

Factors Influencing Primary Schools' Mathematics Teachers Retention in Darazo Municipality of Bauchi State, Nigeria

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Available online at: www.isroset.org

Received: 26/Jul/2022, Accepted: 28/Aug/2022, Online: 30/Sept/2022

Abstract — The study examined the factors impacting the retention of mathematics teachers in primary schools in Darazo Governorate, Bauchi State, Nigeria. A descriptive survey design was adopted. A structured design questionnaire and interview were designed to guide the study. All primary school mathematics teachers and the school's headmasters of Darazo local government area constituted the foremost masses of the study, whereas the government appointed and full-time instructors within the schools were the targets respondents of the study. Stratified and straightforward irregular testing strategies were utilized to choose 38 school superintendents and 40 mathematics teachers for the study. A self-developed, approved and reliability-tested survey instrument was utilized for data collection, which was assessed by utilizing Recurrence Tally and Factual Bundle for Social Sciences. It was found that the workload assigned to teachers, poor incentives and lack of promotion and its implementation, among other factors, influenced mathematics teacher retention in elementary schools. Based on the results obtained, it is recommended that governments need to employ more mathematics teachers, improve their well-being and execution, among others.

Keywords — Factor; Influence; Mathematics Teacher; Retention; Primary school

I. INTRODUCTION

There's no other profession as basic to the fate of the another time than education. Tolerating an incredible instruction makes strides children's life chances – their thriving, social capacities, future employability, and cash related flexibility. Higher turnover rates of teachers make a steady state of flux in children's lives, which in turn impacts insightful progress and achievement in their future career as well as the society in general. It as well makes it through and through more challenging for schools to execute key approach changes. Knowing the fact that instruction may be a pathway out of desperation. Majority of children in Nigeria today are definitively down and out, so getting the driving conceivable teaching and learning experience is significant on the off chance that we are to diminish the desperation segment and finish moved forward correspondence over society. The impacts of high-quality education are especially basic for students from obstructed establishments. Highly and qualified teachers has ceaselessly been a require in teaching system and is no less basic these days. The definition of high quality is cloudy and stances issue inside the improvement of the teaching profession [1]. There is need to recognize the qualities and deficiencies of instructors who stay inside

the teaching profession to help in identifying the characteristics of high-quality teachers with the point of choosing conceivable support factors. Holding qualified and experienced mathematics teachers in basic schools has been a tie inside the educational system by various researchers over a long time ([2], [3], [4], [5]). In some circumstances, qualified mathematics teachers halted the profession to sought for predominant openings inside the private division. Majority of the mathematics teachers who take off the field have less than ten years of teaching inclusion [6]. In terms of gender, it has been found that women are more likely to drop out of classes than their male counterparts [7]. Studies have besides showed up that mathematics teachers' turnover is more common than other subjects, see [8, 9]. Why has mathematics teacher upkeep gotten to be a major concern in education? Studies have showed up that qualified number of mathematics teachers take off the teaching profession due to moo pay rates, require of definitive back, extended workload, and disappointments related to endeavoring to goad withdrawn students [10]. In extension, troublesome students, work disillusionment, uninvolved gatekeepers, intrusive bureaucracy, family and personal circumstances, and general lack of respect from parents and students are a number of the reasons why instructors take off the

profession and the need to distinguish variables that keep mathematics teachers within the teaching profession is conceivably basic, given the need to be organized effectively for a long time to come [11]. Specialists are likely to remain on the off chance that they are compensated monetarily conjointly in case they are recognized and maintained by their chairmen and peers [12]. Retaining mathematics instructors in Nigeria basic schools has been a major concern in afterward a long time [13]. Apart from documents and reports from federal Ministry of Education, information on this topic are few in the available literature and it was observed that there was a noticeable teacher turnover in mathematics, as teachers migrated for another better job [14].

