



# International Journal of Sciences: Basic and Applied Research (IJSBAR)

ISSN 2307-4531  
(Print & Online)

<http://gssrr.org/index.php?journal=JournalOfBasicAndApplied>



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## Influence of Teacher Quality on Literacy Achievement in Primary Schools in Uganda: A Cross-sectional Study of Gomba District

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### Abstract

Despite the implementation of key global educational reforms, low literacy levels still manifest in most Arab states, South Asia and Sub Saharan Africa including Uganda. The study investigated the influence of teacher quality on literacy achievement in primary schools in Uganda. Using cross-sectional survey design involving mixed research methods used a questionnaire, and an interview guide, to collect data from a purposively selected sample of 360 participants. Both qualitative and quantitative data were simultaneously analyzed and presented. Findings indicate that teacher quality is key and it greatly influences literacy achievement. Although 90% of them had been trained, their quality was compromised by unprofessional practices and increased pupil enrollment ratio amidst teacher shortage. As such, more teachers need to be attracted, trained, recruited, and motivated for quality assurance in the education system.

**Key Words:** Literacy; Literacy achievement; Primary School; Teacher quality.

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## **1. Introduction**

The ability of a teacher to inspire student learning and development through a combination of content mastery, command of pedagogical skills, motivation and interpersonal skills is what defines a quality teacher. Quality teachers are a hallmark of any educational system being crucial in a child's holistic development [1, 2]. Teacher quality implies high teaching standards and their application to meet educational standards [3, 4, 5]. The key indicators of this quality include: teacher qualifications, characteristics, and practices [Organization for Economic Cooperation and Development [6]. Teacher qualifications are measured by credentials, knowledge, practicum, value added to student learning, experience and effectiveness [7, 8, 2]. Teacher characteristics include; attitudes and attributes that the teacher brings with to class for example; learners' expectations, collegiality, collaborative nature, race and gender whereas teacher practices include; planning, and preparation of instructional materials, classroom organisation, subject specific pedagogical skills, ensuring a conducive learning environment and learner individual differences. Others are continuous assessment, effective communication or verbal ability, being able to challenge students' thinking and professionalism [4, 9, 10, 11]. The United States defines teacher quality as students' attainment of the contents and their application other than their teacher's credentials [4, 12].

### **1.1 Background of the Study**

There is no single education system that can exceed the quality of its teachers and no nation can develop beyond its education system [13, 14]. However, a great imbalance exists in distribution of the quality and quantity of teachers across the globe with Sub-Saharan Africa, South Asia and most Arabic states having inadequate number of qualified teachers [3]. This report stated that over 82% of the teachers were recruited and deployed in the developing countries in 2012 but no system was put in place for their sustainability. The purpose of recruitment of more teachers was to respond to the increasing number of pupils attending primary schools following increased access to free basic and compulsory education which ultimately affected teacher pupil ratio [5, 15]. Studies by [12] and the report by [16] highlight a need to raise the number of teachers by 68% especially in sub-Saharan Africa and also improve their quality if global goals on educational quality are to be attained by 2030.

Like Chad and Ethiopia which needed to quadruple and double the number of their teachers respectively [12], Uganda's pupil enrolment increased drastically since the introduction of Universal Primary Education (UPE) in 1997 [17]. In their policy brief, [17] recognized that by the year 2003, gross enrollment to primary schools would have increased from 3.1 million to 7.6 million and the gross enrollment ratio was 127% indicating that some beyond the standard age for primary school had enrolled with a great need for more trained teachers. However in the recent past, drops in the rates were registered in the country from 128% in 2010 to 110.9% in 2013 [18]. Dropout rates were also noted to be high by [17]. They stated that of 2,159,850 pupils who had enrolled at the start of UPE in 1997, only 485,703 (23%) completed the primary cycle by 2003. The [18] sheds more light on dropout rates in the country and attributes them to classroom congestion, sickness and responsibilities held by pupils in child headed families. Therefore, Uganda is still grappling with issues of teacher quality, teacher quantity, classroom facilities, instructional materials, Information, Communication and

Technology (ICT) facilities, understocked science laboratories, teacher motivation, school leadership and management, undesirable working conditions, and teacher policy implementation all of which affect literacy achievement [19].

