

Instructional Skills Possessed by In-Service Teachers in SouthWestern Nigeria

TAYO OMONIYI, ABIOLA LATEEF OLORI

Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria

Abstract. Parents, practitioners and policymakers agree that the key to improving public education in Nigeria is placing highly skilled teachers in all classrooms. However, studies reported that the challenges confronting Nigeria education system is attributed to some deficiencies in the structuring of teacher education, one of which is lack of needed instructional skills. It is in view of this that the study evaluated the instructional skills of in-service teachers in South West, Nigeria. The study further examined the extent to which teacher - factors such as teaching experience and academic qualifications influence possession of instructional skills.

The study adopted a survey research design. Five hundred and twenty five (525) teachers in seven (7) local government areas in the Southwestern Nigeria constituted the sample. An adapted and validated instrument “Teachers’ Instructional Skills Utilization Scale” ($r = 0.74$), was used for data collection. Data were analyzed using percentages, t- test and analysis of variance at 0.05 level of significance.

The study found that higher percentage of the participants possessed high instructional skills. The study found no significant difference in instructional skills possessed by experienced and less - experienced teachers. In terms of academic qualifications, there was no significant difference in analytical, design, development and evaluation skills possessed by the teachers.

However, there was significant difference in the implementation skills among teachers with different teaching qualifications. ($F(2, 522) = 3.408, p < 0.05$).

Amongst others, it was recommended that Education Degree Programmes in Nigeria should emphasis acquisition of instructional skills for teaching effectiveness. It was also recommended that workshop and in-service training should be provided for the less experienced teachers because it was found that experienced teachers recorded higher mean scores in the skill areas.

Keywords: Instructional Skills, In-Service Teacher, Teacher Education, Systems Approach to Instruction, Educational Technology.

1. Background to the Study

The quest for effective teaching and learning is a major concern in national discourse. Any meaningful development is said to be based on sound knowledge, values and skills acquisition and teachers occupy the centre stage in this process. Yonlofoun (2013) observed that some concerned citizens have attributed the falling standard of Nigerian education to lack of committed and competent teachers. Oren, Mioduser and Nachmias (2002) noted that if a teacher succeeds in making the entire instructional process clear, students will be able

to grasp difficult concepts easily. Calandra, Gurvitch, and Lund (2008) asserted that teachers should be able to design instructional activities such ways that students can transfer knowledge acquired to real life situations. Furthermore, the Partnership for 21st century skills (2005) stated that teacher education programmes must prepare teachers with sufficient instructional skills to use systems approach to present strategies, learning experiences and instructional materials that are concrete to the learners for learning objectives to be easily achieved.

According to Omoniyi (2005), successful implementation of the National Policy on Education depends largely upon qualitative teacher education, thus policy makers and curriculum planners should not ignore this fact. This reality was further stressed by the Federal Republic of Nigeria (2009; 2013) in the National Policy on Education which stipulated that "since no education system can rise above the quality of its teachers, teacher education programme shall continue to be given major emphasis in all educational planning and development". The policy further added that teacher education programmes shall be structured to equip teachers for effective performance and government will also provide the necessary impetus for the training of teachers in order to meet the present and future changes in curriculum and methodologies.

Lawless and Pellegrino (2007) noted that there are arguments by various researchers on what instructional skills teachers must possess for efficiency. For instance, Oloruntoyin and Olanloye (2011) observed that the identified instructional competence places emphasis on the skills related to the utilization of appropriate pedagogy in the classroom.

This study was guided by Systems Theory by Ludwig von Bertalanffy. He was very prominent in 20th Century science when he proposed the general system theory (*Allgemeine Systemlehre*). According to Bertalanffy (1968) the aim of systems theory is that there is tendency toward integration in the various sciences, natural and social. He considered the idea of organization involved at various levels in

the manifestation of natural systems. He formulated the theory of systems in general to account for similarities in the functioning of such diverse phenomena as living organisms, machines, galaxies and organizations. It was a unique departure from the earlier emphasis on separate analysis of individual parts. Systems approach is simply a complex of interacting components working together with the relationships among them that permit the identification of a boundary-maintaining entity or process. It focuses attention on the whole, as well as on the complex interrelationships among its constituent parts.

