

TEACHERS' PROFESSIONAL COMPETENCIES IN PRACTICAL SKILLS AND KNOWLEDGE TRANSFER EXERCISES FOR EFFECTIVE INSTRUCTIONAL DELIVERY IN SECONDARY SCHOOLS IN NIGERIA

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ABSTRACT

This study investigated teachers' professional competencies in practical skills and knowledge transfer exercises for effective instructional delivery in secondary schools in Nigeria. Three research questions and three hypotheses guided the study. This study adopted a descriptive survey design with a population of this study comprised all the 5,050 teachers in the 202 public senior secondary schools in Abia State, Nigeria. A sample of 760 teaching staff was drawn using proportionate stratified random sampling technique. The instrument used in this study was Questionnaire tagged "Teachers' Professional Competencies in Practical Skills and Knowledge Transfer Exercises Questionnaire (TPCPSKTEQ)", which was validated and the reliability yielded an index of 0.88. In analyzing the data, mean and standard deviation were used to answer the research questions, while z-test was used in testing the hypotheses of no significant difference. The findings revealed among others that, teachers' practical skill competencies needed for effective instruction delivery in secondary schools in Nigeria include: practical skill in the conduct of empirical research for quality instruction, video conferencing for effective instructional delivery, social networking practices for instructional updates, virtual presentations during conferences for knowledge effectiveness, use of power point in teaching for instructional effectiveness, and use of magnetic boards for instructional enhancements. The test of hypothesis one showed that, no significant difference was found between the mean scores of male and female teachers on the teachers' practical skill competencies needed for effective instructional delivery in secondary schools in Nigeria. The study concluded that, competent teachers professionally transfer knowledge and skills to the learners for improved productivity and global competitiveness. It was recommended among others that, teachers of secondary schools should acquire various practical skills that would enable them to be professionally competent in the delivery of services for improved productivity.

Keywords: Teachers, professional competencies, practical skills, knowledge transfer, lesson planning, effective instructional delivery, secondary schools

INTRODUCTION

A teacher could be seen as an individual who has undergone a formal training in an academic institution and had obtained qualifications with specialized knowledge, which he transfers to

the learners for improved productivity. The teacher is an individual who has undergone a formal training programme with specialized knowledge, skills and ideas to perform the following tasks: planning of lesson notes,

writing of lesson note, effective delivery of lessons, proper monitoring and evaluation of students' performance, providing regular feedback on students' performance, improvisation of instructional materials, adequate keeping of records, and appropriate discipline of students to produce quality graduates (Madumere-Obike, Ukala & Nwabueze, 2017). According to Ehule, Ibara and Richard (2019), the teaching workforce is made up with teachers of different abilities, competences, potentials and motivational factors, which in most cases influence the levels of their teaching performance. Also, Ololube (2006) indicated that, teachers are expected to render a very high job performance to improve the standard of secondary education system.

Therefore, the purpose of any teacher in the classroom is to help learners learn, enquire new knowledge, solve problems, and cope with their own emotional needs and tensions for improved productivity. The teacher promotes effective instructional tasks from the domain of teaching and learning through creative idea, participation and cooperative learning, research, analysis and critical thinking, problem solving, innovation and encouragement of creative and divergent thinking (Madumere-Obike & Nwabueze, 2018). These lead to the proper development of knowledge, skills, attitude, values that enable students to function effectively and live as responsible citizens as well as make useful contribution to the development of society. All these can be achieved in the school system through teacher professional competencies in practical skills and knowledge transfer for proper lesson delivery.

This implies that, the teacher promotes effective instruction delivery from the domain of teaching and learning through creative idea, participation and cooperative learning, research,

analysis and critical thinking, problem solving, innovation and encouragement of creative, divergent thinking and participation in teacher professional development programmes. These indeed, lead to the proper development of knowledge, skills, attitudes and values that enable students to function effectively, and live as responsible citizens as well as make useful contribution in the society they found themselves (Chu, Wang & Yuen, 2011). However, teachers need to develop teaching/learning situations that are appropriate to the students concerned and the subject content with a view to developing the competencies targeted in the programmes of study (Nwabueze, Nnamaga & Nnamchi, 2019). They equally have to pilot teaching activities that are appropriate to the students, as well as evaluate students' progress in learning and mastering the related competencies as well as plan, organize and supervise a class in such a way as to promote students' learning and social development (Kwok-Wing, 2014). This would help them to engage in professional development individually and with others; demonstrate ethical and responsible professional behaviour in the performance of their duties, and become more competent in disseminating practical skills and knowledge transfer (Madumere-Obike, Ukala & Nwabueze, 2017).

