

Impact of Collaborative Instructional Leadership of Principals and Teachers on Students' Academic Performance in Secondary Schools in North Central Nigeria

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Abstract - *This study investigated the 'Impact of Collaborative Instructional Leadership of Principals and Teachers on Students' Academic Performance in Secondary Schools in North Central Nigeria'. It was guided by three specific objectives and three research questions. Three hypotheses were formulated and tested at 0.05 level of significance. The study adopted a survey research design and the study area was North Central Nigeria. The population of the study was 16671, comprising 972 principals and 15699 teachers from 972 public secondary schools in the states North Central Nigeria. The sample size for the study was 391 subjects, consisting of 36 principals and 355 teachers and it was drawn using Taro Yamen formula for sample size determination. The instrument used for data collection was structured questionnaire titled, "Impact of Collaborative Instructional Leadership on Students' Academic Performance Questionnaire (ICILSAPQ)" constructed by the researchers. The study used Mean and Standard Deviation to answer the research questions while Chi-square statistic was used to test the hypotheses at 0.05 level of significance. The mean of 2.50 and above was used to arrive at the decision level for the research questions. The study found that jointly providing incentives for teachers, providing incentives for learning, promoting professional development for teachers had impact on students' academic performance in secondary schools in North Central Nigeria. The study recommended that Ministries of Education in the states of North Central Nigeria are to ensure that incentives are given to teachers who are adjudged to have performed above others; that principals liaise with the Ministries of Education of affected states to ensure that adequate instructional materials, varieties of teaching methods, relevant textbooks, among others, are provided; and that both Federal and State Governments as employers through principals should provide training and re-training opportunities for teachers to improve in knowledge and methodology to enhance and sustain students' academic performance in secondary schools in North Central Nigeria.*

Keywords: Collaboration, instructional leadership, Principals and Teachers, Secondary Schools, North Central Nigeria.

Introduction

Education is perceived and recognised as the bedrock of individuals and societal development. No society neglects education and hopes to progress and advance among nations. Secondary school education is part and parcel of this entire gamut (the Nigeria educational system). According to the National Policy on Education (FRN, 2014: 14), "Secondary education is the education children receive after primary education and before the tertiary stage". It spells out the broad goals of secondary education to include preparing the individual for useful living within the society and for higher education. Its specific objectives include, among others, providing all primary school leavers with the opportunity for a higher level education; raising a generation of people who can think for themselves, respect the views and feelings of others and respect the dignity of labour. To achieve the objectives of secondary education in Nigeria, principals and teachers have vital instructional roles to play in enhancing and sustaining students' academic performance by collaborating.

Collaboration is the act of working together as a team towards achieving predetermined objective(s). Hord (2004) conceptualizes collaboration in schools as teams of teachers (professional learning communities) that learn from one another, and together share common goals, actively working towards accomplishing them. Collaboration between principals and teachers encourages redistribution of authority and decision making at different levels of the school. Likewise, collaboration among teachers increases communication and interaction among them, paving way to new ideas that would improve their instructional practice. The learning and the actions that follow this synergy are expected to improve instruction; and by implication, lead to improved students' academic performance.

The vital instructional leadership roles expected to be performed by principals and teachers as Hallinger's 2005 model of instructional leadership highlights include framing schools' goals, supervising instruction, protecting instructional time, providing incentives for teachers, providing incentives for learning, and promoting professional development for teachers. In this study the researchers interestedly picked three of these roles for investigation; namely, providing incentives for teachers, providing incentives for learning, and promoting professional development for teachers. Previous studies reveal that stakeholders in education have been bothered about students' poor academic performance and researchers have adopted different approaches of investigation with a view to finding solution to the problem (Yusuf, 2012; Okendu, 2012; Khoza, 2012; Nasrullah & Khan, 2015 and Abdurrahman & Garba, 2014). Most of such existing research reports suggesting ways and means of addressing the problem have attributed students' poor academic performance to students' study habits, poor time management, school plant and its maintenance, inadequate professional development of teachers as well as supervisory problem. In spite of efforts so far made to address the problem of students' poor academic performance, impact of collaborative instructional leadership of principals and teachers on students' academic performance appeared to have not yet been studied in North Central Nigeria. Further research was therefore required to establish the impact of collaborative instructional leadership of principals and teachers on students' academic performance. Consequently, the problem of this study was to investigate the impact of collaborative instructional leadership of principals and teachers on students' academic performance in secondary schools in North Central Nigeria.