System approach grew out of organism biology; it however, soon branched into most of the humanities and education disciplines (Laszlo & Krippner, 1998). The systems approach to instruction is an educational technology concept attempting to conceive teaching process as event made up of several elements working together aimed at assisting teachers for effective and efficient delivery of instruction. It can be explained from the view point of systems approach to instruction (SAI) that what constitutes instructional skills should be in terms of the competence to facilitate human learning by systematic method of analyzing, designing, developing, implementing and evaluating the entire process of teaching - learning.

An important aspect of teacher instructional skill is the ability to analyze classroom situations, such as being able to identify learners' needs, figure out what caused the problem, understand students' incentives for behaving in particular ways, and also to take appropriate actions following this analysis (Mangal & Mangal, 2013). Bauer and Kenton (2005) opined that the design activities concern various aspects of curriculum and methodology leading to selection of content, learning experiences, methods and instructional materials. Development skills will assist teachers in the development of relevant lesson plan and useable learning materials for the students. The skills here include quality of the lesson plan developed in terms of sequencing and organization of the learning activities and the quality of the instructional materials. According to Olori (2014), instructional

implementation activities include systematic delivery of the lesson planned and the activities include use of set induction, planned repetition, use of examples and illustration, non-verbal communication, questioning, reinforcement, the use of instructional materials and closure. Evaluation is an essential teaching function because it gives feedback on the activities of a teacher with reference to attainment of the learning objectives (Campbell, Murphy & Holt, 2002). Evaluation skill is used by teachers to diagnose students' needs, to provide guidance, to group students, to grade students, to evaluate instruction, to motivate students and increase students' levels of achievement.

In the context of highlighted instructional skills, a graduate from any teacher training institution in Nigeria is considered to have acquired instructional skills during training through exposure to Educational Technology as a course. Botturi (2003), while stressing the importance of instructional skills in facilitating efficient teaching posited that many practicing teachers lack the required skills to analyze the learners, design and develop lessons, implement and evaluate the total processes involved in teaching-learning. However, other problems may be identified which may find their roots in the pattern of training for skill acquisition. For instance, Potter (2006) observed that there are variations in teaching approach by teachers, where some take the initiative to analyze learners' characteristics and produce relevant instructional materials, to others, talk and chalk are the only means used. Plair (2008) posited that sometimes, even if resources are available, learning that could have been enhanced may be impaired when teachers do not possess the adequate instructional skills. The quest for instructional skills that can be used by teachers to impact worthwhile changes in learners makes this study significant.

In order to function effectively in the classroom, teachers need sufficient instructional skills. However, there are diverse reports among researchers on the extent to which teachers are prepared with the skills to function effectively in the 21st century classroom. For instance, Adeyemi (2007) noted that since the National

Policy on Education in Nigeria emphasised the use of innovative ideas in the school setting, schools expect that graduates of teacher education programmes have reasonable skills on how to effectively analyze learners' need, design learning activities, develop lesson plan, select appropriate strategy, utilise various instructional media and evaluate the entire process.

Professionally trained teachers should be able to manage the instructional process in order to maximize learning opportunities for the students. More importantly, they should be skilled enough to select and use relevant and learner friendly technologies that could be matched with content and methodology. Nwachinemere (2006) opined that nowadays, teachers give attention to realistic, lifelike learning situations, which go well beyond word-of-mouth explanations by the teacher or words - in - print explanation of books. On the contrary, Mishra and Koehler (2006) in their study on technological, pedagogical and content knowledge noted that nowadays teachers are not well prepared to exhibit the expected instructional skills in the classroom. This inconclusive debate among researchers concerning the level of instructional skills provided by the teacher education institutions makes this investigation significant.

There are studies indicating that the use of instructional skills by teachers is significantly influenced by some teacher factors. For instance, the report by the National Centre for Education Statistics (2000) indicated that teachers with fewer years of teaching experience significantly use instructional skills in their classes more than teachers with more years of teaching experience. Owolabi, Oyewole, and Oke (2013) in their study on trainee teachers' ability to use instructional materials reported that those with prior teaching experience were found to be significantly more skilled in instructional materials utilization than those without prior teaching experience. In another study, Adeyemi (2007) conducted a survey on factors contributing to teachers' successful use of instructional materials in Nigerian schools. The findings revealed no significant difference

between experienced and less experienced teachers' competence in the use of instructional materials in the classroom.