Nevertheless, the government of Uganda has registered progress in addressing the issue of teacher quality by taking on the obligation to train pre-service teachers and also by constructing more primary schools. According to [17], the government of Uganda constructed 5000 schools and trained 78% additional teachers in a period of seven years from 1996 to 2003, an enormous achievement in a single decade. Currently, there are 45 government teacher training colleges in the country and private teacher training colleges which all together graduate 8,769 grade three teachers per annum [19, 20]. However, these teachers are not recruited immediately after training and those employed lack capacity building due to underfunding of the education sector [19, 21].

### ***1.2 Overview of Uganda's Education Structure***

Education in Uganda is provided through formal, non-formal and informal systems. The government spearheads its provision through individuals, private sector and Non-Governmental Organizations (NGOs) based on the curriculum that is designed by the National Curriculum Development Center (NCDC). Formal education starts with pre-primary from 3 to 5 years of age (baby class, middle class and top class). This is followed by primary section which takes a period of 7 years (P1, P2 P3, P4, P5, P6 and P7). Then secondary school (ordinary) level which takes 4 year (S1, S2, S3 and S4). Thereafter, some join vocational schools, while others join advanced secondary level of education. Both advanced level and vocational education take a period of two years. After advanced level of secondary education, those who scored at least two principle passes (E is a principle pass) in two major subjects and general paper, join the university or tertiary institutions. The duration at the university depends on the programme of study but it ranges from three to five years. The structure of formal education system in Uganda was cited by [22] as in Table 1.

### ***1.3 Primary School Section***

The primary school section in Uganda takes seven years. It is divided into lower primary and upper primary. Lower primary implies primaries one to three which are also called thematic classes because thematic curriculum guides the planning, and teaching processes [23]. The language of instruction in lower primary is the area local language except for English language which is taught in English. Upper primary section starts from primary four to primary seven. However, primary four is referred to as a transitional class which bridges the thematic curriculum with the national primary school curriculum [24, 25].

### ***1.4 Literacy and Numeracy***

The word literacy is refers to the abilities to read and write a text [26]. Academicians in the 20<sup>th</sup> Century defined literacy in relation to the broader sense of education and knowledge. They divided it into four discrete categories: literacy as an autonomous set of skills; literacy as applied, practiced and situated; literacy as a learning process; and literacy as text [2]. In the twenty first century it has advanced its meaning to the ability to read, write, apply numeracy in day today processes and acquisition of both inter and intrapersonal skills, [27, 5].

Therefore, numeracy is considered a component of literacy. It is defined as one’s ability to do oral counting, mathematical structures, and the application of arithmetic in daily life [26].

**Table 1:** The Structure of Formal Education System in Uganda

Education level	Cycle	Award	Progress opportunities
Pre- Primary Primary school	3 Years 7 Years	- Primary Leaving Examination (PLE)	Primary Education Lower Secondary (O’ Level) 2. Technical school 3. Community polytechnics
Lower Secondary (Ordinary Level)	4 Years	Uganda Certificate of Education (UCE)	1. Upper Secondary (A’ Level) 2. Primary Teachers College 3. Technical/Vocational Institutions 4. Farm Institutes 5. Health Institutions 6. Other Departmental Training Institutions
Technical Institutes	3 Years	Certificate	1. Technical Colleges 2. Universities
Upper Secondary (Advanced Level)	2 Years	Uganda Advanced Certificate of Education (UACE)	1. University 2. Uganda College Of Commerce 3. National Teachers College 4. Uganda Technical College 5. Other Training Institutions
Primary Teachers College	2 Years	Certificate	1. National Teachers College
Uganda College of Commerce National Teachers College Uganda Technical College University	2/3 Years 2 Years 2 Years 3/5 Years	Diploma Diploma Diploma Diploma/Degree	1. University 1. University 1. University 1. Post Graduate Studies

Source: G. Ejuu (2012).