Teacher professional competencies are very important factors that determine teachers' task performances in education industry for improved performance of students. This is because, it is on the professional competencies of the teachers that the success of educational endeavours depends for improved performance of students. The development of teachers' professional competencies is geared towards the improvement of knowledge and skills of the teaching staff in support of current role, which

prepare them for future role globally (Igoni & Nwabueze, 2021). The components of teaching staff competencies may include: being able to participate in scientific inquiry, having research skills, possession of practical knowledge, interpersonal relations skill and good communication and presentation skills in teaching (Nwabueze, Nnamaga & Nnamchi, 2019). Teaching competencies according to Uche and Nwabueze (2009), apply to teachers who have sufficient knowledge and understanding to fulfill their responsibilities for improved students' productivity. General competencies of a teacher according to Madumere-Obike, Ukala and Nwabueze (2015) can be defined as: ability to innovate, enquire and create during teaching and learning process; capacity to encourage a favourable atmosphere for the process of learning; capacity to face socio-cultural diversity during the process of teaching; team work capacity in the professional work of the teacher; capacity to self-criticize their role as a trainer and as teacher; skills to apply and facilitate knowledge; capacity to adapt, update and project as a teacher; and capacity to foster and encourage ethical development in the students (p.11).

The knowledge, skills and commitment of teachers as well as the quality of school leadership are the most important factors in achieving high quality educational outcomes. Competencies teachers need include: having specialist knowledge of the subject(s) they teach, and the necessary pedagogical skills to teach them. Others include: teaching to heterogeneous classes, making effective use of ICT, and helping students acquire transversal competencies (Nwabueze, Nnamaga & Nnamchi, 2019). However, there is need to promote certain key professional values and attitudes amongst teachers such as: reflective

practice, autonomous learning, engagement in research and innovation, collaboration with colleagues and parents, and an involvement in the development of the whole school to enhance teacher task performance (Madumere-Obike, Ukala & Nwabueze, 2015). A professionally competent teacher develops qualities such as curiosity, originality, initiative, cooperation, perseverance, open-mindedness, self-criticism, responsibility, self-confidence and independence (Madumere-Obike, Ukala & Nwabueze, 2017). Only when the teacher is capable of understanding and identifying with the child, that it can be said that teaching is indeed, a success. When this is accomplished, the students become more engaged and be able to think and utilize whatever is taught for academic progress and societal building.

Teachers' professional competency programmes upgrade the teachers to adopt a critical approach to the subject matter, establishes links between school managerial activities set out in the programme and students' performance functions; as well as transforms the classroom into an academic stand-point open to a range of different viewpoints within a common space. This implies that, teachers have to understand the subject-specific and programme-specific knowledge to be taught, so as to be able to promote the creation of meaningful links by the students; exhibit a critical understanding of his or her academic development and be aware of its potential and limitations; exhibit a critical understanding of the knowledge to be taught, so as to promote the creation of meaningful links by the students; and establish links with the students' expected outcomes in the proposed learning activities (Madumere-Obike, Ukala & Nwabueze, 2017). Equally, professionally competent teachers are supposed to use appropriate language when speaking to

students, parents and peers. They must observe rules of grammar and stylistics when writing texts intended for students, parents or peers, and be able to take up a position to support their ideas and argue the subject matter in a consistent, effective, constructive and respectful way during discussions (Oragwu & Nwabueze, 2015). They communicate ideas concisely using precise vocabulary and correct syntax as well as correct the mistakes students make when speaking and writing. However, they constantly strive to improve their own oral and written language skills through practical development and knowledge transfer exercises.

Attainment of such quality educational practices in the school system depends largely on the level of instructional delivery going on in school organization. Instructional delivery is all about “to instruct”. According to Schofield (2015), to instruct involves building into the mind, knowledge of facts, relations, rules or principles of one kind or another performed through instruction. Instruction is a process of communication of a certain kind, and that kind is one that includes: giving reasons, evidence and argument for the purpose of helping another to understand or arrive at the truth (Modebelu & Kalu-Uche, 2014). Instruction from the above definitions is closely related to teaching as it helps the learners to grab and understand how to relate with one another and become productive citizens. Instructional delivery therefore could be seen as statutory curricula function that is performed by the teachers to enable learners acquire knowledge, skills, ideas and attitudes to become productive in the system and outside the system. This ultimately depends on the commitment of teachers to make judicious and adequate use of both human and material resources to ensure effective service delivery in the teaching-learning process (Ayeni & Afolabi, 2012).

