

Role of Teachers' Quantity on the Academic Achievement of Secondary School Students

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Abstract

Sequel to a national personnel audit that was recently conducted on public and private education in Nigeria, there has been a growing debate on the immediate need to increase the academic staff strength in all secondary schools in the country. This debate has however taken a controversial trend as a large part of the educational chiefs in the country have stood on an opinion to ordinarily improving the working condition of the existing academic staff since, to them, teachers' quantity has no direct impact on students' academic achievement. This paper therefore investigated the role of teachers' quantity on the academic achievement of secondary school students to determine whether small or excess teachers' quantity have a direct significant influence on how students perform academically. Using a descriptive survey design, the study sampled 120 teachers from a population of 1,205 in Chikun local government area of Kaduna state, Nigeria. A researcher-designed questionnaire of Likert scale was used for the data collection and descriptive statistical tools of frequency counts, percentages, mean and standard deviation were used for the data analysis. It was therefore concluded that most schools in the local government are underserved with teachers and that – that had created some sorts of low academic achievement among the secondary school students. Schools do not give a fair share of their revenue to improve staff strength in their schools. Also, schools that are characterized by a low number of teachers are faced by pressure, high workload, and overstress which invariably influence the poor academic achievement of students.

Keywords: role, teachers' quantity, academic achievement, secondary school, students

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Introduction

Growing concern about the nationwide teacher shortages has focused considerable attention on education and the teaching profession in the last five years. More than a million teachers are close to retirement, and projections indicate the need for more than two million teachers by 2025. A rising student population, attrition rates in teacher preparation programs, and teacher retention after they enter the profession are all factors contributing to this national "crisis". Roughly one-third of teachers leave the profession within the first five years.

Teachers are important inputs into the educational system. Aghenta (2000) described them as "the key factors in formal education." They have been referred to as the "essential input of a highly skilled labor resource" by Adesina (1981), and the "centre of the educational system" by Adeyemi (2004). As a result, teachers play a significant role in students' education. Umeasiegbe (1991) stated that "the quality of every school system is a function of the aggregate quality of teachers who operate it," and that "the level of performance in any school is directly tied to the quality of its teachers." His argument was in agreement with Moore (1994) contention that competent teachers would improve effective teaching in schools.

Mullens (1993) agreed with the idea, stating that a teacher's subject matter competency is a significant predictor of student learning. He maintained that a teacher's performance in the classroom is influenced not just by the completion of schooling, but also by actual achievement in terms of subject matter knowledge.

Notwithstanding the importance given to teachers in the schools' system, it was noticed that teachers' shortages have been a common feature in many countries (Dennison, 1984; Levin, 1985). In the United Kingdom, for example, Dennison (1984) observed a persistent lack of teachers in Mathematics and Physical Sciences. "A situation in which a school is unable to fill a Physics vacancy is a significant level in balancing staffing and curriculum, and it is a true institutional difficulty," he claimed. Levin (1985) too examined the problem of teachers' shortages in American schools and remarked that one of the most serious challenges facing American education is the death of Science and Mathematics teachers at the secondary level. He claimed that the majority of new Science and Math instructors in the United States lack adequate training in the subjects they teach.

Also, the teacher shortage has been on the radar of education advocates, school leaders, researchers, analysts, and policymakers since the early 1980s. Warnings of the possibility of severe shortages of qualified teachers have threatened for a number of years. According to the U.S. Department of Education's Teacher Shortage Areas Nationwide Listing report, there has been a teacher shortage of some sort in all states across the country from 1990-1991 through 2015. Attrition, retirement, increased student enrollment, and a focus on lower class sizes, according to the National Education Association of Nigeria, are the key reasons for the need for two trillion teachers in the next 11 years. The rates at which instructors leave or shift within the teaching profession

are far more pressing, and often startling. For schools all around the United States, finding and keeping skilled instructors has become a difficult undertaking. According to the findings from Goldring, Taie and Riddles (2001), the results from the U.S. Department of Education 2012-13 Teacher Follow-up Survey indicates that 20% of teachers either moved to another school or left teaching altogether. Chang (2011) estimates that 25% of first-year instructors leave the profession before their third year. More than one third of new or beginning teachers depart from their teaching jobs within the first 3 years, and more than one third to nearly half depart after 5 years. The Carnegie Forum on Education and the Economy reported that half of all teachers leave the profession within 7 years. This rate of teacher turnover appears to be higher in comparison to other professions and occupations. It is this rate of turnover, which causes concern for schools and districts as they are challenged with the problem of staffing schools.

Effectiveness of teachers has a crucial place in education and it is usually evaluated based on students' achievement. The focus of teacher effectiveness has been primarily on quality of teachers and how teachers instruct. Teachers are a basic part of educational system as having a vital and decisive role in the quality of education and how well students learn. There may be a common public perception that pupils' learning levels are linked to how much they study and do their homework. Nonetheless, several factors can influence students' success in course grades and general tests, or in other words, their academic achievement. The effectiveness of teachers in teaching their lessons is one of the most important school-related elements in improving students' performance and achievement. Therefore, it is worthwhile to examine the factors that impact teacher quality or teacher effectiveness and how such factors affect students' academic achievement eventually.