Despite the aforementioned studies on teacher retention, few factors can be found in the literature that affect it from a deeper perspective, despite the negative impact of the threat in schools and the education system in general. Given this lack, this study stands ready to expand the scope of research on factors influencing primary school's mathematics teacher's retention in the education system. Retaining mathematics teachers at Darazo Local Government Primary Schools is important to staffing the classrooms with highly qualified teachers. However, there are no known factors that prompted mathematics teachers to leave or stay in the profession yet. Therefore, this study initiated a survey of all primary school's mathematics teachers in Darazo Local Government with the aim of identifying influenced factors related to their retention. Indeed, in spite of the fact that, the Nigerian government endeavors to hold its instructors by paying competitive compensations, but concurs that there's nothing it can do to halt the mass departure of instructors to other divisions. With this in mind, it ought to be imperative to find out why a couple of primary school's mathematics teachers at Darazo Local Government remained in the profession when others left. Why do they stay when some went to other sectors for greener pastures?

II. RELATED WORK

In arrange to stem the tide of highly mathematics educator maintenance, approach and education benefit pioneers must utilize certain techniques. This proposition is not as it were constrained to developing nations, but moreover to developed nations and districts. Teacher stipend has been reliably cited by a few analysts around the world as a key affect in teacher retention. Freely accessible information from government sources was utilized to survey the relevance of compensation because it impacts teachers' purposeful to stay within the educating system. Higher pay makes strides both teacher quality and retention rate [15]. Pay features a major effect on instructors and can moreover be a measuring stick for choosing whether to remain [16]. In analyzing the impact of the administration fashion of the school organization on the deliberate of the instructors to stay, studies found that respondents overviewed within the US concurred that they would remain in their educating work [17,18]. Be that it may, the

concept of leadership does not have all around recognized delineation as the meaning can routinely be domineering by what it is deduced to cover. Leadership can be describes as getting people to do their assigned tasks more effectively and efficiently [19]. Therefore, scholars believe that school leaders who are wealthy in their jobs have proven to be those with diverse professional experience and who have viewed staff involvement as a key element in the day-to-day affairs of their schools [20]. Administration in education has been recognized as a vital interface to positive school climate and a contributing figure towards teacher retention [21,22].

Herzberg displayed his motivational illustration in 1959 as a speculation of how to induce it and earnestly impact working environment inspiration, job-satisfaction and working environment support [23]. At to begin with, Herzberg made his hypothesis for Joined Together States businesses, however, his approach has been utilized in instructive research around the world and his speculation proposes that work environment proficiency is affected by a number of components that drop into two major categories called motivational components and cleanliness components and these components either increase or lessen working environment job-satisfaction, which unequivocally or conflictingly affect working environment motivation and in the long run impacts working environment proficiency [24].

Several studies have associated work environment effectiveness and work fulfillment to educator's upkeep [25,26,27]. Cleanliness factors are categorized as outward motivations whereas the motivational components recognized as affirmation, achievement, progression, improvement, and obligation may lead to an increase in work fulfillment. However, they do not in any case lead to a diminish inside the level of work satisfaction and these factors are customarily categorized as characteristic or intrinsic motivations [28]. Several factors from Herzberg's theory such as stipend, headway, co-worker connections, and in-service planning, affect whether a teacher will remain inside the field of instruction [29]. Perryman et al [30], tended to issues such as organization, management, and leadership issues as factors contributing to teacher retention. They outlined that Herzberg's factors list is found all through the literature on teacher's retention without a doubt when his motivational appear is not the emphasis of the explore or theoretical illustration.

Recently, diverse studies revealed that monetary delight plays an imperative portion inside the lives of classroom teachers and cash related stipend ought to not be thought small of, since it contributes to giving for the family and the particular staff. Fights that stipend may be a source of emolument considered uncommonly imperative for working individuals, satisfactory stipend can choose enthusiasm to stay in a work, while down and out remuneration may perhaps be a figure that engages a master to do so to conclusion his current career [31,32]. Hanushek et al. [33], examines the influence of

emolument differentials and teachers' intention to leave school, they found that teaching profession, in common, does not give sufficient money related rewards to decrease the issues of teachers whittling down. In this circumstance, it cannot be denied that cash related rewards are without a question among the components that will be important in stemming the tide of school teacher's flights.

The above references show up that there's as of presently an influence of sharpen on the upkeep of mathematics teachers in secondary schools. To the driving of the author's data and the open composing, no endeavor has in any case been made to examine the factors influencing mathematics teachers' retention in primary schools. Thus, this study center on the components affecting the retention of mathematics teachers in basic schools within Darazo Municipality, of Bauchi State, Nigeria. However, having mentioned the rationales for the existence of this study, it is imperative to mentioned that the aforementioned previous studies provides a research foundation or rather a gap for the current study to fill.