However, effectiveness is needed in the process of delivering instructions.

Effectiveness implies how appropriate someone is able to perform the duties attached or assigned to him irrespective of the gender of the incumbent or location. It enhances the achievement of teaching staff in the school system. It is an antecedent of role’s achievement of the teacher. It could also be identified as, a plan proposed for the accomplishment of educational objectives within a stipulated time or duration of school (Nwabueze, 2016). Instructional effectiveness is systematic process of carrying out instructional activities by teachers to equip the students with proper knowledge, skills and ideas needed for individual growth and global competitiveness. The transformative power of an effective teacher enhances instructional effectiveness and promotes students’ performance (Oragwu & Nwabueze, 2018). However, teachers that make school an exciting and interesting place for learners promote good understanding among students. Such teachers possess passion for their subjects and genuine care for the students they teach.

Effective instructional delivery however, is the ability of the teacher to demonstrate sound professional attributes like scholarship through adequate training, and it is pivotal to successful teaching, students’ learning outcomes and attainment of quality education in secondary schools. Effective instructional delivery can manifest in teacher’s knowledge of the subject-matter, skills and competences in the teaching and learning processes, which leads to the accomplishment of the stated educational goals (Madumere-Obike, Ukala & Nwabueze, 2017). This means that, a professionally competent teacher must possess the qualities and skills/competencies needed for effective teaching and pleasant

learning within the school setting (Ayeni & Afolabi, 2012). The teacher must know what to teach, how to teach, and whom to teach. The aim of effective instructional engagement in secondary school is to deliver the curriculum efficiently, so as to achieve the set goals and standards in schools for academic competitiveness. Effective instructional delivery occurs when the essence of instructional delivery has been accomplished through teaching at any of the three levels of education (primary, secondary and tertiary) in Nigeria. Effective instructional delivery at secondary school level therefore, refers to a situation where the goals of secondary education are attained through quality instruction delivery. At this level of education, teachers are the primary agents of effective instruction delivery and must be professionally competent to discharge their duties.

In order to ensure positive instructions in secondary schools, Withall and Nwabueze (2011) opined that, teachers have to create a psychologically non-threatening, non-inhibiting climate but at the same time, a cognitively challenging situation to help the learners predict the consequences of certain courses of action and identify if need be, alternative activities. Aside the knowledge of lesson plans, it is also imperative for the teacher to possess a good measure of self-understanding, psychological awareness and insight so as to be able to demonstrate expert quality in the performance of instructional tasks in secondary schools (Bottery, 2008).

This study will examine teachers' professional practical skills, teachers' knowledge transfer exercises, teachers' adequate lesson planning, and teachers' adequacy in the delivery of instruction. Practical skills imply the ability of a teacher to carry out all the laboratory practices in an

efficient manner. Knowledge transfer exercise is the capability to transfer, recognize, disseminate widely, and embody knowledge in the students (Edikpa, Nwabueze & Iremeka, 2018). This requires that, the institution develops effective knowledge harnessing, reuse, and learning from prior knowledge for quality instruction delivery and productivity.

Statement of the Problem

Teachers' poor possession of practical skills, knowledge transfer exercises, and adequate lesson planning skills affect their adequacy in the delivery of instruction in secondary schools in Nigeria. This could be as a result of poor involvements of teaching staff in professional competency programmes, which make them lack the knowledge/ capacity building to communicate effectively, manage time properly, present the expected knowledge to students, and maintain interpersonal relationships between them and the students. This may equally be as a result of lack of zeal with poor motivational strategies to be involved in professional development programmes, which retard the already acquired knowledge and skills as well as academic growth within the system. Therefore, this study investigates teachers' professional competencies in practical skills and knowledge transfer exercises for effective instructional delivery in secondary schools in, Abia State, Nigeria.

Purpose of the Study

The aim of this study is to investigate teachers' professional competencies in practical skills and knowledge transfer exercises for effective instructional delivery in secondary schools in, Abia State, Nigeria. Specifically, objectives of the study are to:

1. find out the extent to which teachers' professional competencies in practical skills enhance effective instructional

- delivery in secondary schools in Abia State, Nigeria;
- ascertain the extent to which teachers' professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria; and
 - examine the extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria.