There are studies indicating that there is no significant relationship between teachers' academic qualification and use of instructional skills. While some studies reported that teachers' academic qualification has significant influence on the use of instructional skills (Wright & Wilson, 2011), Bauer and Kenton (2005), in a study about quality of instructional delivery in schools found that teachers with higher qualification were significantly skilled than teachers with lesser qualification at overcoming obstacles in the classroom. Potter (2006; Lawless and Pellegrino, 2007) in their studies found no significant difference in analytical, design, development, implementation and evaluation skills of teachers based on academic qualification. Omoniyi and Quadri (2013) reported that academic qualification of teachers did not have any significant influence on teacher's competence in instructional media usage. In a study by Ojo (2005), it was reported that teachers with higher academic qualifications were found to be significantly competent in the use of instructional media than teachers with lesser academic qualifications.

2. Statement of the problem

Teacher education ideally involves inculcation of instructional skills to make for competent teachers. Such skills are to be found in the curriculum of Teachers' Grade II, Colleges of Education and Universities. With the phase out of Grade II Colleges in Nigeria and low patronage of Colleges of Education as reported in literature, the crop of teachers today are mostly those who started with University Degrees. If the instructional skills are of relevant for effectiveness, can it be said that those who started with first degree have acquired enough skills comparable to those who started with GradeII/NCE?

Therefore, this study sought to investigate the level of instructional skills possessed by in-service teachers of primary and secondary schools in Southwest Nigeria and the extent to

which teaching experience and academic qualifications influence possession of the instructional skills.

3. Research Question

What is the level of the in-service teachers' possession of instructional skills?

4. Hypotheses

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

H01: There is no significant difference between experienced and less experienced in-service teachers on instructional skills possessed.

H02: There is no significant difference in the instructional skills possessed by in-service teachers in terms of academic qualifications.

5. Significance of the study

The study provided reliable information that could assist education decision makers in providing relevant in-service training to upgrade teachers' instructional skills. It may assist instructional designers for teacher education programme to focus more on skill training for neophyte teachers on the use of systems approach in instruction to enhance their productivity.

6. Methodology

The study adopted a survey research design. The target population for the study comprised all professionally trained in-service teachers at public primary and secondary schools in Southwestern part of Nigeria. The sample consisted of 525 respondents. Multi-stage sampling technique was used in constituting sample for the study. Simple random sampling technique was used to select three states in Southwest, Nigeria. Proportional sampling technique was used to select ten percent (10%) of the Local Government Areas in each selected state. This gave three (3) LGAs in Oyo, two (2) LGAs in Lagos and two (2) LGAs in Ogun State. Random sampling technique was used to select five public schools in each local

government area and fifteen (15) teachers from each selected school.

This instrument Teachers' Instructional Skills Utilization Scale (TISUS) was an adaptation of Charlotte Danielson's (2007) framework for teaching skills to measure teachers' level of utilization of instructional skills. Section A sought background information about the teachers in terms of academic qualifications, years of teaching experience and area of specialization. The Section B of the instrument was a likert-type scale with four options ranging from 4 to 1 (very often, often, rarely and never) where the respondents were required to indicate how often they utilize the instructional skills in teaching and learning process. It consisted of five (5) parts which covered the analytical skills, design skills, development skills, implementation skills and evaluation skills.

In order to establish its face validity, the instrument was given to experts in Educational Technology and Educational Evaluation. The final draft was trial-tested on thirty (30) teachers similar in attributes with the participating teachers. Cronbach Coefficient Alpha's formula was used to analyze the responses and a value of 0.74 was obtained, meaning that the scale was internally consistent and reliable for the study. Copies of the instrument were administered by research assistants and this was monitored by the researchers to ensure that all copies of the questionnaire were duly returned. Percentage was used to answer the research question, while t - test and Analysis of Variance (ANOVA) were used to analyse hypotheses 1 and 2 respectively.

7. Results

Question 1: What is the level of in-service teachers' possession of instructional skills?

