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Assessment of Public Primary School Classroom Teachers' Subject Matter Competence in Southwestern Nigeria

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Abstract:

The study assessed public primary school classroom teachers' subject matter competence in Southwestern Nigeria. It also examined head teachers' perception of primary school classroom teachers' subject matter competence in English Language, Mathematics, Social Studies and Basic Science in Ogun, Ondo and Osun state, Nigeria. The study adopted descriptive survey research design. The sample comprised of 92 head teachers and 934 classroom teachers who were randomly selected. The data collected were analyzed using mean, standard deviation, percentage count, One Sample t-test and Paired t-test statistics. The results showed the following in public primary school classroom teachers' subject matter competence: English Language, below average (4.02), Mathematics, above average (5.94), Social Studies, excellent (7.28), Basic Science, above average (5.85) and head teachers' perception in each of the subjects as follows: English Language, poor (3.89), Mathematics, poor (3.68), Social Studies, poor (3.67) and Basic Science, poor (3.70).

The study concluded that classroom teachers' subject matter competence should be improved upon especially at the primary school setting.

Keyword: Assessment, Classroom competence, Subject matter competence

1. Introduction

The quality and level of excellence in education depend on the quality and competencies of teachers. The National Policy on Education NPE (NERDC, 2013), section 5, 92 (a) states that in recognition of the pivotal role of quality teachers in the provision of quality education at all levels, teacher education shall continue to be emphasized in educational planning and development. This implies that the Federal Government of Nigeria is keen at ensuring that teachers give their best in line with the country's curriculum specification.

Teacher classroom competencies refer to the knowledge, skills, attitudes, values and behaviour of teachers demonstrated in the classroom to foster positive classroom interaction. The question is 'Are Nigerian primary school teachers having the requisite subject matter competence that can add value to the primary school system? In fact, some teachers are said to lack the basic qualities that would ordinarily qualify someone to teach in the classroom. Igbuzor (2006), Enba and Anchor (2010) and Igbokwe (2016) mentioned that unqualified teachers, wrong knowledge of subject content among others are some of the areas that should be looked into critically for any meaningful teaching and learning to take place in the classroom.

According to Eyengho and Ogunti (2016), the primary school curriculum represents the total experiences to which all the learners must be exposed. This implies that the subject matter competencies of the classroom teachers at this level of the educational system should be called to play in the scheme of things. Classroom teachers' subject matter competence is a critical variable in improving

students' achievement, fostering and closing the achievement gap. The single most important influence on students' learning is the quality of teaching, yet most schools do not define what good teaching is (Danielson, 2006). In the operation of the school programme and in relation to teachers' expertise in the teaching and learning process, the competence of the classroom teachers are the activities directed toward standards, excellence and in line with specified curriculum programme in the school system. They are what classroom teachers can do and not what they know. Classroom teachers are expected to demonstrate classroom competence such as mastery of subject matter competence. Mastery of subject matter is the delivery of subject content, main ideas or themes. It is the foundation upon which teacher education programme is based. It contributes to the growth and development of the teacher. It is the knowledge of what is taught. It requires teachers to demonstrate mastery of multiple subject area(s) they intend to teach in the classroom especially at the primary school level. Darling-Hammond (2000) emphasized this as a reason for strong students' achievement and less public concern with teachers' effectiveness.

According to Eyengho (2016), the primary school is an important avenue through which the objectives of providing functional and comprehensive education to the citizenry could be employed and implemented. In Nigeria, as explicated in the NPE (NERDC, 2013), primary school education is the education given to children aged six to twelve years. This invariably implies that the defined population at this level of the educational system are the foundation upon which the other levels of the educational system in Nigeria rest, therefore, teachers designed for this level of learners should be efficient and competent in their chosen fields. The question is 'Are public primary school teachers competent in their field of studies? It is perceived that some public primary school teachers are incompetent in their subject areas thus the woeful performance of pupils in various examinations at the primary school level in Nigeria. Consequently, and taking into cognizance the Nigerian experience, there appears to be issues for consideration as to the public primary school classroom teachers' subject matter competence. Consequently, the present study is geared towards the assessment of public primary school classroom teachers' competence in Southwestern Nigeria.