Research Questions

The following research questions guided the study.

- What is the extent to which teachers' professional competencies in practical skills enhance effective instructional delivery in secondary schools in Abia State, Nigeria?
- What is the extent to which teachers' professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria?
- What is the extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria?

Hypotheses

The following hypotheses were tested at 0.05 significant level.

- There is no significant difference between the mean ratings of male and female teachers on the extent to which teachers' professional competencies in practical skills enhance effective instructional delivery in secondary schools in Abia State, Nigeria.
- There is no significant difference between the mean ratings of male and

- female teachers on the extent to which teachers' professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria.
- There is no significant difference between the mean ratings of male and female teachers on extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria.

METHODOLOGY

Design of the Study: This study adopted a descriptive survey design. Descriptive survey design concerns with matters that already exist and opinions that are held. It does not involve a manipulation of the situation, circumstances or experience of the participants. This type of survey is ascertaining and establishing the status quo, facts and figures at the time of research and present such facts as they are for productivity (Madumere-Obike & Nwabueze, 2018). The descriptive survey research utilizes a variety of instruments especially questionnaire and interview to guide the study. These tools are used to study significant differences between the variables under study.

Population: The population of this study comprised all the 5,050 teachers in the 202 public senior secondary schools in Abia State, Nigeria. There are 3,010 male and 2,040 female teachers in secondary schools in Abia State.

Sample and Sampling Technique: The sample was drawn from 100 schools in the state using simple random sampling technique representing 50% of the school population. This was done using balloting system. In the selected schools, 460 teaching staff was drawn using

proportionate stratified random sampling technique and this represented 9.1% of the population. This included 240 male teachers and 220 female teachers.

Instrument for Data Collection: The instrument used in this study was Questionnaire tagged “Teachers’ Professional Competencies in Practical Skills and Knowledge Transfer Exercises Questionnaire (TPCPSKTEQ)”, developed by the researchers. This questionnaire was designed to elicit information from teachers, which consisted of two sections; “A and B”. Section A comprised personal information such as gender, while section B consisted of three clusters’ questionnaire items structured based on the main variables of this study. Modified Likert four-point rating scale ranging from very high extent to very low extent was used to gather information from the respondents. Thus, Very High Extent = 4points, High Extent = 3points, Low Extent = 2points, Very Low extent = 1point

Validation of the Instrument: The instrument was face validated by three experts; two in Educational Administration and Planning, and one from Measurement and Evaluation, who assessed and validated the contents of the instrument. Their comments and observations were used to improve on the quality of instrument presented, which made it valid for administration.

Reliability of the Instrument: The reliability of the instrument was established using

Cronbach alpha to determine the internal consistency of the instrument on a sample of 30 teachers in public secondary schools in Enugu State, Nigeria. Thirty copies of questionnaire were administered to them once and the scores were tabulated and calculated using Cronbach alpha statistics, which yielded reliability indices (Coefficients) of 0.91 for cluster A; 0.83 for cluster B; and 0.90 for cluster C; having an overall reliability index of 0.88.

Method of data analysis: In analyzing the data, mean and standard deviation were used as the statistical tools to answer the research questions, while z-test was used in testing the hypotheses of no significant difference. Any mean score above the mean criterion of 2.50 is agreed upon, but below the mean criterion is disagreed upon. The acceptance or rejection of any of the null hypotheses was based on the critical value of z-test (± 1.96) and the calculated value at 0.05 alpha significant level. Thus, any z-calculated value below the z-critical value of ± 1.96 is accepted otherwise, rejected.

RESULTS

Answers to Research Questions

Research Question One: What is the extent to which teachers’ professional competencies in practical skills enhance effective instructional delivery in secondary schools in Abia State, Nigeria?

Table 1: Mean scores and standard deviation of respondents on the extent to which teachers’ professional competencies in practical skills enhance effective instructional delivery in secondary schools

S/N	Extent to which teachers’ professional competencies in practical skills enhance effective instructional delivery include:	Female (220)		Male (240)		Decision
		Mean	St.D	Mean	St.D	
1	Practical skill in the conduct of empirical research for quality instruction	3.61	0.67	3.63	0.82	Very High Extent
2	Practical skill on video conferencing for effective instructional delivery	3.42	0.69	3.40	0.85	Very High Extent