Table 1 : Frequency Distribution of Level to which the Teachers Possessed Instructional Skills

Instructional Skills	No. of Teachers with High Instructional Skills (%)	No. of Teachers with Low Instructional Skills (%)
Analytical skills	457 (87.0%)	68 (13.0%)
Design skills	447 (85.1%)	78 (14.9%)
Development skills	365 (69.5%)	160 (30.5%)
Implementation skills	314 (59.8%)	211 (40.2%)
Evaluation skills	433 (82.5%)	92 (17.5%)

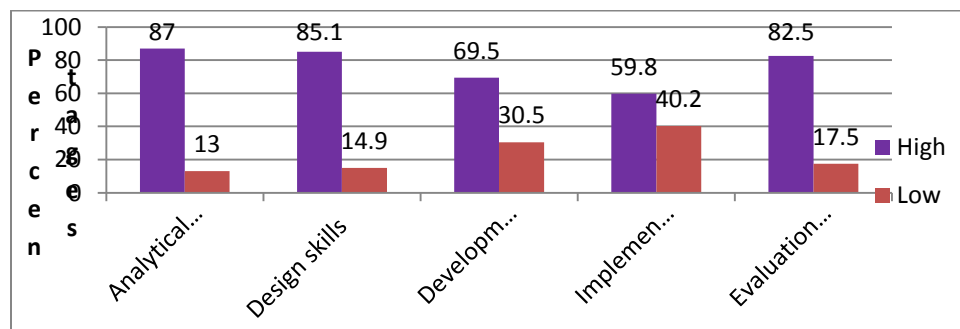


Figure1: Instructional Skills Level of the Teachers

Table one revealed that 87.0 % of the sampled teachers indicated possession of high analytical skills against 13.0 % with low analytical skills. In design skills, 85.1 % were high in the skills while 14.9 % were low in the skills. In development, 69.5 % indicated possession of high skills, while 30.5 % indicated lowly possession of the skills. Implementation, 59.8 % indicated high skills, while 40.2 % indicated low skills. In evaluation, 82.5% indicated high skills, while 17.5% indicated low skills. This result is graphically represented with the group bar chart in Figure one.

8. Hypotheses:

H01: There is no significant difference between the experienced and less experienced in-service teachers on instructional skills possessed.

Table 2: Summary of t-test Statistics Comparing Teachers' Level of Possession of Instructional Skills in Terms of Teaching Experience

Instructional Skills	Teaching Experience	N	Mean	SD	SD Error Mean	Df	t-cal	Sig. Val.
Analytical Skills	Less Experienced	178	17.0827	12.06	0.90412	2	1.561	0.179
	Experienced	347	17.9111	1.66	0.08885	522		
	Total	525				524		
Design Skills	Less Experienced	173	17.6427	1.56	0.11715	2	0.283	0.219
	Experienced	347	17.6854	1.68	0.09015	522		
	Total	520				524		
Development Skills	Less Experienced	178	16.9157	1.83	0.13681	2	0.615	0.517
	Experienced	347	17.0231	1.93	0.10349	522		
	Total	525				524		
Implementation Skills	Less Experienced	178	17.5620	3.66	0.27389	2	0.723	0.427
	Experienced	347	17.7303	1.68	0.09004	522		
	Total	525				524		
Evaluation Skills	Less Experienced	178	17.7089	5.21	0.39024	2	0.258	0.079
	Experienced	347	17.7865	1.50	0.08079	522		
	Total	525				524		

The results in table two indicates that there is no significant difference between experienced and less experienced teachers in the instructional skills possessed by them. In Analytical skills ($t = 1.561$, $P > 0.05$), Design skills ($t = 0.283$, $P > 0.05$), Development Skills ($t = 0.615$, $P > 0.05$), Implementation Skills ($t = 0.723$, $P > 0.05$) and Evaluation Skills ($t = 0.258$, $P > 0.05$). Thus the null hypothesis of significant difference was retained.