The teacher is the most important factor of the teaching-learning process. The teacher has the greatest impact on the school. He establishes the tone of the classroom and the group's attitude. He is the figure of authority who sets the tone for the group's behavior. He is a role model who is openly emulated. The Government of Pakistan in 2020 says that the teacher is the pivot of any education system. In fact, teachers are the strength of a nation. Teachers continue to retain their influence and it is difficult to bypass them in the process of teaching learning. The importance of teacher is recognized throughout the world. Good teachers are essential for the effective functioning of education system and for improving the quality of learning process. Job satisfaction enables teachers to put their best to do the assigned work. The maintenance of high satisfaction and morale has long been an important objective for educators.

During the recent past decades, a variety of explanations have been reported in the literature. There are those who believe that the teacher shortage is due to an increase in student enrollment and an increase in the number of teacher retirements. Although increases in both student enrollment and teacher retirement contribute to the need for more teachers, the data indicate that the need to hire new teachers is affected by teacher turnover. According to Boe (2005), teacher attrition is the most important factor in determining the requirement for extra teachers. Teacher turnover, which for the purposes of this study, includes attrition, migration, retirement, termination, and school staffing cutbacks due to layoffs, school closings, and reorganization, plays a significant role in what appears to be a seemingly shrinking supply of qualified teachers.

Purpose of the Study

The purpose of this study is to assess the role of teachers' quantity on students' academic achievement in secondary schools in Kaduna state of Nigeria. However, the study focuses on two quantity indices: small and excess. These served as the basis for the two research questions: First, what is the role of small teachers' quantity on students' academic achievement in secondary schools in Chikun LGA, Kaduna state? Second, what is the role of excess teachers' quantity on students' academic achievement in secondary schools in Chikun LGA, Kaduna state? A sample size of 120 was purposely selected from a population of 2502 due to events of insecurity in the area of examination.

Method

Sample and Sampling Technique

The population of secondary school teachers in Chikun local government is 2,502. The target population of the study comprised of secondary school teachers in Chikun local government which had 10 public secondary schools with 188 teachers. However, the schools were purposely sampled; the criteria of school sample were based on complete administrative structure, coeducational, location of school. The researcher used four (4) public secondary schools out of the total number of ten (10) public secondary schools in Chikun local government. A total of 120 staff in the four (4) public secondary schools in Chikun local government will be provided with questionnaire using a non-probability convenience sampling technique.

Instrument

A questionnaire for the head teachers and key officers was developed by the researcher. The questionnaire is preferred as an instrument of research because it is easy to administer. All the questions required answer based

on the Likert type-point scale of Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD) in order to elicit the quantitative data intended facilitate the analysis of respondents' opinions.

Design

The researcher used descriptive survey design for collecting data: Survey instruments were used because it involves a relatively large number of respondents (Amin, 2005). The survey instruments method was self-administered questionnaire. It was therefore important that the survey research design employed in this study were relevant not only to the research questions but also to the purposes of the research, a fact underlined by both Cohen et al., (2007) and Bryman (2004).

Also, the data collected from questionnaire will be analyzed by the use of descriptive statistics (frequencies and percentage). The descriptive analysis is appropriate for this study because it involved the description, analysis and interpretation of circumstances prevailing at the time of study.

Results

Analysis of Bio-data

This section presents information on bio-data of respondents in frequency distribution tables and simple percentages; which dwelled on items such as status, gender, ownership of school, type of school, and location of school in tables as follows:

Table 1: Status of Respondents

Category	Frequency	Percentage
Teachers	72	60
Non-academic staff	48	40
Total	120	100

Table 1 shows status of the respondents by category. The table shows that teachers have the highest frequency and percentage. Table 2 below is on gender of the respondents.

Table 2: Gender of Respondents

Category	Frequency	Percentage
Male	97	80.8
Female	22	18.3
Total	120	100

The above table shows gender of the respondents by category. The table shows that male have the highest frequency and percentage.

Research question 1: What is the role of small teachers' quantity on students' academic achievement in secondary schools in Chikun LGA, Kaduna state?

Table 3: Opinions of respondents on the role of small teachers' quantity on students' academic achievement in secondary schools in Chikun LGA, Kaduna state

S/N	Items	SA	A	D	SD	Mean	STD
1	One advantage of small teachers' quantity is that students familiarize themselves better with the teachers easily than when they are many, thereby influencing their academic achievement	15	26	48	31	2.04	1.14
2	Low numbers of teachers significantly charge available teachers to work diligently thereby improving students' academic achievement	46	48	24	2	3.36	1.01
3	Most schools with small number of teachers spend more of their funds in improving students' welfare and instructional aids	14	29	32	45	1.76	1.21
Cumulative Mean						2.83	

Source: field survey, 2022

Table 3 revealed an aggregate mean score of 2.83, which is an indication that majority of the respondents have a positive view of the role of small teachers' quantity on students' academic achievement in secondary schools. Item one, which expresses that one advantage of small teachers' quantity is that students familiarize themselves better with the teachers easily than when they are many, thereby influencing their academic achievement, received a majority opinion of disagree (48) and strongly disagree (31). However, 41 respondents either merely or strongly agree to that item. Simply put, with a decision mean of 2.04, there is an indication that majority of the respondents disagree with the item.