### 1.5 Literacy Achievement

Literacy achievement goes beyond acquiring the above mentioned skills to their practical demonstration through the ability to read, write, and apply numeracy in day to day experiences and being able to cope with oneself and others [2, 4, and 9]. For students to acquire these skills, the teacher’s communication abilities are vital [28, 29]. Such a teacher should also employ language acquisition skills such as listening, speaking, writing, reading and then later alone reading with meaning and expression. Culturally appropriate literature on ethnicities, world religions, and non traditional families should be used to foster literacy [2, 28]. Literacy achievement is not only affected by teacher quality and other institutional factors but also external factors such as socioeconomic background of the learner, learner’s attitude towards learning and parents’ involvement and their level of

education [7]. However, there is a great disparity in literacy achievement between developed countries and developing countries most especially in Sub-Saharan Africa from variations in teacher quantity, quality, competences, motivation, school leadership, management and educational policies, structures, and systems [30, 12, 13].

### ***1.6 Literacy Achievement in Primary Schools in Uganda***

High illiteracy levels are persistent in Uganda [31]. In tackling it, the government of Uganda in collaboration with other stakeholders has been working to improve all indicators of quality education including teacher quality through Teacher Development and Management Systems (TDMS) and Teacher Professional Development (TPD) programmes [24]. These have been on for some time but a high number of unqualified and underqualified teachers still exist in the education system [32]. This study found out that 23,363 teachers in primary schools in Uganda were not qualified. Private schools were found to have a significant proportion of underqualified teachers which was 35% of their total number of teachers while public schools had 12.7%. However these teachers would be brought on board through TPD [33].

Literacy levels of children attending primary schools in Uganda are still low [19, 34]. This was more evident in the National Assessment of Performance in Education (NAPE) Reports as stated by [35, 5, 19]. According to [22], 52% of the pupils could not read or write a short text in English in 2011 while 37% could not count and apply numeracy in real life situations whereas 54% could not do oral reading by the end of lower primary in 2013 [19]. The report also highlights that 59% and 54% of the pupils were not proficient in English language and numeracy respectively by the end of primary six. However, [5] indicates that numeracy in lower primary has improved with 72.8% of the pupils regarded as proficient in 2015, though reading and writing have remained stagnant at around 56.7%. Based on the above information and statistics, the researcher sought to investigate the influence of teacher quality on low literacy levels in the country.

### ***1.7 General Objective of the Study***

To determine the quality of teachers in primary schools in Uganda and its influence on literacy achievement with an intention to suggest strategies for literacy achievement.

### ***1.8 Specific Objectives***

- i. To assess the quality of teachers in primary schools in Uganda.
- ii. To identify factors impinging literacy achievement in primary schools in Uganda.

## **2. Materials and Methods**

### ***2.1 Study Design***

A cross-sectional survey design was used while employing a mixed methodology for data collection and analysis. A questionnaire, key informant interview and classroom observation were used in order to enrich data.

## **2.2 Study area**

The study was conducted in Gomba district in central region in Uganda. It is one of the newly formed districts carved from Mpigi district in July, 2010. Before 2010 it was one of the counties of Mpigi district. The district has four sub counties and a town council which are Maddu, Mpenja, Kabulasoke, Kyegonza, and Kanoni respectively. All the five sub counties were included in the study but only two schools from each were sampled making a total of ten schools. It was conducted in Gomba district because according to the national assessment of performance in education survey that was carried out in 2013 and 2014, Gomba district was among other districts that scored low in literacy achievement.

## **2.3 Study Population**

The study population comprised of the district education officials since primary education is decentralised, head teachers, School Management Committee (SMC) members, teachers and pupils. All participants were included in the study basing on their roles and responsibilities in ensuring teacher quality and literacy achievement.

## **2.4 Sampling and Sample Size**

Gomba district lies between 00 11N, 31 55E at latitude: 0.1750 and longitude: 31.9100 with four sub-counties and the town council with 263 primary schools, 85 of which are public and 178 are privately owned. Sample size was determined by Krejcie and Morgan (1970)'s table for a finite population and summarized in Table 2. Two schools were randomly sampled per subcounty making a total of 10 schools. Two district education officials, one head teacher per school, one member of SMC per school were purposively sampled. Two classes from lower primary and upper primary respectively were randomly sampled and included in the study hence four class teachers per school and 1400 pupils drawn from four classes in the ten schools.