Statement of the Problem

In recent times, students' academic performance in North Central Nigeria's secondary schools has been a major concern to parents, teachers and other stakeholders. It has been observed also that some secondary school principals lack collaborative instructional leadership strategy in administrating the schools, resulting in low quality instruction and affecting students negatively in academic performance. Up till this moment the problem is obvious and the performance of students in the study area has not significantly improved. If solution to the problem is not sought, the adverse effect of students' poor academic performance would persist. The researchers, therefore, conjectured the impact of collaborative instructional leadership of principals and teachers on students' academic performance as a further step towards proffering solution to the problem for investigation. The problem of the study, therefore, was to investigate the extent to which collaborative instructional leadership of principals and teachers impact on students' academic performance in secondary schools in North Central Nigeria.

Objective of the Study

The main objective of the study was to investigate impact of collaborative instructional leadership of principals and teachers on students' academic performance in secondary schools in North Central Nigeria. The specific objectives were to ascertain the extent of the impact of jointly

- i. providing incentives for teachers by principals and teachers on students' academic performance in secondary schools;
- ii. providing incentives for learning by principals and teachers on students' academic performance in secondary schools; and

- iii. promoting professional development of teachers by principals and teachers on students' academic performance in secondary schools.

Research Questions

The following research questions guided the study.

To what extent does jointly

- i. providing incentives for teachers by principals and teachers impact on students' academic performance in secondary schools?
- ii. providing incentives for learning by principals and teachers impact on students' academic performance in secondary schools?
- iii. promoting professional development for teachers by principals and teachers impact on students' academic performance in secondary schools?

Statement of Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

- i. Jointly providing incentives for teachers by principals and teachers has no significant impact on students' academic performance in secondary schools.
- ii. Jointly providing incentives for learning by principals and teachers has no significant impact on students' academic performance in secondary schools.
- iii. Jointly promoting professional development for teachers by principals and teachers has no significant impact on students' academic performance in secondary schools.

Significance of the Study

The results of this study would be beneficial to students, teachers, principals, policy makers in the Ministries of Education (MOEs) and researchers.

Students would benefit from teachers who are motivated through collective provision of incentives by principals and teachers instructionally; thereby improving and sustaining their academic performance. Teachers would benefit from provision of professional development by acquiring enhanced knowledge and skills through training and re-training on the job.

Principals would enjoy co-operation of teachers through collaborative provision of incentives for teachers.

The result of this study would help policy makers to pre-plan the training and re-training of teachers for effective instructional delivery thereby improving students' academic performance. The outcome of the study would help government to plan ahead for conducive learning environment and instructional materials for students' improved learning and performance. Researchers would benefit from the study as this study would form part of knowledge bank from which to draw data for further studies.

Scope of the Study

This study focused on investigation of 'impact of Collaborative Instructional Leadership of principals and teachers on Students' Academic Performance in secondary schools in North Central Nigeria. The content scope is impact of jointly providing incentives for teachers; providing incentives for learning and promoting professional development of teachers on students' academic performance in secondary schools in the North Central Nigeria. The study's geographical scope covered all public secondary schools in the study area.

Research Design

The research design adopted was survey design.

The Study Area

The area of the study was North Central Nigeria. Geographically, North Central Nigeria consists of six states (Benue, Kogi, Kwara, Nasarawa, Niger, and Plateau) and Abuja, the Federal Capital Territory (FCT).

Population of the Study

The population for the study was 16671, comprising 972 principals and 15699 teachers from 972 public secondary schools in the states in North Central Nigeria.

