and end of term exams. Factors behind teachers' absenteeism have been mitigated.

5.2.2 To examine the levels of teachers' professional quality to improve standard of teaching quality.

The study provides evidence that primary teachers' incentive pay program had impacted teachers' level of professional quality to improve standard of teaching quality in schools for better performance of girls in PLE and end of term school exams. 61.0% of the beneficiaries were professionally trained teachers who confirmed that, the higher the level of qualification and additional training attained the higher the salary scales/incentive.

5.2.3 To assess the extent of teacher to girl problem support mechanisms at school to ease and effect interaction, problems sharing and solving for better learning.

The study revealed that primary teachers' incentive pay program had impacted teacher to girl problem support mechanism at school to ease and effect interaction, problem sharing and solving for better learning in schools in Juba. Teachers' helped girls' when in problem, fostered interaction, listened to them and installed better learning for better performance.

5.3 Recommendation of the study

The study recommends Government of South Sudan and key stakeholders of girls' education based on the study specific objectives to;

5.3.1 To establish the extent of teachers' attendance rate to improve girls' performance in PLE and end of terms school exams.

The government should ensure teachers welfare as priority to achieve girls' good performance and prosperity by increasing their salaries in the face of the burning economy to avoid absenteeism in search better pay somewhere. Therefore welfare of both teachers and pupils must be respected by school management and administration if good girl educational performance is to be realized.

5.3.2 To examine the levels of teachers' professional quality to improve standard of teaching quality.

Both the government and the key stakeholders should build teachers capacities so often to deliver right output to pupils at the right time. Refreshment trainings to them are essential to upgrade teaching and learning standards.

5.3.3 To assess the extent of teacher to girl problem support mechanism at school to ease and effect interaction, problem sharing and solving for better learning.

Key stakeholders need not to compromise their roles/duties than leaving all on teachers' shoulders to support pupils'. They by virtue are teachers outside who should equally play same role as the teachers' when the pupils are out of class to realize their educational prosperity. By providing girls' time to do school home work, all meals, save playing environment, and right study time are an essential roles parents and the public should offer and monitor.

5.4 Area for further Research

It will be of interest to investigate deeply the extent of domestic responsibilities on girls' educational performance.

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APPENDICES

APPENDIX I:QUESTIONNAIRE

Uganda Martyrs University

P. Box 5498 Kampala Uganda

Serial No. 1600502159

Dear Respondent,

I am OHIDE JOSEPH AKILLEO a second year master degree student of science in monitoring and evaluation (Msc. M&E) at Uganda Martyrs University.

I am undertaking a research study entitled, "Impact of primary school teachers' incentive pay on the girls' education", with reference to Juba. This research is a partial requirement for the award of a master degree of science in monitoring and evaluation (Msc. M&E) of Uganda Martyrs University.

You are randomly selected to respond to the following interview questions to the best of your knowledge for the success of this research. The interview will take only five to ten minutes of your time. Your responses and information provided shall be treated confidently for academic purposes strictly.

Thanks

SECTION A:

Background Information (Please Tick)

A1. Sex

Male	
Female	

A2. Age group

18-27 Years	**27-36 Years**	**36-45 Years**	**45-54 Years**	**Above 54 Years**

A3. Level of Education

Primary	**Secondary**	**Post-secondary**

A4. Occupation

……

A5. Current job

……

A6. The school ownership (**School Name**……...)

Private	**Government**	**Private and government**

A7. School type **(Tick)**

Single	
Mixed	

A8. Who funds the school? **(Tick)**

Parents	**Government**	**NGOs**

Specify others if any

……

SECTION B:

Teachers' absenteeism on girls' performance in PLE and end of terms school exams.