H02: There is no significant difference in the instructional skills possessed by the in-service teachers in terms of academic qualifications

Table 3: Summary of One Way Analysis of Variance Comparing Teachers' Level of Possession of Instructional Skills in Terms of Academic Qualifications

Instructional Skills	Academic Qualifications	N	Mean	SD	SD Error Mean	Sum Squares	Mean Square	df	F	Sig. Val.
Analytical Skills	GrdII+NCE+B.Ed/B.Sc (Ed)/B.A (Ed)	145	17.72	10.43	0.13102	2.507	43.253	2	0.844	0.430
	NCE+ B.Ed/B.Sc (Ed)/B.A (Ed)	241	17.64	1.36	0.67206	26739.825	51.226	522		
	B.Ed/B.Sc (Ed)/B.A (Ed)	139	17.42	1.58	0.11574	26826.33		524		
	Total	525	18.33	7.16	0.31227					
Design Skills	GrdII+NCE+B.Ed/B.Sc(Ed)/B.A (Ed)	145	17.77	1.84	0.15284	0.856	2.928	2	1.090	0.337
	NCE+ B.Ed/B.Sc (Ed)/B.A (Ed)	241	17.58	1.56	0.10069	1402.43	2.687	522		
	B.Ed/B.Sc (Ed)/B.A (Ed)	139	17.56	1.54	0.13081	1405.286		524		
	Total	525	17.66	1.64	0.07155					
Development Skills	GrdII+NCE+B.Ed/B.Sc (Ed)/B.A (Ed)	145	17.94	2.00	0.14602	1.813	4.906	2	1.372	0.255
	NCE+ B.Ed/B.Sc (Ed)/B.A (Ed)	241	17.85	1.90	0.12251	1867.099	3.577	522		
	B.Ed/B.Sc (Ed)/B.A (Ed)	139	17.62	1.76	0.16992	1876.907		524		
	Total	525	17.99	1.90	0.08260					
Implementation Skills	GrdII+NCE+B.Ed/B.Sc (Ed)/B.A (Ed)	145	17.98	1.72	0.14268	3.072	21.536	2	3.408	0.034*
	NCE+ B.Ed/B.Sc (Ed)/B.A (Ed)	241	17.32	3.21	0.20692	3298.738	6.319	522		
	B.Ed/B.Sc (Ed)/B.A (Ed)	139	17.11	1.70	0.14390	3341.810		524		
	Total	525	17.62	2.53	0.11022					
Evaluation Skills	GrdII+NCE+B.Ed/B.Sc (Ed)/B.A (Ed)	145	17.88	1.70	0.14132	1.911	4.956	2	0.164	0.629
	NCE+ B.Ed/B.Sc (Ed)/B.A (Ed)	241	17.63	4.51	0.29055	5572.287	10.675	522		
	B.Ed/B.Sc (Ed)/B.A (Ed)	139	17.59	1.41	0.11920	5582.198		524		
	Total	525	17.74	3.26	0.14245					

* indicates significant at < 0.05

The results in table three revealed that in terms of implementation skills the null hypothesis is rejected, meaning that there was significant difference in implementation skills of teachers ($F(2,522) = 3.408, P < 0.05$) but no significant difference was found in Analytical Skills ($F(2,522) = 0.844, P > 0.05$), Design Skills ($F(2,522) = 0.337, P > 0.05$), Development Skills ($F(2,522) = 1.372, P > 0.05$) and Evaluation Skills ($F(2,522) = 4.04, P > 0.05$). It was further revealed that in other instructional skills, teachers with Grade II+NCE+B.Ed./B.Sc. (Ed.)/B.A (Ed.) recorded highest mean score, followed by teachers with NCE+B.Ed./B.Sc. (Ed.)/B.A (Ed.), while teachers with B.Ed./B.Sc. (Ed.)/B.A (Ed.) recorded the lowest mean score.

9. Discussion

The success of any teacher education programme significantly depends on sufficient instructional skills provided in the curriculum. This is a known fact because a skillful, innovative and creative teacher is able to utilize required instructional skills by being able to analyze the learning tasks, design instructional process, develop lesson plan and materials, effectively implement instruction and evaluate the entire teaching - learning process.

The findings on research question one indicated that in terms of analytical, design, development, implementation and evaluation skills, majority of the teachers do highly possessed the instructional skills. This showed that majority of teachers in Nigeria possessed the competence to effective teach in the classrooms. This finding agrees with Nwachinemere (2006), who reported in a study that teachers in Sweden are undergoing training and re-training programmes and these have greatly helped them to develop competence in the use of instructional skills. This finding is supported by Oloruntoyin and Olanloye (2011) who observed that teacher education curriculum has been redesigned with provision of effective technological pedagogical and content knowledge (TPCK) and for teachers to be systematic in their instructional approach.