Sample and Sampling Technique

The sample for the study was 391 subjects, consisting of 36 principals and 355 teachers drawn from the population through Taro Yamen formula. The sampling technique for the study was multi-stage sampling technique. Simple Random Sampling technique was used to select three (3) states from the six (6) states and FCT. Three (3) Local Government Areas (LGAs) each were selected from the three (3) states, using Simple Random Sampling Technique. Therefore, the total LGAs sampled were 9 LGAs. Also, Simple Random Sampling Technique was used to select 4 Senior Secondary Schools from each of the 9 LGAs. The total schools sampled were 36 schools. Proportionate Stratified Random Sampling was used to determine 391 respondents for the study.

Instrument of Data Collection

The instrument used for data collection was 'Impact of Collaborative Instructional Leadership on Students' Academic Performance Questionnaire (ICILSAPQ)'. The questionnaire was a four-point rating scale researchers-made questionnaire, comprising 15 items sub-divided into three clusters, with the response modes of: Very High Impact (VHI) = 4 points; High Impact (HI) = 3 points; Low Impact (LI) = 2 points; and Very Low Impact (VLI) = 1 point.

Validation of the Instrument

The instrument (questionnaire) was validated by three experts, two from Educational Administration and Planning unit while one was from Test and Measurement unit of the Department of Educational Foundations and General Studies, Federal University of Agriculture, Makurdi, Benue State.

Reliability of the Instrument

To establish the reliability of the instrument, a trial test was conducted outside the study area. The data collected were subjected to statistical analysis, using the Cronbach Alpha Correlation Coefficient to determine the internal consistency of the instrument. The result of the trial test was as follows: cluster1 = 0.88; cluster2 = 0.87 and cluster3 = 0.77. The overall reliability estimate obtained was 0.84.

Method of Data Collection

The researchers with the aid of two research assistants administered 391 copies of the questionnaire to the respondents and retrieved them.

Data Analysis Techniques

Mean and Standard Deviation were used to answer the research questions, while Chi-square statistic was used to test the hypotheses at 0.05 level of significance; the decision rule being 2.50. Any mean that was 2.50 and above was accepted as having high impact and very high impact; and any mean

below 2.50 was accepted as having low impact and very low impact as follows: 3.50 – 4.00 Very High Impact (VHI); 2.50 – 3.49 High Impact (HI); 1.50 – 2.49 Low Impact (LI) and 0.50 – 1.49 Very Low Impact (VLI).

Results and Discussion

The analyses were carried out using descriptive statistic of mean and standard deviation to answer the research questions and Chi-square statistic to test the hypotheses at 0.05 level of significance.

Results

The results of the study were presented according to research questions answered and hypotheses tested as follows:

Research Question 1

To what extent does jointly providing incentives for teachers by principals and teachers impact on students’ academic performance in secondary schools in North Central Nigeria?

Table 1: Mean and Standard Deviation of Respondents on the Impact of Jointly Providing Incentives for Teachers by Principals and Teachers on Students’ Academic Performance in Secondary Schools in North Central Nigeria

No.	Items	N	VH E	HE	LE	VL E	Mea n	SD	Decision
1.	Providing teachers with adequate instructional materials motivates them to do better and this enhances students’ performance.	391	99	220	52	20	3.02	.810	High Extent
2.	Providing teachers with suitable and conducive office accommodation makes them to be committed to their work and consequently enhances students’ academic performance.	391	101	209	52	29	2.97	.871	High Extent
3.	Giving ‘Best Teacher of the Year Award’ to deserving teachers motivates other teachers to do their best and this improves students’ academic performance.	391	192	129	45	25	3.27	.937	High Extent
4.	Promoting deserving teachers makes them to work harder and this influences students’ academic performance.	391	97	229	40	25	3.02	.818	High Extent
5.	Giving financial rewards to teachers for students’ excellent academic performance motivates teachers to be dedicated to their duty for better academic performance.	391	92	197	62	40	2.86	.931	High Extent
Cluster Mean and Standard Deviation							3.03	0.870	High Extent