B1. Have you ever been absent from the school? **(Tick)**

Yes	**No**

B2. If Yes! What could be the reason for that your absenteeism from the school? **(Tick multiple)**

Meager salary and business/ job	**Contracted ended**	**Distance &lack of transport.**	**Personal issues**	**Ill health**	**Bad weather**

Specify others

……

B3. If No! Briefly explain

……

B4. You might have been absent from the school for genuine reasons what so ever, but at the end how does the pupils (girls) performs in your subject(s) both in PLE and the end of term school exams? **(Tick)**

Excellent	
Very good	
Good	
Fair	
Poor	

Specify others

……

B5. How do you compensate for the period(s) you failed to teach during your absence so that pupils (girls) can perform well in your subject and excel both in PLE and the end of term school exams? **(Tick)**

Apply for extra teaching periods	
Ask a colleague to teach for you	
Don't do anything	

Specify others

……

SECTION C:

The level of teachers' professional quality to improving the standard of teaching

C1. Is teaching your profession or were you trained as a teacher? **(Tick)**

Yes	
No***(cont, with C2 & skip C3)***	

Specify others

……

C2. How many years of teaching experience do you have now? (Tick)

1-5 Years	**5-9Years**	**9 Years Above**

C3. Since when were you trained as a teacher? **(Tick)**

1-5 Years	5-9Years	9 Years Above

C4. Did you go for any further teaching training later to improve on your teaching skills and standard? **(Tick)**

Yes	
No	
If Yes! When? (*Indicate Months/Years*)	

Specify others

……

C8. What is your salary scale and the 40 dollars incentive meant for primary teachers attached to? **(Tick)**

Student performance	
Year of experience	
Academic grade	
Additional training	
Subjects of teaching	
Position and extra duties/assignments	

Specify others

……

SECTION D:

Teacher to girl problems support mechanisms at school to ease and effect interaction, problems sharing and solving for better learning.

D1. In your subject(s) of teaching what is the ratio of girls to boys in the followings; (Specify the Subject…….. E.g. Maths, English etc.) ***(Fill in the ratio).***

Attendance Ratio Boys: Girls	**Performance Ratio Boys: Girls**

D2. What problems do you think girls' faces that do affect their learning at school? ***(Tick where you agree and label X where you disagree).***

Problem	**Agree √/ Disagree X**
1. Long distance walk from home to school(late arrival)	
2. Lack of tuition and poor performance	
3. Sexual harassment by boys and teachers	
4. Lack of sanitary pads	
5. Teachers' absenteeism	
6. Poor teaching modes by untrained teachers'	
7. Lack of pocket money	
8. Insufficient parental support	
9. Delay of teachers' salaries affecting teachers' will to teach.	
10. Early forced marriage and pregnancy	
11. Boys' education favored to girls'	
12. Girls' domestic responsibilities etc……	

Specify others

……

D3. What support do you and the school give girls when they share with you or you detect the problems mentioned above in question no. D2? **(*Tick multiple, the support mechanism you offer*).**

Support Mechanism Offered	**Ticks(Agree where necessary)**
1. Allocate girls extra marks	
2. Additional attention in class	
3. Counseling	
4. Girls pay tuition less than boys	
5. Extra lessons for girls	
6. Buy sanitary pads to girls	
7. Free school meals	
8. Lobby for government, NGOs and parental support etc……..	

Specify others

……

APPENDIX II: TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION Krejcie and Morgan 1970

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size

"S" is sample size.

Krejcie, Robert V., Morgan, Daryle W., "Determining Sample Size for Research Activities", Educational and Psychological Measurement, 1970.

APPENDIX 2: INTRODUCTORY LETTER

Uganda

Martyrs

University

Making a difference

Office of the Dean, Faculty of Agriculture 9th May, 2018

Your ref:

Our ref:

TO WHOM IT MAY CONCERN

This is to introduce the bearer **OHIDE Joseph Akilleo** a second year student of Master of Science in Monitoring and Evaluation, Registration Number 2016-M302-20108 in the Faculty of Agriculture of Uganda Martyrs University.

He is conducting a Research Project on **" Impact of primary teachers' incentive pay on girls' educational performance, a case study of Juba South Sudan"** to enable him prepare a Dissertation as a partial requirement for the award of him degree.

I will be very grateful if you would accord the student all the necessary assistance and cooperation.

Thanks for the support

Yours Sincerely,

Ssekandi Joseph

Ag. Dean, Faculty of Agriculture

Uganda Martyrs University P.O. Box 5498 – Kampala - Uganda

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