III. METHODOLOGY

Research Design

This study considers descriptive-survey design. This was considered to be fitting since it included the chosen of a few components of the preeminent and target population, with a see to summing up the disclosures at the conclusion. As well, it included the collection and examination of information to delineate a foreboding status of the primary school's mathematics teachers of the study area.

Population, Sample and Sampling Techniques

The target group of this study included all primary schools' mathematics teachers in the administrative area of the municipality of Darazo, Bauchi State.

Table 1: Represents the target population categorized across all stations in the study area

Ward	Number of Schools	Teachers	Headmasters
Gabarin	4	15	4
Lago	4	15	4
Konkiyel	5	20	5
Sade	7	34	7
Lanzai	5	40	5
Darazo	10	40	10
Tauya	1	12	1
Papa	1	12	1
Yautare	1	12	1
Total	38	200	38

Sample Size and Sampling Procedure

The study utilized purposive sampling to choose head instructors. A straightforward random sampling was utilized to choose the mathematics instructors in each school. A test measure of twenty (20%) percent is suitable for a study [34]. This study hence utilized a test of 20 percent mathematics instructors. The test estimate was hence 40 mathematics instructors and 38 school head instructors from all primary schools of Darazo Local

Government area of Bauchi State Nigeria, independent of sex, making an add up to of seventy-eight respondents as the sample for the study.

Research Instruments

The instrument for the study was a survey questionnaire entitled "Factors Affecting Mathematics Teachers Retention in Primary School". The instrument was semi-structured and contained both open and closed questions, one for the mathematics instructors and another for the school head. An interview guide was in addition utilized for the school heads.

Validation and Reliability of Instrument

The primary draft of the questionnaire was submitted to a colleague (i.e. an educator at a college) for comments. After considering the suggestions/comments, the extreme draft survey was organized for administration. The questionnaire was tested over a two-week period in ten (10) open simple schools which were not parcel of the study. The responses to the study items from the two tests were related utilizing the Pearson product moment relationship coefficient. A dependable coefficient of 0.80 was gotten.

Method of Data Collection and Analysis

The researchers really gone by the schools to assemble the data and information required for the study. On the preface of each school board, copies of the survey questionnaire were dispersed to the chosen mathematics teachers in each school whereas the procedures for completing it were clarified. The teachers gave a week for the completion. All 78 completed overviews were recouped by the researchers. This was made conceivable with the back of the individual school head instructors who made a distinction to discover the completed instruments and ensure that they were completed interior the confined time allocation. Quantifiable Bundle for Social Sciences (SPSS) was utilized to analyze the data maintained by repeat counts and percentage rate.

IV. RESULTS AND DISSCUSSION

This section consisted of the analysis, the results and the explanation of the data collected. The analyzed information was organized according to the research objectives. The results are presented in line with the examine goals. Examination of expressive estimations of the findings were shown in the form of tables and charts. The reason of this study was to investigate the components affecting primary school's mathematics teacher retention, including workload dispersal, provision of incentives, and letters of proposition for progressions.

Respondents' Demographic Information

The demographic characteristics of the respondents is paramount in this study. It was considered critical to set up the foundation data of the respondents, which included sex, age and teaching experience among others. Statistical components of the respondents can be chosen since they

have impact on mathematics teacher’s retention procedures [35]. Information on statistical components of the respondents who took portion within the study is valuable in highlighting their imperative characteristics. Hence, it was understandably significant to set up the statistical data of the mathematics instructors and their schools head for their noteworthy effect on teacher’s retention. It is displayed agreeing to sexual orientation within the figure 1 underneath.