The data presented in Table 1 revealed that all the 5 items (1-5) had their mean values of 3.02, 2.97, 3.27, 3.02, and 2.86 with corresponding SD of .810, .871, .937, .818 and .931, respectively; thus indicating that their mean values were above the mean cut-off point of 2.50. Since the mean ratings of all the five items were above the cut-off point of 2.50, it implies that adequate instructional materials, suitable and conducive office accommodation, giving award to deserving teachers, promoting deserving teachers, and giving financial rewards to teachers for student’ excellent performance impact students’ academic performance. The cluster mean of 3.03 with SD of 0.870 indicates that jointly providing incentives for teachers by principals and teachers, to a high extent, impacts on students’ academic performance in secondary schools in the North Central Nigeria.

Research Question 2

To what extent does jointly providing incentives for learning by principals and teachers impact on students’ academic performance in secondary schools?

Table 2: Mean and Standard Deviation of Respondents on the Impact of Jointly Providing Incentives for Learning by Principals and Teachers on Students’ Academic Performance in Secondary Schools in North Central Nigeria

No.	Items	N	VH E	HE	LE	VL E	Mea n	SD	Remark s
6.	Equipped library/laboratory makes for conducive learning and improved students’ academic performance.	391	194	119	58	20	3.27	.930	High Extent
7.	Conducive classrooms make learning easier for students and enhance their academic performance.	391	90	218	53	30	2.94	.859	High Extent
8.	Teachers’ good rapport with students enhances academic performance of students.	391	179	109	63	40	3.10	1.06	High Extent
9.	Award of prizes to 3-best performing students in each class at the end of every session encourages students to study harder and perform better in examinations.	391	121	216	34	20	3.13	.800	High Extent
10.	Scholarship award to over-all best student leads to positive competition among students and this leads to higher performance.	391	79	222	65	25	2.90	.824	High Extent
Cluster Mean and Standard Deviation							3.07	0.890	High Extent

The data presented in Table 2 revealed that all the 5 items (6-10) had their mean values of 3.27, 2.94, 3.10, 3.13 and 2.90 with corresponding SD of .930, .859, 1.060, .800 and .824, respectively; thus indicating that their mean values were above the mean cut-off point of 2.50. Since the mean ratings of all the five items were above the cut-off point of 2.50, it implies that equipped library/laboratory, teachers’ good rapport with students, conducive classrooms, award of prizes to deserving students, and scholarship award to over-all best student impact students’ academic performance. The cluster mean of 3.07 with SD of 0.890 indicates that jointly providing incentives for learning by principals and teachers, to a high extent, impacts on students’ academic performance in secondary schools in the North Central Nigeria.

Research Question 3

To what extent does jointly promoting professional development for teachers by principals and teachers impact on students’ academic performance in secondary schools?

Table 3: Mean and Standard Deviation of Respondents on the Impact of Jointly Promoting Professional Development for Teachers by Principals and Teachers on Students’ Academic Performance in Secondary Schools in North Central Nigeria

No.	Items	N	VHE	HE	LE	VLE	Mean	SD	Remarks
11.	Teachers attending seminars to update their knowledge leads to improved teaching and students’ higher academic performance.	391	173	138	50	30	3.18	.968	High Extent
12.	Provision of in-service training for serving teachers to acquire higher certificates enables teachers acquire higher teaching skills for improved students’ academic performance.	391	191	122	58	20	3.26	.928	High Extent
13.	Teachers learning from one another in and outside their schools improves their teaching methods to the advantage of students’ academic performance.	391	98	200	63	30	2.93	.888	High Extent
14.	Teachers attending workshops to develop their skills and teaching proficiency leads to faster	391	99	220	52	20	3.02	.808	High Extent

	learning and better academic performance of students.									
15.	Teachers' self-professional development through reading of professional journals and studying modern technological devices make them to be proficient in teaching thereby improving students' academic performance.	391	101	209	52	29	2.97	.871	High Extent	
	Cluster Mean and Standard Deviation						3.07	0.890	High Extent	