3	Practical skill in social networking practices for instructional updates	3.59	0.68	3.47	0.84	Very High Extent
4	Practical skill on virtual presentations during conferences for knowledge building	3.28	0.71	3.32	0.86	Very High Extent
5	practical skill on the use of power point in teaching for instructional effectiveness	3.30	0.70	3.20	0.88	Very High Extent
6	Practical skill on the use of magnetic boards for instructional enhancements	3.11	0.73	3.27	0.87	Very High Extent
Aggregate Mean		3.39	0.70	3.38	0.85	Very High Extent

N/B: Very High Extent = 3.01-4.0; High Extent = 2.50-3.00; Low Extent = 1.50-2.49; Very Low Extent = 0.01-1.49

Data in Table 1 present the mean scores and standard deviation of respondents on the extent to which teachers’ professional competencies in practical skills enhance effective instructional delivery in secondary schools in Abia State, Nigeria. Both male and female respondents agreed on the items in the table to a very high extent; and as represented in the table, it is shown that the higher the mean scores, the lower the standard deviation. Equally, the lower the mean scores, the higher becomes the standard deviation. The aggregate mean scores of 3.39 having standard deviation of 0.70 is for female respondents, while 3.38 having standard deviation of 0.85 is for male respondents. Therefore, the extent to which teachers’ professional competencies in practical skills

can enhance effective instructional delivery in secondary schools in Abia State, Nigeria include: adopting practical skills in the conduct of empirical research for quality instruction, video conferencing for effective instructional delivery, social networking practices for instructional updates, virtual presentations during conferences for knowledge building, use of power point in teaching for instructional effectiveness, and use of magnetic boards for instructional enhancements.

Research Question Two: What is the extent to which teachers’ professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria?

Table 2: Mean scores and standard deviation of respondents on the extent to which teachers’ professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools

S/N	The extent to which teachers’ professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools include:	Female (220)		Male (240)		Decision
		Mean	St.D	Mean	St.D	
7	Knowledge transfer exercise to assist teachers in proper planning of classroom instruction	3.44	0.68	3.28	0.88	Very High Extent
8	Equipping teachers with the right skills to transfer knowledge into students	3.26	0.71	3.22	0.88	Very High Extent
9	Acquiring series of ideas to promote learning	3.29	0.70	3.13	0.89	Very High Extent
10	Becoming creative in their subject areas for knowledge building	3.39	0.69	3.13	0.89	Very High Extent
11	Managing academic time appropriately for knowledge sharing processes	3.31	0.70	3.30	0.87	Very High Extent
12	Promoting innovative ideas of handling students in classroom interactions	3.22	0.72	3.17	0.89	Very High Extent
13	Acquiring the knowledge of operating new educational resources like technology resources for teaching/research	3.03	0.74	3.03	0.91	Very High Extent
14	Acquiring the knowledge to utilize available teaching aids in classroom activities	3.13	0.73	3.10	0.90	Very High Extent

15	Acquiring the skills of writing of lesson notes for improved performance	3.12	0.73	3.15	0.89	Very High Extent
16	participating in professional development programmes for knowledge building	3.21	0.72	3.35	0.86	Very High Extent
17	Being involved in team teaching for effective instructional task performance	3.07	0.74	3.07	0.90	Very High Extent
18	Being versatile in using practical applications for teaching practices	3.08	0.74	3.13	0.89	Very High Extent
19	Contributing to the knowledge advancement through classroom instructions	2.94	0.75	3.00	0.91	High Extent
Aggregate Mean		3.19	0.72	3.16	0.89	Very High Extent

Data in Table 2 present the mean scores and standard deviation of respondents on the extent to which teachers’ professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria. Both male and female respondents accepted on the items in the table to a very high extent; and as represented in the table, it is shown that the higher the mean scores, the lower the standard deviation. Equally, the lower the mean scores, the higher becomes the standard deviation. The aggregate mean scores of 3.19 having standard deviation of 0.72 is for female respondents, while 3.16 having standard deviation of 0.89 is for male respondents. Therefore, the extent to which teachers’ professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria include: assisting the teachers to plan their classroom instructions properly, equipping them with the right skills to transfer knowledge to students, acquiring series of ideas to promote learning during classroom instruction, becoming more creative in their

subject areas for knowledge building, managing their academic time appropriately for knowledge sharing processes, promoting innovative ideas of handling students in classroom interactions, and the knowledge of operating new educational resources like technology resources for teaching/research. It equally helps them in sharing knowledge to students using available teaching aids in classroom activities, acquiring the skills of writing lesson notes for improved performance, participating in professional development programmes for knowledge building, being involved in team teaching for effective instructional task performance, being versatile in using practical applications to support the theoretical assumptions during teaching, and contributing maximally to knowledge advancement during classroom instructions.