**Table 2:** Showing Krejcie and Morgan Table for Determining Sample Size

<b>Participants</b>	<b>Population size (N)</b>	<b>Sample size (S)</b>
District education officials	2	2
Principals (Head teachers)	10	10
School management committee	10	10
Class teachers	40	36
Pupils	1400	302
Total	1462	360

## **2.5 Data Collection Method**

An in-depth interview guide was used to collect qualitative data from district education officials, SMC members and head teachers. A self-administered questionnaire and classroom observation checklist were used to collect quantitative data from teachers and to review pupils' performance records of the previous term and their

classroom interaction and participation in numeracy and literacy lessons. The researcher was assisted by research assistants who received guidelines in both oral and written forms. Research tools were pretested to the teachers and pupils of Kabulasoke Christian Junior School since it is located near the researcher's work station. This enabled the tools to be edited to meet research objectives however the findings of the pilot study were not included in the analysis of the main study's results.

### ***2.6 Data Analysis***

Qualitative data were coded and thematically analysed. Direct quotations were made with confidentiality ensured. Quantitative data were analysed statistically using a Statistical Package for Social Scientists (SPSS version 16). The frequencies of responses in relation to the questionnaire were analysed and summarised into frequency Tables; 3, 4, 5, and 6. Results are presented in text, and tabular forms and their interpretation and discussion provided in line with each objective.

### ***2.7 Ethical Considerations***

Ethical clearance was sought from East China Normal University ethics research committee and an introductory letter explaining the purpose of the study was written and taken to Gomba district local government and sampled schools. Confidentiality was assured to the participants by keeping anonymous and written informed consent was sought from participants before taking part in the study.

### ***2.8 Limitations of the Study***

The geographical and time scopes were limited as only a month was scheduled for this study however it is able to give an insight on the status of teacher quality and how it affects literacy achievement in the area for policy makers and other stakeholders to devise timely measures to address the challenge at hand.

## **3. Results**

### ***3.1 Teacher Quality in Primary School in Uganda***

The general response of the district education officers, school management committees and head teachers to the question concerning teacher quality was that over 85% of them were qualified and 15% unqualified but with minimum teaching requirements. The respondents stated that unqualified teachers still linger in the education system due to the inadequate budget allocation for the education sector.

The government is constrained to meet the challenge of growing demand of more teachers to counteract the increased pupil enrollment ratio.

In trying to address the challenge at school level "teachers" with minimum qualification or the underqualified are recruited and appointed by the school management committees. The level of teacher training and qualification among primary school teachers is summarised as in the Table 3.

**Table 3:** Teacher Respondents by Training and Credentials, N=40

Variable	Responses/ Scale	Percent / %
Teacher Credentials	ECD Certificate	2.5
	Grade 3 /Teacher Education Certificate	50
	Grade 5/Diploma in Teacher Education	35
	Degree in Primary education	2.5
	Others	10
Teacher Training	Yes	90
	No	10

Of the 40 respondents, 36 (90%) had had teacher training either in early childhood development, and primary teacher education though with different levels of training while 4 (10%) had not been trained but had minimum requirements for teaching and they were operating on licence basis.

Most of the teachers were females with varying teaching experiences whereby the majority (72.5%) had served for more than five years as indicated in Table 4.

**Table 4:** Teacher Respondents by Experience N= 40

Variable	Response Scale	Percent / %
Teaching Experience	Below Five Years	27.5
	Five to Ten Years	22.5

Teacher practices that were investigated included regularity of lesson planning and preparation, use of instructional materials, and the use of learner centered pedagogy. The results in Table 5 indicate that the majority of the teachers did not plan most of the lessons. Whereas 15% of the respondent planned their lessons most of the time, 30% did it quite often, 52.5% sometimes and 2.5 rarely lesson planned.

The same trend is observed in the preparation and use of instructional materials whereby 27.5% did prepare and used instructional materials most of the time, 52.5% did it quite often, and 20% did it sometimes.

As far as the use of learner centered methods are concerned, 60% of the respondents employed them quite often while 32.5% used them most of the time and 7.5% used them sometimes.