The data presented in Table 3 revealed that all the 5 items (11-15) had their mean values of 3.18, 3.26, 2.93, 3.02 and 2.97 with corresponding SD of .968, .928, .888, .808 and .871, respectively; thus indicating that their mean values were above the mean cut-off point of 2.50. Since the mean ratings of all the five items were above the cut-off point of 2.50, it implies that teachers attending seminars to update their knowledge, in-service training for serving teachers, teachers learning from one another, teachers attending workshops to develop their skills and teaching proficiency, and teachers' self-professional development impact students' academic performance. The cluster mean of 3.07 and SD of 0.890 indicates that jointly promoting professional development for teachers by principals and teachers, to a high extent, impacts on students' academic performance in secondary schools in the North Central Nigeria.

Hypotheses Testing

The hypotheses of the study are tested using Chi-square (χ^2) statistic at 0.05 level of significance.

Hypothesis 1

Jointly providing incentives for teachers by principals and teachers has no significant impact on students' academic performance in secondary schools.

Table 4: Chi-Square Test of Impact of Jointly Providing Incentives for Teachers by Principals and Teachers on Students' Academic Performance in Secondary Schools in North Central Nigeria

	Df	$\chi^2\alpha$	Sig.	Alpha Level	Remark
Chi-square	13	372.53	0.000	0.05	S, R
Number of Valid Cases	391				

Df = degree of freedom, $\chi^2\alpha$ = chi-square calculated, Sig. = P-value; P < .05, S= Significant, R= rejected

Table 4 shows a Chi-square significant value of 0.000 which is less than the 0.05 level of significance and with 13 degree of freedom. Therefore, the hypothesis which states that jointly providing incentives

for teachers by principals and teachers has no significant influence on students’ academic performance in secondary schools was rejected. This indicates that jointly providing incentives for teachers by principals and teachers has significant impact on students’ academic performance in secondary schools in North Central Nigeria.

Hypothesis 2

Jointly providing incentives for learning by principals and teachers has no significant impact on students’ academic performance in secondary schools.

Table 5: Chi-Square Test of Impact of Jointly Providing Incentives for Learning by Principals and Teachers on Students’ Academic Performance in Secondary Schools in North Central Nigeria

	Df	$\chi^2\alpha$	Sig.	Alpha Level	Remark
Chi-square	13	348.521	0.000	0.05	S, R
Number of Valid Cases	391				

Df = degree of freedom, $\chi^2\alpha$ = chi-square calculated, Sig. = P-value; P < .05, S= Significant, R= rejected

Table 5 shows a Chi-square significant value of 0.000 which is less than the 0.05 level of significance and with 13 degree of freedom. Therefore, the hypothesis which states that jointly providing incentives for learning by principals and teachers has no significant impact on students’ academic performance in secondary schools was rejected. This indicates that jointly providing incentives for learning by principals and teachers has significant impact on students’ academic performance in secondary schools in North Central Nigeria.

Hypothesis 3

Jointly promoting professional development for teachers by principals and teachers has no significant influence on students’ academic performance in secondary schools.

Table 6: Chi-Square Test of Impact of Jointly Promoting Professional Development by Principals and Teachers on Students’ Academic Performance in Secondary Schools in North Central Nigeria

	Df	$\chi^2\alpha$	Sig.	Alpha Level	Remark
Chi-square	13	418.224	0.000	0.05	S, R
Number of Valid Cases	391				

Df = degree of freedom, $\chi^2\alpha$ = chi-square calculated, Sig. = P-value; P < .05, S= Significant, R= rejected

Table 6 shows a Chi-square significant value of 0.000 which is less than the 0.05 level of significance and with 13 degree of freedom. Therefore, the hypothesis which states that jointly promoting

professional development for teachers by principals and teachers has no significant impact on students' academic performance in secondary schools was rejected. This indicates that jointly promoting professional development for teachers by principals and teachers has positive and significant impact on students' academic performance in secondary schools in North Central Nigeria.