Research Question Three: What is the extent to which teachers’ professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria?

Table 3: Mean scores and standard deviation of respondents on the extent to which teachers’ professional competencies in lesson planning enhance effective instructional delivery in secondary schools

S/N	The extent to which teachers’ professional competencies in lesson planning enhance effective instructional delivery in include:	Female (220)		Male (240)		Decision
		Mean	St.D	Mean	St.D	
20	Planning lesson before teaching the learners to avoid failure, but achieve success	3.28	0.71	3.10	0.89	Very High Extent

21	Ensuring proper skills of providing teaching and learning resources to enhance instructional effectiveness	3.25	071	3.00	0.90	Very High Extent
22	Planning lesson with knowledge and understanding of modern teaching approaches to enhance effective instructions	3.29	0.71	2.98	0.91	Very High Extent
23	Planning creative and innovative lesson methods that are critically minded to explore unknown areas and enhance effective instruction	3.12	0.73	3.08	0.90	Very High Extent
24	Planning to enable the teacher achieve the objectives of the curriculum	3.08	0.74	3.07	0.90	Very High Extent
25	It helps the teacher to progress gradually from simple to complex issues for effective instructional delivery	3.09	0.74	3.08	0.90	Very High Extent
26	Planning of lesson helps the teacher to identify the skills, knowledge and attitude the learners must acquire within the time of teaching	3.14	0.73	3.07	0.90	Very High Extent
27	It helps to outline clearly the step-by-step procedures to follow while teaching	3.11	0.73	3.15	0.89	Very High Extent
28	Mapping out evaluation strategies to enhance effective instructional competitiveness	3.23	0.71	3.13	0.89	Very High Extent
Aggregate Mean		3.18	0.72	3.07	0.90	Very High Extent

Data in Table 3 present the mean scores and standard deviation of respondents on the extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria. Both male and female respondents agreed on the items in the table to a very high extent; and as represented in the table, it is shown that the higher the mean scores, the lower the standard deviation. Equally, the lower the mean scores, the higher becomes the standard deviation. The aggregate mean scores of 3.18 having standard deviation of 0.72 is for female respondents, while 3.07 having standard deviation of 0.90 is for male respondents. Therefore, the extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria is very high. They include: planning lesson before teaching the learners to avoid failure but achieve success, ensuring proper skills of providing teaching and learning resources to enhance instructional effectiveness, planning

lesson with knowledge and understanding of modern teaching approaches to enhance effective instructions, planning creative and innovative lesson methods that are critically minded to explore unknown areas and enhances effective instruction, planning to enable the teacher achieve the objectives of the curriculum, planning to help the teacher to progress gradually from simple to complex issues for effective instructional delivery, planning to help the teacher identify the skills/knowledge and attitude the learners must acquire within the time of teaching, outlining clearly the step-by-step procedures to follow while teaching, and mapping out evaluation strategies to enhance effective instructional competitiveness.

Test of Hypotheses

Hypothesis One: There is no significant difference between the mean ratings of male and female teachers on the extent to which teachers' professional competencies in practical skills enhance effective instructional delivery in secondary schools in Abia State, Nigeria.

Table 4: Summary of z-test analysis between the mean scores of male and female teachers on the extent to which teachers' professional competencies in practical skills enhance effective instructional delivery in secondary schools

Gender	N	Mean	St. Dev.	df	z-calculated	z-critical	Decision
Male teachers	240	3.38	0.85	458	-0.914	±1.96	Accepted
Female teachers	220	3.39	0.70				

Data in Table 4 present the summary of z-test analysis on the difference between the mean scores of male and female teachers on the extent to which teachers' professional competencies in practical skills enhance effective instructional delivery in secondary schools in Abia State, Nigeria. The z-calculated value of -0.914 is less than the z-critical value of ±1.96 and therefore, was accepted at 0.05 alpha significant level. Therefore, no significant difference was found between the mean scores of male and female teachers on the extent to

which teachers' professional competencies in practical skills enhance effective instructional delivery in secondary schools in Abia State, Nigeria.

Hypothesis Two: There is no significant difference between the mean ratings of male and female teachers on the extent to which teachers' professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria.