1.1. Statement of the Problem

The primary school system in Nigeria is the foundation upon which all the other levels of education depend. The public primary school classroom teachers' subject matter competence is expected to be potential drivers in achieving the goals and objectives set out at the primary school level but it appears there are inconsistencies in the subject matter competencies of public primary school teachers in Nigeria. This perception in the subject matter competence of public primary school teachers may be due, among others, to inadequate training received by these teachers, lack of self-development by individual teachers, inadequate exposure to professional training, seminars, conferences, workshops, government indifference to teachers' needs and development and other stakeholders' negative views about the position of teachers in the total development of the child. Public primary school teachers are being accused of not playing their roles as expected and not displaying enough subject matter competence during the teaching learning process. Unfortunately, this seeming accusations and observations as it relates to classroom teachers' subject matter competence has not been adequately established; hence, the need for this study.

1.2. Purpose of the Study

The study assessed public primary school classroom teachers' subject matter competence in Southwestern Nigeria. The specific objectives of the study are to:

- (i) investigate the subject matter competence of public primary school teachers in English Language, Mathematics, Social Studies, and Basic Science, in Southwestern Nigeria; and
- (ii) examine head teachers' perception of public primary school classroom teachers' subject matter competence in English Language, Mathematics, Social Studies, and Basic Science, in Southwestern Nigeria.

1.3. Research Questions

Based on the objectives of this study, the following questions were asked and answered:

- (i) What are the subject matter competence of public primary school teachers in English Language, Mathematics, Social Studies and Basic Science, in the study area?
- (ii) What are the head teachers' perception of public primary school classroom teachers' subject matter competence in English Language, Mathematics, Social Studies and Basic Science, in the study area?

1.4. Research Hypotheses

Based on the objectives of the study, the following research hypotheses were generated and tested:

- i. There is no significant difference in the scores of selected public primary school teachers in Mathematics, English Language, Social Studies and Basic Science, in the study area.
- ii. There is no significant difference in head teachers' perception of public primary school classroom teachers' competence in English Language, Mathematics, Social Studies and Basic Science, in the study area.

2. Research Methodology

The study adopts a survey research design. A total number of 92 head teachers and 943 classroom teachers, teaching English Language, Mathematics, Social Studies and Basic Science were selected through simple random sampling technique among the three states in Southwestern Nigeria (Lagos, Ogun and Ondo States). The classroom teachers were purposively selected from primaries five and six respectively. In each school, twelve teachers and a head teacher were randomly selected. The researchers adopted and

administered structured achievement tests from previous Common Entrance Examinations in Nigeria. Structured questionnaires were also administered public primary school teachers on the assessment of teachers' subject matter competence. Questionnaire was employed in data collection. The criteria for assessment were coded as follows: Excellent- 7-10, Very good 6-7.0, Above average- 5.1-5.9, Average-5-5.0, Below average- 4-4.9, Poor- 3.3-3.9 and Fail- 0-3.

2.1. Research Findings

- Research Question 1: What are the subject matter competence of public primary school teachers in English Language, Mathematics, Social Studies and Basic Science, in the study area?

S/N	Variable Description		Frequency (f)	Percentage(%)	Total f (%)
1	Sex	Male	204	21.8	934 (100%)
		Female	730	78.2	
2	Highest Education	NCE	433	46.4	934(100%)
		Degree	501	53.6	
3	Length of Teaching	1-4yrs	62	6.6	934(100%)
		5-9yrs	241	25.8	
		10-14yrs	287	30.7	
		15yrs Above	344	36.8	
4	Subjects	English	378	40.5	934(100%)
		Maths	240	25.7	
		Social Studies	182	19.5	
		Basic Science	134	14.3	

Table 1a: Frequency and Percentage analysis of Teachers Demographic Data

Table 1a shows that 78% of the respondents were females while 28% were males. It also shows that 56% of the respondents were degree holders while 46.4% were NCE holders. The results revealed that teachers were more qualified in terms of certificate. The length of teaching experience varies. Teachers whose experience were 15 years and above had the highest percentage (36.8%), 10-14 years were 30.7%, 5-9 years were 25.8% and 1-4 years 6.6%. The percentage of classroom teachers that responded to English Language questionnaires were 40.5 %, Mathematics 25.7%, Social Studies 19.5% and Basic Science 14.3% respectively.