**Table 5:** Teachers’ Practices N=40

Response Scale	Items		
	Lesson Planning (%)	Use of IMS (%)	Learner centered pedagogy (%)
Most of the time	15	27.5	32.5
Quite Often	30	52.5	60
Sometimes	52.5	20	7.5
Rarely	2.5	0.0	0.0
Almost Never	0.0	0.0	0.0

**3.2 Factors Impinging Literacy Achievement**

According to one of the district education officials, literacy achievement has for so long remained elusive in the region. The factors impinging literacy achievement are deeply embedded in school leadership and management and teacher training which to a large extent influences teacher practices. *“Over 85% of the teachers in the district are trained and those that are not formally trained had been introduced to teaching pedagogy through various teacher training sessions. However some schools’ administrators are always absent to monitor their teachers’ performance”* said an inspector of schools. Head teachers were reported to be absent on several occasions and even when at school, rarely did they supervise and offer support to their teachers as confirmed by the teacher respondents in Table 6, where (60%) of them expressed that head teachers rarely gave support supervision with timely feedback.

**Table 6:** Teacher respondents on head teacher’s supervision of the teaching process N=40.

Variable	Response Scale	Percent / %
Regularity of head teacher support supervision	Most of the Time	0.0
	Quite Often	0.0
	Sometimes	27.5
	Rarely	60
	Almost Never	12.5

As far as Teacher Pupil Ratio (TPR) is concerned, lower primary classes had teacher pupil ratio of over 1:100 while upper primary classes had class population ranging from 50 to 100. Other factors that were mentioned by respondents included; inadequate quantities of educational inputs such as textbooks and other instructional materials, staff houses, irregularity in the payroll, inadequate teacher professional capacity, and undesirable learning environment. The nature of learning environment varies from school to school and from class to class depending on class size and the class teacher’s creativity. A head teacher mentioned that dusty classrooms had rendered teachers and pupils susceptible to jiggers that had become endemic hence the victimised pupils cannot

concentration in class. Nutritional factors were also mentioned; *“Parents send their children to school without any food stuff and are not willing to contribute towards lunch meals fund”* said a head teacher. HIV/ AIDS scourge has also contributed to low literacy achievement. *“The orphans suffer from chronic depression and trauma while the infected ones suffer from opportunistic infections and this affects their regular attendance and concentration while at school”* stated a member of SMC. *“Teachers, administrators and students’ absenteeism is a salient topic in the education sector, and the question remains whether it refers to the fact of not reporting to work or being at work but not doing the needful?”* reported an SMC member. Teacher attrition was identified to be high in the education sector with around 15% of it attributed to official dismissal from service as a result of misconduct. Pupil absenteeism was higher on market days and during the rainy seasons as they accompany their parents to sell produce and grow crops respectively. Other factors that were highlighted include; language barrier among teachers in lower primary section where the medium of instruction should be the area language as per the thematic curriculum policy, and job dissatisfaction.

#### **4. Discussion**

The study found out that about 90% of teacher were qualified while 10% were not. Though the majority were qualified, their quality was hampered by unprofessional conduct such as inadequate planning, preparation and teacher centered methods of teaching. Teacher personal characteristics were negligible as long as the teacher was extrinsically motivated. [19, 36] had relatively similar findings as they emphasized teacher qualifications, planning and general professional practices as indicators of teacher quality. Others according to [14] include trust and viable relationships, compassionate, and teachers’ thorough understanding of his learners. A study by [19] indicated that 12.7% of teachers in primary schools in Uganda were not qualified in 2010 and both the qualified and unqualified needed continuous professional development to strengthen their pedagogical skills. Such challenges are not limited to Uganda but cuts across all other regions of the world where teacher quality and literacy achievement are still desired [14].

The factors impinging literacy achievement included; teacher pupil ratio, teacher and student absenteeism, inadequate teacher incentives, parental involvement in their children’s learning as well as parents’ level of education, school leadership and administration, teacher and educational quality policies’ implementation, learners’ interest and attitude towards education, and inadequate instructional materials as well as the nature of learning environment. This can be attributed to failure of responsible stakeholders to provide quantitative inputs to match the enormously increasing enrollment ratio which in a way has compromised teacher quality and contributed to high dropout rates [24]. A seminar paper by [37] identified teacher absenteeism, teacher pupil relationship and examination oriented curriculum as other factors impinging literacy achievement. The issue of teacher absenteeism has been going on for decades as it was earlier cited by [38] in its study on teacher quality around the globe. UNICEF stated that 43% of teachers self-reported having been absent at least once in a term.