Also, item two, which expresses that Low numbers of teachers significantly charge available teachers to work diligently thereby improving students' academic achievement, received a majority opinion of agree (48) and strongly agree (46). However, 26 respondents either merely or strongly disagree to that item. Simply put, with a decision mean of 3.36, there is an indication that majority of the respondents agree that low numbers of

teachers significantly charge available teachers to work diligently thereby improving students' academic achievement.

Item three, which expresses that Most schools with small number of teachers spend more of their funds in improving students' welfare and instructional aids, received a majority opinion of strongly disagree (45) and disagree (32). However, 43 respondents either merely or strongly agree to that item. Simply put, with a decision mean of 2.76, there is an indication that majority of the respondents disagree that most schools with small number of teachers spend more of their funds in improving students' welfare and instructional aids.

Research question 2: What is the role of excess teachers' quantity on students' academic achievement in secondary schools in Chikun LGA, Kaduna state?

Table 4: Opinions of respondents on the role of excess teachers' quantity on students' academic achievement in secondary schools in Chikun LGA, Kaduna state

S/N	Items	SA	A	D	SD	Mean	STD
1	When there is an excess teachers' quantity, there is division of labour, which reduces the workload on subject teachers which in turn improve students' academic achievement	53	47	8	12	3.23	2.64
2	There is no single school with excess number of teachers except that students' academic achievement will keep improving	50	50	10	10	3.41	2.44
3	Teachers become lazy when they are many to share the same work thereby affecting students' academic achievement	32	7	49	32	1.24	2.01
Cumulative Mean						2.62	

Source: field survey, 2022

From table 4 above, item one showing a mean response of 3.23 clearly give an indication that majority of the respondents agreed that when there is an excess teachers' quantity, there is division of labour, which reduces the workload on subject teachers which in turn improve students' academic achievement.

Also, item two, which state that there is no single school with excess number of teachers except that students' academic achievement will keep improving, has a mean response of 3.41. This is also an indication that majority of the respondents agreed to that statement.

Lastly, item three, showing a mean response of 1.24 clearly give an indication that majority of the respondents disagreed that teachers become lazy when they are many to share the same work thereby affecting students' academic achievement.

Discussion

The discussion of the findings of this study were organized around the research questions formulated to guide the study.

In research question 1, the study sought to know the role of small teachers' quantity on students' academic achievement in secondary schools. It was therefore discovered that, sometimes when the teachers in any given school are low in numbers, the students familiarize themselves with them better than when there are a lot of them. What this further implies is that, when there is a single teacher to teach a single subject to a single class at a time, students tend to get use to his method of teaching and give a lot of attention than when there a more than one doing the same job. This slightly agrees with the findings of James (2013) who sees student-teacher closeness a means to good academic achievement. Also, it was found that teachers are intrinsically reinforced to do their jobs better in situations when there are just few of them on ground. Sometimes, teachers do not pay rapt attention to key duties as it relates to instructional functions when there are other persons that would automatically share or bear their job in case of any defects. Therefore, there is a need to, even if there are more than enough teachers on ground, clearly share individual duties without overlapping on the others' job. This will invariably help remove laziness and foster diligence among teachers. It was also found that most schools with small number of teachers do not see a need to spend more of their funds in improving students' welfare and instructional aids, thereby diverting their funds for other purposes.

Other the other hand, research question 2, which sought to assess the role of excess teachers' quantity on students' academic achievement in secondary schools, indicates a strong view of the need for a more-than-enough quantity of teachers in any given school. Part of what was discovered so far from the analysis is that – excess quantity of teachers allows for division of labour among available teachers, where workloads could be broken down such that individual teachers handles smaller parts for expertise and efficiency. Although there are some indications from the analysis of data that excess number of teachers tend to make teachers become lazy as some of them would neglect their responsibilities with the mindset that there are few others who would cover for them. This is in line with Adeoti (2016) who sees excess teachers in any given school as a waste of time, resources and funds.

Conclusion

From the foregoing, it can be concluded that most schools in the local government are underserved with teachers and that – that had created some sorts of low academic achievement among the secondary school students. Schools do not give a fair share of their revenue to improve staff strength in their schools. Schools that are characterized by a low number of teachers are faced by pressure, high work load, overstress etc. which invariably influence the poor academic achievement of students. However, schools with low number of teachers mostly facilitate high rate of students-teacher relationship such that – students familiarize themselves better with the teachers easily than when they are not many, thereby influencing their academic achievement.

Also, it was concluded that – low numbers of teachers significantly charge available teachers to work diligently thereby improving students' academic achievement. It is widely known that when there are enough teachers to share the job, there is going to be division of labour which would in turn lead to expertise, productivity and job accuracy. However, some teachers become lazy when there are more hands to do the job.

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