SN	Paired Subjects	$\bar{x} \pm SD$	N	df	t-cal	Sig.	Decision
Paired 1	English	4.02 ± 1.90	934	933	19.44	.000	Sig.
	Maths	5.94 ± 2.45					
Paired 2	English	4.02 ± 1.90	934	933	41.02	.000	Sig.
	SOS	7.28 ± 1.76					
Paired 3	English	4.02 ± 1.90	934	933	18.67	.000	Sig.
	Basic Science	5.85 ± 2.40					
Paired 4	Math	5.94 ± 2.45	934	933	18.67	.000	Sig.
	SOS	7.28 ± 1.76					
Paired 5	Maths	5.94 ± 2.45	934	933	14.51	.000	Sig.
	Basic Science	7.28 ± 1.74					
Paired 6	SOS	7.28 ± 1.76	934	933	14.63	.000	Sig.
	Basic Science	5.85 ± 2.40					

Table 1b: Means and Paired t-test Analysis of Teachers Scores in English Language, Mathematics, Social Studies and Basic Science $p < 0.005$

Result presented in Table 1b indicates that classroom teachers' subject matter competence in English Language was below average ($\bar{x} = 4.02$), teachers subject matter competence in Mathematics was above average ($\bar{x} = 5.94$), in Social Studies, it was excellent ($\bar{x} = 7.28$) and in Basic Science, it was above average ($\bar{x} = 5.85$). The highest level of competence was found among Social Studies teachers while the lowest was among English Language teachers.

- Research Hypothesis I: There is no significant difference in the scores of selected public primary school teachers in Mathematics, English Language, Social Studies and Basic Science, in the study area.

Table 1b shows that teachers competence in English Language differ significantly from Mathematics competence ($t = -19.44$, $df = 933$ and $p < 0.05$). Hence, the null hypothesis was rejected and an alternative hypothesis was upheld. It further revealed that the estimated mean score of teachers' competence in English Language which differs significantly from Social Studies teachers' competence ($t = -3.26$, $df = 933$ and $p < 0.005$). Hence, the alternative hypothesis was upheld. Teachers' competence in English Language differs significantly from teachers' competence in Basic Science ($t = -18.67$, $df = 933$ and $p < 0.05$). The null hypothesis was rejected. It shows that teachers' competence in Mathematics differs significantly from teachers' competence in social studies ($t = -14.51$, $df = 933$ and $p < 0.005$).

0.05). The null hypothesis was upheld. Classroom teachers' competence in mathematics differs significantly from teachers' competence in Basic Science ($t = .772$, $df = 933$ and $p < 0.05$). The null hypothesis was rejected. Teacher competence in Social Studies also differ significantly from Basic Science teachers' competence ($t = 14.63$, $df = 933$ and $p < 0.05$). Therefore, the null hypothesis was held.

- Research Question 2: What are the head teachers' perception of public primary school classroom teachers' subject matter competence in English Language, Mathematics, Social Studies and Basic Science, in the study area?

S/N	Variable Description		Frequency (f)	Percentage(%)	Total f (%)
1	Sex	Male	15	16.3	92 (1000%)
		Female	77	83.7	
2	Highest Education	BSC	48	52.2	92(100%)
		NCE	44	47.8	
3	Length of Teaching	1-4yrs	1	1.1	92(100%)
		5-9yrs	1	1.1	
		10-14yrs	13	14.1	
		15yrs Above	77	83.7	
4	Subjects	English	18	19.6	92(100%)
		Mathematics	25	27.2	
		Social Studies	27	29.3	
		Basic Science	22	23.9	

Table 2a: Frequency and Percentage analysis of Head Teachers Demographic Data

Table 2a shows the percentage analysis of head teachers' demographic characteristics. It shows that 83.7% of the respondents were females while 16.3% were males. The BSC holder were 52.2% while head teachers with NCE were 44%. The length of teaching experiences 15 years and above had highest percentage 83.7%, 10-14years was 14.1%, while 5-9 years and 1-4years were 1.1%. The head teacher that studied English Language was 19.6%, Mathematics 27.2%, Social Studies 29.3 and Basic Science 23.9%. This shows that the head teachers were qualified in terms of experience.

S/N	Subject Teacher	$\bar{x} \pm SD$	N	df	t value	Sig.	Decision
1	English teacher	3.89 ± .81	92	91	46.29	.000	Sig.
2	Maths teacher	3.68 ± 1.01	92	91	34.81	.000	Sig.
3	SOS teacher	3.67 ± .98	92	91	35.89	.000	Sig.
4	Basic teacher	3.70 ± .86	92	91	41.32	.000	Sig.