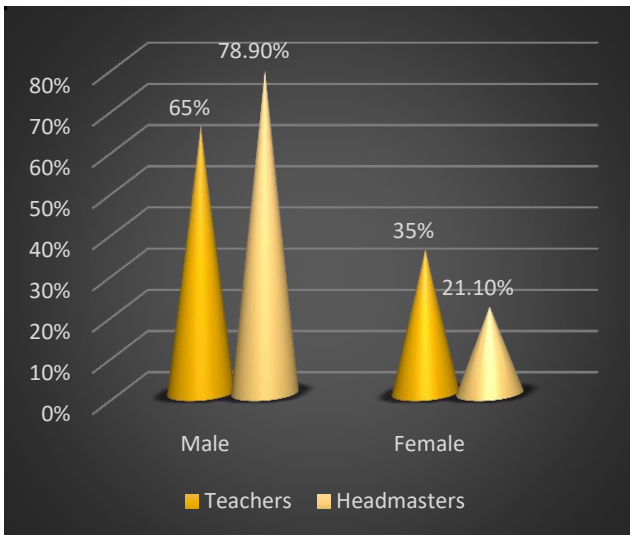


Fig 1. Distribution of Headmasters and Mathematics Teachers by Gender

From figure 1, it can be seen that majority of mathematics teachers participated in the study were male (78.9%), while the rest were female (21.1%). This means that there are more male mathematics teachers in primary school than female teachers. In addition, the information provided by the school headmasters showed that 65% of them were male and 35% were female. This clearly showed that there were more men than women in leadership positions in primary schools in Darazo Governorate, Bauchi State. The results imply that there is a gender imbalance in leadership positions. This showed that more men than women rose to leadership positions in the field, demonstrating a lack of gender equity among teachers and school leaders. The results are consistent with the work of [36] who found that gender equality is a very important characteristic as it can be used to improve the performance of all employees involved. This infers that females are given negligible chances to be the Governors in the primary schools of the study area.

Mathematics Teachers’ Length of Service in the Current Station

It is important to determine the tenure of teachers in their current ward to find out if they have been in the schools long enough to provide credible information on the study variables [37]. Respondents were inquired to demonstrate the number of a long time they served at their current station. Their responses are shown in Figure 2 below.

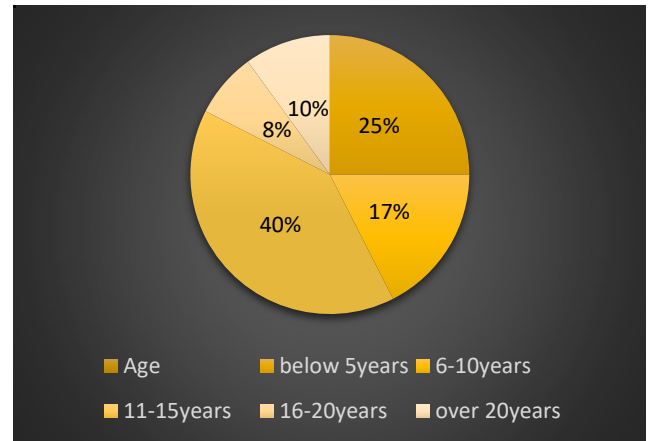


Fig 2. Mathematics Teachers’ Duration of Service in the Current Station

Figure 2, showed that most mathematics teachers (40%) had worked 11 to 15 years in their current schools, followed by 25% who had worked 6 to 10 years, then 17% who had worked less than 5 years and 8 % who had served for 16-20 years. Only 10% of respondents indicated that they had worked for more than 20 years. This indicated that the respondents were in a better position to provide credible information about issue in questions over the years. This implied that study participants were adequate to provide credible first-hand information from experience to disseminate possible grievances, patterns, and trending factors affecting mathematics teacher’s retention in elementary schools of Darazo County, Bauchi State.

Workload Allocation and Mathematics Teachers’ Retention

It is important to look at the flexibility of the work schedule to determine whether the teaching hours allocated to mathematics teachers per week, along with other job-related flexibilities, had a noteworthy effect on mathematics teacher maintenance. To determine the class schedule, the study participants were asked to state the average number of class hours they teach per week. The results are shown in table 1.2 below.