The finding in hypothesis one revealed no significant difference in the analytical, design, development, implementation and evaluation skills possessed by the less experienced and experienced teachers. This supports the study of Adeyemi (2007) who earlier reported no significant difference in the use of instructional media between experienced and less experienced teachers. The reason given is that the two groups of teachers were sufficiently exposed to training in educational technology.

Also, in this study, the findings from hypothesis two revealed that there is no significant difference in the analytical skills possessed by teachers with different academic qualifications. This implies that there is no significant difference among teachers with GrdII+NCE+B.Ed./B.Sc.(Ed.)/B.A(Ed.); NCE+B.Ed./B.Sc. (Ed.)/B.A(Ed.) and B.Ed./B.Sc. (Ed.)/B.A(Ed.) in terms of analytical, design, development and evaluation skills. This finding agreed with Lawless and Pellegrino (2007) who found that teachers' academic qualification has no significant influence on how well learning tasks are diagnosed by higher certificated and minimally certificated teachers. Potter (2006) in a study reported no significant difference in the lesson plan knowledge of highly qualified teachers and lowly qualified teachers. This result corroborates the study by Plair (2008) who reported that all teachers who have qualifications in teacher education possessed required skills in analyzing pupils' characteristics, content sequencing, instructional material development and the use of assessment in teaching.

Finding also revealed significant difference among teachers with GrdII+NCE+B.Ed./B.Sc.(Ed.)/B.A(Ed.); NCE+B.Ed./B.Sc.(Ed.)/B.A(Ed.) and B.Ed./B.Sc.(Ed.)/B.A(Ed.) in terms of implementation skills. This result supported the study of Cecilia (2007) where in an observation of teachers in technology enriched classroom, it was found out those teachers with higher teaching qualifications displayed expertise in using all types of technologies and strategies in the classroom than teachers with minimal qualifications. This result is also supported by

Botturi (2003) who reported that teachers with minimal qualification but with a rich packaged curriculum on integration of pedagogy and technology significantly display sufficient skills in implementation than teachers with higher qualification in teaching with poor teacher education curriculum package.

Finding also show no significant difference among teachers with GrdII+NCE+B.Ed./B.Sc.(Ed.)/B.A(Ed.); NCE+B.Ed./B.Sc. (Ed.)/B.A(Ed.) and B.Ed./B.Sc.(Ed.)/B.A(Ed.) in terms of evaluation skills. This result agreed with the survey study of McKinney, Chappell, Berry and Hickman (2009) which reported that all teachers with basic teaching qualification responded that they were able to use formative evaluation adequately in the classroom.

10. Conclusions

This study investigated the instructional skills of the in-service secondary schools teachers in southwest, Nigeria. The purpose was to investigate the level to which they possess analytical, design, development, implementation and evaluation skills so as to provide empirical support for decision to review policies on skill training of teachers. The findings of the study revealed that majority of the sampled teachers highly possessed instructional skills. The study primarily revealed that the quality of instructional skills provided by teacher education programmes seems to be sufficient to offer the 21st century skills needed by the Nigerian students.

11. Recommendations

Based on the findings of this study, the following recommendations are made:

- A policy of mentor-mentee relationship should be put in place by government whereby a newly employed teacher would be placed under the supervision of an experienced teacher for a period of one year in order to understudy the teacher to whom he has been assigned and gradually assumes the responsibility

of teaching. The reason for this is that even though there was no significant difference in the skills possessed by them, experienced teachers were found to have higher mean score than less experienced teachers.

- The teacher education programmes should be reviewed in Nigeria. In all faculties of education, course in educational technology should be increased to two and emphasis placed on acquisition of instructional skills in the design of the courses. The reason for this recommendation is that it was found that teachers with only B.Ed/B.Sc(Ed)/B.A(Ed) Degree have lowest mean score when compared with other qualifications and this result might be attributed to only one course the students offered in Educational Technology at the degree level only.

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