Summary of Major Findings

The following findings emerged from the research questions answered and hypotheses tested:

- i. Jointly providing incentives for teachers by principals and teachers has positive impact on students' academic performance in secondary schools.
- ii. Jointly providing incentives for learning by principals and teachers has positive impact on students' academic performance in secondary schools.
- iii. Jointly promoting professional development for teachers by principals and teachers has positive impact on students' academic performance in secondary schools.

Discussion of Findings

The finding of the study revealed that jointly providing incentives for teachers by principals and teachers has positive impact on students' academic performance in secondary schools in North Central Nigeria. This finding is in consonance with that of Okwo (2008) who revealed that some of the incentives for improving the work conditions of teachers included regular supervision of teachers, awarding annual rewards to teachers of outstanding performances in their subject disciplines, providing professional development opportunities and promoting teachers regularly. Similarly, it agrees with that by Kirunda (2008) that performance-based rewards affected the performance of teachers by motivating them and increasing their productivity and efficiency, that teachers' effectiveness could be improved through award of prizes to outstanding teachers, by providing adequate facilities and instructional materials; and by Osuigwe (2001) that teachers' instructional delivery could be improved by providing them with in-service training and by promoting and advancing teachers like their colleagues in other sectors of the civil service are consistent with the finding of this study.

The second finding of the study revealed that jointly providing incentives for learning by principals and teachers has positive impact on students' academic performance in secondary schools in the North Central Nigeria. The finding by Sharma (2011) that high-ability students had higher pass rates and earned significantly more credit points when assigned to (larger) reward groups, and that the effects increased and were statistically significant for both low- and high-ability students is consistent with the finding of this study.

The third finding of the study has revealed that jointly promoting professional development for teachers by principals and teachers has positive impact on students' academic performance in secondary schools in North Central Nigeria. The finding revealed similarity to the work of Iheanachor (2007) which indicated positive relationship between students' academic achievement in Mathematics and teachers' background (i.e. teachers' qualifications, subject majors and years of experience especially from six years of teaching). The finding by this study agrees with that of Parish (2013) which indicated that for 4th grade science teacher professional development participation in curriculum, instruction, and differentiation credit strands increased the chances for students to score above the district median on Curriculum-Based Assessments (CBAs). The larger number of professional development hours in a variety of credit strands had a negative impact on student achievement in 4th grade science. In 5th grade science, the students whose teacher spent more hours in professional learning for continuous improvement had an increased likelihood of scoring above the district median on CBAs.

Conclusion

Based on the findings of this study, it can be concluded that collaborative instructional leadership of principals and teachers by jointly providing incentives for teachers; providing incentives for learning and providing professional development for teachers have positive impact on students' academic performance in secondary schools in North Central Nigeria.

Recommendations

In view of the findings of the study, the following recommendations were made.

- i. Ministry of Education in the states of North Central Nigeria are to ensure that incentives are given to teachers who are assessed to have performed above others. The incentives can be letters of commendation, prizes, scholarships, among others, to motivate them in quality instructional delivery resulting in improved and sustained students' academic performance in secondary schools in North Central Nigeria.
- ii. Principals should liaise with the Ministries of Education of affected states to ensure that adequate instructional materials, varieties of teaching methods, relevant textbooks, among others, are provided while teachers are monitored (supervised) to ensure that students improve and sustain their academic performance in secondary schools in North Central Nigeria.
- iii. Both Federal and State Governments as employers through principals and teachers should provide training and re-training opportunities for teachers to improve in knowledge and methodology to enhance and sustain students' academic performance in secondary schools in North Central Nigeria.

Limitation of the Study

The study has obvious limitation.

As a survey study the validity of the results is a function of how sincerely, honestly and accurately the respondents were in their responses to the questionnaire. Whatever the limitation, the findings can be considered valid and beneficial.

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