Table 2b: Mean and One- Sample t-test analysis of the Head Teachers' Perception of Classroom Teachers' Subject Matter Competence in English Language, Mathematics, Social Studies and Basic Science
 $p < 0.005$

Table 2b reveals that head teachers' perception of classroom teachers' subject matter competence in English Language was poor ($\bar{x} = 3.89$), Mathematics teachers' competence was poor ($\bar{x} = 3.68$), Social Studies teachers' competence was poor ($\bar{x} = 3.67$) and the Basic Science teachers' competence was also poor ($\bar{x} = 3.70$).

- Research Hypothesis II: There is no significant difference in head teachers' perception of public primary school classroom teachers' competence in English Language, Mathematics, Social Studies and Basic Science, in the study area.

Table 2b reveals that there is a significant difference in the head teachers' perception of classroom teachers' competence in English Language ($p < 0.05$). It also shows that head teachers' perception differs significantly from teachers' competence in Mathematics ($p < 0.05$). Also, difference was found in head teachers' perception and teachers' competence in Social Studies ($p < 0.05$). Difference was also found in head teachers' perception and teachers' competence in Basic Science ($p < 0.05$). Therefore, the null hypothesis which states that the perception of head teachers on classroom teachers' competence in English Language, Mathematics, Social Studies and Basic Science was not upheld. Hence, significant difference exists in head teachers' perception of classroom teachers' competence in English language, Mathematics, Social Studies and Basic Science.

2.2. Principal Findings

From the results presented in this study, the following principal findings are presented:

1. Public primary school classroom teachers' subject matter competence in English was below average.
2. Public primary school classroom teachers' subject matter competence in Mathematics was above average.
3. Public primary school classroom teachers' subject matter competence in Social Studies was excellent.
4. Public primary school classroom teachers' subject matter competence in Basic Science was above average.
5. Head teachers' perception of public primary classroom teachers' subject matter competence in English Languages, Mathematics, Social Studies and Basic Science were poor.

3. Discussion

Table 1b suggests that public primary school classroom teachers' subject matter competence in English Language was below average and it deserves attention because English language cuts across other subjects' disciplines except other languages. This is the more reason why English Language classroom teachers need to improve themselves in term of their subject matter competence. Isman (2005) stated that the essential components of any teaching and learning processes is the content development, which includes the creation of course materials, content modules, learning objects, resources, etc. He further suggested that teachers should possess quality knowledge in order to enrich their instructional design. Azarian, Yunus & Dahlan (2013) opined that the more knowledge or information one has enhanced effective planning and desirable outcomes.

Moreover, the results show that classroom teachers' subject matter competence in Mathematics was above average. Frank (2008) opined that the mastery of subject matter borders around the value of knowing everything about a subject, if a teacher does not have first-hand knowledge about a particular subject matter, how will students learn? or How will his teaching method give the best instructional strategies? Therefore, if his teaching strategies cannot deliver high quality knowledge of the subject matter, then, the entire process will be faulty.

Furthermore, classroom teachers' subject matter competence in Social Studies was excellent. The classroom teachers were knowledgeable in the subject matter and it makes teaching and learning objectives achievable.

In addition, classroom teachers' knowledge of subject matter competence in Basic Science is above average. Subsequently, teachers' competence in Basic Science makes learning experiences in primary schools relevant and practical. According to Joy-Telu (2013), assessment is carried out for the purposes of determining whether or not public-school teachers possess classroom competencies that involve an administrator (a principal, assistant principal or curriculum supervisor) visiting classrooms, recordings, observations and filling out checklists indicating whether the teachers have demonstrated several defined behaviours. This submission corroborates head teachers' perception of classroom teachers' competencies in this study. The results obtained from Table 2b also attested to the fact that classroom teachers' subject matter competence in English Language, Mathematics, Social Studies and Basic Science were poor. This is why Eyengho (2016) stated that contemporary education at all level are targeted toward developing the totality of the individual. This totality should cover all the aspects in education that will be of benefit to the learners.

4. Conclusion

The conclusion drawn from this study is that classroom teachers' subject matter competence is crucial in the teaching learning process especially at the primary school level. Though, there are variations in teachers' subject matter competence as typified in the four subjects examined in this study, stakeholders should pay adequate attention to effective training and retraining of teachers at all levels in order to improve on their subject competence and for the benefit of the learners.

5. Recommendations

The following recommendations were made based on the findings of the present study:

- (1) Classroom teachers should improve their subject matter competence through in-service training most especially English Language teachers.
- (2) Government should recruit more competent teachers in order to have enough hands to teach the four core subjects in the public primary schools in Nigeria.
- (3) Teachers should be encouraged and motivated to attend seminars, conferences and workshops that would enhance their professional development.

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