Table 2. Mathematics Teachers’ Number of lessons taught per week

Number of lessons	Frequency	Percentage
18	8	20
19	10	25
20	12	30
21	4	10
22	6	15
Total	40	100

Table 2 shows that most of the mathematics teachers (30%) taught 20 lessons per week, followed by 25% who taught 19 lessons per week and 20% who taught 18 lessons per week. In addition, the results also showed that only 10% and 15% of respondents taught 21 and 22 lessons per week, respectively. It is therefore clear that most of the participants did not agree that they had a cheap

timetable due to the high number of lessons they had to complete in a week. This implied that mathematics teachers were likely to survive emotional and physical exhaustion due to the heavy workloads they were subjected to. These results are comparable to those of Kasau et al [38], who found that employees who worked weekends reported significantly higher levels of emotional exhaustion, work stress, and psychosomatic health problems, a situation that is likely to prompt an employee to quit. The finding clearly uncovered that arrangement of favorable working plan can propel mathematics instructors to remain and proceed working in their stations which can diminish the mathematics teachers' turnover.

Provision of Incentives and Mathematics Teachers Retention

To investigate the influence of motivations on the upkeep of mathematics instructors in primary schools in Darazo county, Bauchi State, teachers were asked to indicate their levels of satisfactions with the incentives offered in their elementary schools. The responses were in a scale of 1 to 3 of which 1= Not Satisfied, 2= Satisfied and 3= Very Satisfied as shown in table 1.3 below.

Table 3: Mathematics teacher's satisfaction with the provided incentives

Incentives	Satisfied	Not Satisfied	Very Satisfied
Monetary incentives	7.50%	58.24%	35.08%
Administrative trust	12.70%	53.12%	34.18%
Delegation of duties	7.59%	70.15%	22.25%
Gifts for excellent performance	11.30%	55.62%	32.91%
Public announcement	5.10%	35.55%	59.35%
During Prize and given days			
Trips to recreational sites	4.0%	68.36%	27.686%

Table 3 depicts that majority of mathematics teachers (58.24%) were not satisfied with the monetary incentives, 53.12% were also not satisfied with the administrative trust. It was also noticed that (70.15%) were dissatisfied with the task types assigned to them. In addition, the results showed that the bigger portion of mathematics teachers (55.62%) were not satisfied with the blessings for awesome achievement. In extension, the finding showed that the many mathematics teachers (68.38%) were disillusioned with their trips to recreational districts. Finally, the results showed that (59.35%) were very satisfied with the type of recognition during the public announcement on the award days. The researchers also tried to figure out the criteria used in providing incentives to the teachers. The majority of school's heads surveyed revealed that they value the availability of financial resources to provide incentives such as gifts and transport allowance. These results are consistent with the work of Kelly [39], who found that the ideal incentives tailored to specific individuals and flexibility over time lead to well-understood work relationships capable of stimulating

incremental performance, lack of recognition becoming higher staff turnover. The finding consequently illustrates that course of action of inspirations can influence mathematics instructors which diminish rate of mathematics teacher's turnover

Letters of Recommendation for promotion and Mathematics Teachers retention

It is a conscious plan by the management to improve the quality of the staff. It is also about giving employees the opportunity to update and improve their knowledge, skills and qualifications in order to adapt to their work, it to boot a way of giving the staff a chance to overtake and make strides their capacities, data and capabilities in orchestrate to move forward to their work [40]. Mathematics teachers were asked to indicate whether letters of recommendation were available or not. The findings are presented in figure 3 below.

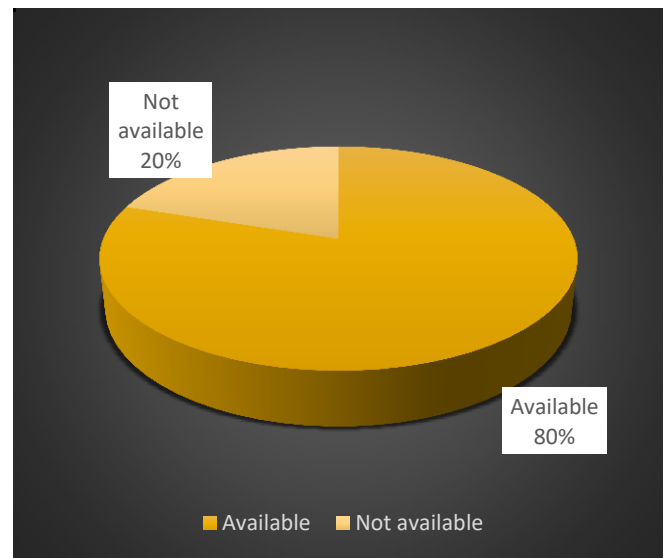


Fig 3: Distributions of Recommendation Letter for promotion to Mathematics Teachers