#### **5. Conclusion**

The study found out that 90% of the teachers in Uganda are qualified and that they influence literacy achievement to a greater extent. Therefore, teacher credentials, experience and personal characteristics were

found to be very necessary for literacy achievement but they are not sufficient enough to cause desired learning achievement if the teacher does not plan, prepare necessary instructional material, use relevant pedagogical approach, act professionally, has negative attitude towards the profession and is not supported by the educational system to ensure and assure quality teaching and learning process.

The other factors that imping literacy achievement other than teacher quality included; school leadership approach, inadequate incentives, the level of parental involvement in their children's learning, teacher policy implementation, irregular appraisal and support supervision, absenteeism of both teachers and pupils, outrageous teacher pupil ratio, and undesirable working conditions. Therefore a supportive system is necessary for a qualified teacher to demonstrate desired behaviour and practices so as to cause desirable learning outcome.

## **6. Recommendations**

Recommendations are therefore made to school leaders and administrators, teachers and the parents.

### ***6.1 School Leaders and Administrators***

Promote and ensure teacher professional development through seminars and workshops to enhance teachers' abilities in what to teach and how to teach.

Strengthen and employ support supervision in schools rather than inspection as a measure to enhance literacy achievement to greater heights. As such, it should be done in a more collegial manner other than "policing" so as to allow teachers to identify their own gaps in their teaching and learning process and design a feasible way forward that is followed up by the supervisor.

The process of teacher recruitment and sustainability as stated in education legal and quality assurance framework for primary education should systematically and strictly be followed and implemented by officials in charge to reduce on teacher attrition rate.

There is need to take a wider step to strengthen the appraisal system, avail teacher incentives and sensitise parents about the value of education in order to curb down absenteeism rates among teachers, pupils and educational administrators.

More classroom should be constructed to decongest the classes and renovate those in existence so as to provide a conducive learning environment. The classes should be cemented to regulate the incidence of jiggers among learners and their teachers, and provided with shutters so as to retain the learning materials within the classroom.

### ***6.2 Parents***

Parents and care givers should provide meals and scholastic materials and schedule time to read for and with their children.

### ***6.3 Teachers***

Teachers should collaborate to form teacher professional learning communities intended to promote and develop reflective practice, mentorship, and coaching amongst themselves.

Formative assessment (continuous assessment) that is intended for learning other than of learning should be emphasized such that each individual learner's needs, and abilities are identified much earlier and then supplementary as well as remedial services are provided.

### **Declaration of Conflicting Interests**

I declare that there are no any conflicts of interest to disclose.

### **Funding Statement**

This research study itself was not funded but the programmes to attain advanced certificate for teacher trainers and education administrators of which it was a partial require was funded by UNESCO in collaboration with Chinese government. I therefore want to state that the views in this manuscript are findings of both secondary and primary data, hence UNESCO and the Chinese government have nothing to do with them.

### **Acknowledgement**

I am grateful to UNESCO in collaboration with Chinese government scholarship council for supporting and advancing my career. My advisor; Professor HUANG Zhicheng. The director of the International Center for Teacher Education (ICTE); Prof. Peng Liping, and his team especially Dr. Li Yan, and Ms. Wang Ru (Alisa). The editor of this manuscript: Dr. Akin-Tunde A. Odukogbe of University College Hospital, Ibadan, Nigeria. The department of Teacher Instruction, Education and Training (TIET), Ministry of Education and Sports, Uganda most especially Dr. Egawu Jane, Ms Mugisha Annet J.K and Mr. Web Ndyabahika. Gomba district local government, department of education, schools' head teachers, school management committees, teachers and pupils in sampled schools in Gomba district, administration and staff of Kabulasoke PTC more especially Mr. Mukasa Herbert, Ms. Nangira Catherine and Mr. Kisitu Gerald, my family, research assistants and lastly but not least to the almighty God, I will forever be grateful.

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