Table 5: Summary of z-test analysis between the mean scores of male and female teachers on the extent to which teachers' professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria

Gender	N	Mean	St. Dev.	df	z-calculated	z-critical	Decision
Male teachers	240	3.16	0.89	458	-0.697	±1.96	Accepted
Female teachers	220	3.19	0.72				

Data in Table 5 present the summary of z-test analysis on the difference between the mean scores of male and female teachers on the extent to which teachers' professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria. The z-calculated value of -0.697 is less than the z-critical value of ±1.96 and therefore, was accepted at 0.05 alpha significant level. Therefore, no significant difference was found between the mean scores of male and female

teachers on the extent to which teachers' professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria.

Hypothesis Three: There is no significant difference between the mean ratings of male and female teachers on the extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria.

Table 6: Summary of z-test analysis between the mean scores of male and female teachers on the extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria

Gender	N	Mean	St. Dev.	df	z-calculated	z-critical	Decision
Male teachers	240	3.07	0.90	458	-1.127	±1.96	Accepted
Female teachers	220	3.18	0.72				

Data in Table 10 present the summary of z-test analysis on the difference between the mean scores of male and female teachers on the

extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary

schools in Abia State, Nigeria. The z-calculated value of -1.127 is less than the z-critical value of ± 1.96 and therefore, was accepted at 0.05 alpha significant level. Therefore, no significant difference was found between the mean scores of male and female teachers on the extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria.

DISCUSSION OF FINDINGS

Teachers' professional competencies in practical skills:

The findings of this study revealed that, the extent to which teachers' professional competencies in practical skills can enhance effective instructional delivery in secondary schools in Abia State, Nigeria include: adopting practical skills in the conduct of empirical research for quality instruction, video conferencing for effective instructional delivery, social networking practices for instructional updates, virtual presentations during conferences for knowledge building, use of power point in teaching for instructional effectiveness, and use of magnetic boards for instructional enhancements. The test of hypothesis one showed that, no significant difference was found between the mean scores of male and female teachers on the extent to which teachers' professional competencies in practical skills enhance effective instructional delivery in secondary schools in Abia State, Nigeria. These practical skills when acquired equip them with new knowledge and skills to teach, research, collaborate, administer and manage educational resources in the school system. Madumere-Obike, Ukala and Nwabueze (2017) revealed that, academic staff of higher institutions need to be equipped with professional practical skill competencies that can enhance their instructional task

performances such as having specialized knowledge of courses to teach, adopting proper use of ICT devices in teaching/research to enhance quality instructional delivery, making proper use of instructional materials during teaching to facilitate quality instruction, and engaging in innovative activities related to education to enhance knowledge creativity among students. Uwameiye and Titilayo (2012) supported this by saying that teachers need improvement in instructional planning, implementation and evaluation skills, as well as in core Business skills in relation to the teaching of office practice, shorthand and keyboarding as well as in commerce, bookkeeping and ICT in the school system.

This implies that, teachers must possess practical skill competencies to improve their service delivery for institutional productivity. Such practical skill competence includes using technology devices and application of good teaching methodologies in classroom instructions for knowledge transformation. This agrees with the findings of Madumere-Obike, Ukala and Nwabueze (2015) who revealed that teachers must possess the knowledge and management skills of capturing and updating their knowledge for proper curriculum delivery, setting up a knowledge approach to adapt to the new inventions/technological devices and apply them in teaching, and mobilizing a knowledge network for academic purposes among lecturers. These would help them ensure that the right information gets to the right people at the right time for appropriate knowledge transfer, improving operational efficiency of institutions and the staff, increasing innovation rate among facilitators, promoting facilitators' growth through current learning using the modern technologies, and improving team communication among them for capacity building.

Teachers' professional competencies in knowledge transfer exercises:

The findings of this study equally revealed that, the extent to which teachers' professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria include: assisting the teachers to plan their classroom instructions properly, equipping them with the right skills to transfer knowledge to students, acquiring series of ideas to promote learning during classroom instruction, becoming more creative in their subject areas for knowledge building, managing their academic time appropriately for knowledge sharing processes, promoting innovative ideas of handling students in classroom interactions, and the knowledge of operating new educational resources like technology resources for teaching/research. It equally helps them in sharing knowledge to students using available teaching aids in classroom activities, acquiring the skills of writing lesson notes for improved performance, participating in professional development programmes for knowledge building, being involved in team teaching for effective instructional task performance, being versatile in using practical applications to support the theoretical assumptions during teaching, and contributing maximally to knowledge advancement during classroom instructions. The test of hypothesis two showed that, no significant difference was found between the mean scores of male and female teachers on the extent to which teachers' professional competencies in knowledge transfer exercises enhance effective instructional delivery in secondary schools in Abia State, Nigeria. However, teachers' involvement in knowledge transfer exercise helps them to be productive in the delivery of

their jobs for quality outputs in secondary schools.