The chart in figure 3, revealed that many of the respondents (80%) indicated that the letters of recommendation were available at the stations, while 20% indicated that the letters of recommendation were not available at the stations. The finding appeared that the high number of mathematics teachers concurred that there was equality and fair evaluation when it came to issuing letters of recommendation for promotion, which in turn led to their career aspirations. These results contrast with that of Marso et al [41], who found that letters of recommendation for teachers were not readily available to encourage them to continue staying in the profession. Therefore, the finding indicate that lack of recommendation can diminish mathematics teachers in staying which increase rate of teachers' turnover. The respondents were moreover inquired to demonstrate whether or not they were willingly promoted. Their responses are shown in figure 4 below.

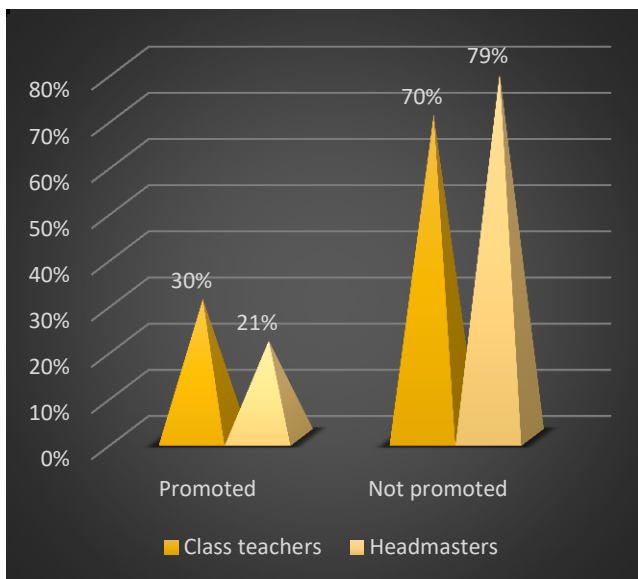


Fig 4. Distribution of Respondents Based on Promoted and not Promoted.

From Figure 4 above, it can be seen that the majority of respondents (70% and 79%) have not been promoted to the next grade even though they are entitled to, while 30% and 21% have been promoted. This indicated that stakeholders did not use different teacher retention strategies to retain their teachers. These results are consistent with that of Nahal [42], who found that the foremost reasons for teachers taking off the profession were inadequately affirmation, poor career development and meager salary increases. This implies that lack of implementation of the promotion can increase the high rate of mathematics teacher's turnover.

V. CONCLUSION AND RECOMMENDATIONS

In this paper, it can be concluded that the problem of mathematics instructor's retention in primary schools in Darazo Governorate of Bauchi State is wide and influenced by school, government, workload entrusted to teachers, lack of motivations, execution, to mention a few among other components. Based on this, the researchers suggest the following: The government have to be offer teachers predominant conditions for pay rates, settlements and other edges benefits to encourage open division laborers with comparative capabilities. In extension, more mathematics teachers need to be enlisted to decrease the high teaching stack. The government should also develop a more grounded progression course of action for fundamental school mathematics teachers based on justification and teaching experience to evade teachers getting to be stagnant in one profession and workshops for teachers to form strides their capable data and aptitudes. School administrators should have enabled to get participatory leadership styles by counting mathematics teachers more in decision-making.

Conflict of Interest

This unique duplicate has not been dispersed and is not underneath thought for dissemination someplace else.

Subsequently, we have no clashes of captivated to uncover.

Funding

This study received no external funding.

Authors' Contributions Statement: *All authors contributed equally to this inquire approximately work. They all examined and confirmed the extreme adjustment of the first duplicate.*

ACKNOWLEDGMENT

We thank and give all the glory to God. We also acknowledged and expressed a propound gratitude to the entire staffs of Darazo Local Education Authority, College of Education, Darazo and our family for their encouragement toward the success of this study.

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AUTHORS' PROFILE

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