Knowledge transfer exercises needed by teachers could be, becoming extremely creative in their subject areas, supporting innovative ideas on teaching methodology, operating technology resources during academic instructions, making use of teaching aids in classroom activities, and becoming very active in research for individual growth and institutional developments. This can help them in becoming versatile in using practical applications to support the theoretical assumptions during academic instructions and research development. In line with the findings, Oboegbulem (2013) revealed that, the application of knowledge transfer exercise improves instructional programmes by giving courage and support to facilitators of learning for proper service delivery. Madumere-Obike and Nwabueze (2012) revealed that, the approaches to knowledge transfer exercises include organization of seminars, inaugural lectures, conferences, workshops, cooperative and collaborative learning, online social networking and project/capacity building.

Teachers' professional competencies in lesson planning:

The findings of this study finally revealed that, the extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria is very high. They include: planning lesson before teaching the learners to avoid failure but achieve success, ensuring proper skills of providing teaching and learning resources to enhance instructional effectiveness, planning lesson with knowledge and understanding of modern teaching approaches to enhance effective instructions, planning creative and innovative lesson methods that are critically

mind to explore unknown areas and enhances effective instruction, planning to enable the teacher achieve the objectives of the curriculum, planning to help the teacher to progress gradually from simple to complex issues for effective instructional delivery, planning to help the teacher identify the skills/knowledge and attitude the learners must acquire within the time of teaching, outlining clearly the step-by-step procedures to follow while teaching, and mapping out evaluation strategies to enhance effective instructional competitiveness. The test of hypothesis five showed that, no significant difference was found between the mean scores of male and female teachers on the extent to which teachers' professional competencies in lesson planning enhance effective instructional delivery in secondary schools in Abia State, Nigeria.

However, lesson planning is essential to the process of teaching and learning. A teacher who is prepared is well on his/her way to a successful instructional experience. The development of interesting lessons takes a great deal of time and effort. In line with the findings, Nwabueze (2016) stated that, it is important to realize that the best planned lesson is needed in teaching with interesting delivery procedures, along with good classroom management techniques; these are skills that must be researched, structured to individual style, implemented in a teacher/learning situation, and constantly evaluated and revamped when necessary.

CONCLUSION

This study had shown that competent teachers professionally transfer knowledge and skills to the learners for improved productivity. Professionally competent teachers show excellent skill in the planning of lesson, practical skills in the delivery of knowledge, pedagogical content skill in knowledge transfer,

skills in the creation of knowledge for productivity, and skills in the transfer of knowledge for quality output. They equally practicalize their skills in research and development for knowledge building, leadership practices for institutional growth, and good communication network for instructional enhancement.

RECOMMENDATIONS

Based on the findings, the following recommendations were made.

1. Teachers of secondary schools should acquire various practical skills that would enable them to be professionally competent in the delivery of services for improved productivity.
2. Principals should assist the teachers to be involved in professional development programmes that would improve their practical skill competencies in empirical research, video conferencing, social networking practices, virtual presentations during conferences and workshops, power point presentations in teaching to improve their task performances for effective instructional delivery.
3. They should equally know how to use magnetic white boards to make teaching more interesting, apply information and communication technology practices in academic instructions for knowledge understanding, and use internet packages in classroom instructions for knowledge transformation.
4. Teachers should regularly be involved in knowledge transfer exercises to be equipped with the right skills to transfer knowledge to students, acquire series of ideas to promote learning during classroom instruction, become more creative in their subject areas, promote innovative ideas of handling students in classroom

interactions, and assist students with the knowledge of operating technological resources during teaching.

5. Teachers should be professionally competent in planning their lessons to enhance effective instructional delivery in secondary schools by planning lesson before teaching the learners to avoid failure but achieve success, ensuring proper skills of providing teaching and learning resources to enhance instructional effectiveness, planning lesson with knowledge and understanding of modern teaching approaches to enhance effective instructions, and planning creative and innovative lesson methods that are critically minded to explore unknown areas to enhance effective instruction.

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