

# Pedagogical Skills, Self-Efficacy and Content Knowledge Need For Shorthand Instructional Delivery of Lecturers in Public Tertiary Institutions in Niger State, Nigeria

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## ABSTRACT

*This study assessed the pedagogical skills, self-efficacy and content knowledge need for shorthand instructional delivery of lecturers in public tertiary institutions in Niger State, Nigeria. Three specific objectives and three research questions guided the study. Similarly, three null hypotheses were formulated and tested at 0.05 level of significance. The study covered shorthand lecturers from sixty public tertiary institution offering shorthand in Northern Nigeria. The design for the study was descriptive survey and the population was 125 shorthand lecturers. The entire 125 shorthand lecturers were used for the study. The instrument for data collection was a 4-points structured questionnaire developed by the researcher titled "Pedagogical Skills, Self-Efficacy and Content Knowledge Need for shorthand instructional Delivery" (PSSECNSID). The instrument was validated by 4 experts. Pilot study was conducted using tertiary institutions in Osun state who were not part of the subjects. The data collected from pilot study was analyzed using Cronbach Alpha method for reliability test and reliability co-efficient of 0.70 was obtained. The instrument was administered to the target respondents using direct approach and the researcher was assisted by 18 research assistants. Mean and standard deviation were used to answer the research questions, while Analysis of Variance (ANOVA) was used to test the null hypotheses at 0.05 level of significance. The study concluded that shorthand lecturers need pedagogical skills, self-efficacy and content knowledge for effective shorthand instructional delivery in public tertiary institutions in Niger State, Nigeria. Based on the findings, the study recommended, among others, that government and professional organizations should organize workshops and seminars that will improve the pedagogical skills, self-efficacy and content knowledge of shorthand lecturers in Niger State, Nigeria. Implication of these findings, among others, is that pedagogical skills need of shorthand lecturers for effective instructional delivery may not improve if training and re-training programme are not organized in public tertiary institutions offering shorthand in Niger State, Nigeria.*

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## INTRODUCTION

Shorthand is one of the subjects in business education and secretarial option in tertiary institutions in Nigeria. Ismaila (2022) defined shorthand as a skilled subject which aids the ability to concentrates on taking account of events using special outlines. According to Aromolaran (2021), Shorthand is the method



of writing that is rapid and concise enough to enable the writer to keep pace with normal speech, usually brief strokes, abbreviation and special characters are used to represent letters, word and phrases. Similarly, Azuka (2021) defined Shorthand as the act of representing spoken words with written signs as briefly and as distinctively as possible. Shorthand is a skilled subject which helps the ability to concentrate, on taking account of events using special outline. The subject uses a variety of techniques that simplify alphabets or characters by using special symbols to represent phonemes, words and phrases. It has twelve vowels, four diphthongs, two diphones and twenty-four consonants.

The importance of Shorthand to the job performance of secretaries cannot be overemphasized. The study conducted by Adebayo (2023) affirmed that shorthand is relevant in maintaining documents than automated machines that can be operated by anyone who is literate in manipulating the office machines. Fasami (2021) reported that, secretaries need shorthand skill to carry out the day-to-day responsibilities and routine work in the offices. Similarly, a study conducted by Aromolaran (2021) revealed that shorthand skill is much the cherry on the cake in the skill set of the forward – looking contemporary personal assistant and a skill that will help a secretary stand out from the crowd when looking for that career progression. The author stressed that recruitment agencies appreciate it when they see Shorthand in a curriculum vita because it is very rare to get secretaries with shorthand skills.

Despite the relevance of shorthand in the office operation of secretaries, there is general complain of difficulties in teaching the subject among educational practitioners. Ugoji (2021) argued that, shorthand is basically a complex time-skill subject that can only be handled by skilled, proficient teachers. Ekpeyong (2020), Egbuwaohia (2023), Ofuenyi (2021), in their different studies, noted that most shorthand teachers find it difficult to teach the subject effectively. Adanghe (2021), noted that, the subject of shorthand cannot be easily taught by inexperienced teachers. Yakubu (2014), noted that, teaching shorthand is difficult because it requires teachers that have high level of accuracy, aptitude and ability. Adeboye (2022) attributed the difficulty in teaching shorthand to inadequate content knowledge and pedagogical skill for effective instructional delivery. Odumosu, Olusesan and Abel (2023) reported that most shorthand teachers lack the content knowledge and pedagogical skills that are essential to teaching of the subject. The study of Lacour and Wilkerson (2021) also showed that the major problem of most teachers was lack of self-efficacy needed for classroom instruction. The authors argued that self-efficacy is the pivot that strengthen teacher's belief to effectively meet the challenges ahead of him in the classroom environment.

Pedagogical skills are the method, procedure, strategy and technique used by teachers to impact knowledge, skills, values, understanding and norms to the learners in a school setting. According to sander (2023), pedagogical skill is the knowledge of principles and techniques of classroom behaviour and management. The National Science Teachers' Association (2020) reported pedagogical skills as actions and strategies of teaching, organization of classroom experiences, evaluation and implementation of learners' prior notions, and transformation of ideas into understandable pieces. Magnusson (2022) opines that a general way of presenting teaching knowledge and belief is to guide the prospective teachers on decisions about organization of activities, use of curricular materials, contents of students' assignment and evaluation of students learning through orientation. Adamu and Muthar (2022) maintained that the attainment of any educational goals and objectives contingent on the pedagogical skills of the teachers.

Self-efficacy is the power to produce an effect (Lacour & Wilkerson, 2021). Henk and Melnick (2021) defined self-efficacy as a personal judgment of one's ability to successfully participate in an activity which has effects on future activities. Akhtar (2023) defined self-efficacy as the belief of an individual in his abilities to meet the challenges ahead of him and complete a task successfully. Generally, self-efficacy

refers to ones' overall belief in one's ability to succeed. Bandura (2022) opined that teachers' perceptions about their abilities influence their behaviour thought pattern, and their emotional reactions in difficult situations. Teachers with a high self-efficacy are confident and motivated to work toward a learning goal. The components of self-efficacy, according to Bandura (2021) include performance outcome, vicarious experiences, verbal encouragements and physiological feedback. The author attributed the confidence of teachers in classroom to their self-efficacy.

Content knowledge refers to the variables of a discipline: factual information, organizing principles and central concepts of the subject (Grossman, 2021). Content knowledge generally refers to facts, concepts, theories and principles that are taught and learned in specific academic courses, rather than to related skills such as reading, writing, or researching that students also learn in school (Ahtee & Johnston, 2021). According to Shulman (2020) content knowledge is the body of knowledge of teachers on the specific content they teach. To Shulman, content knowledge includes topic, facts and relationship within a subject. Olorukooba (2020) defined content knowledge as the knowledge which teachers have in their areas of specialization. Adamu and Mukthar (2022) argued that content knowledge is the pillar for effective instructional delivery of any business teacher. The authors that added that good content knowledge makes teaching and learning effective.

Having gone through the variables in the study, it can be understood that pedagogical skills, self-efficacy and content knowledge are essential for classroom instructional delivery; its therefore, against this background that e the study assessed the pedagogical skills, self-efficacy and content knowledge need for shorthand instructional delivery of lecturers in public tertiary institutions in Northern, Nigeria.

### **Statement of the Problem**

The philosophy of vocational education demands that teaching be relevant to student's need. However, empirical evidences, enunciated by Adetoyinbo (2023) and Jegede (2022) revealed that shorthand lecturers have difficulties in teaching the subject. The author stressed that, most teachers have problem in mastering symbols and signs as outline in shorthand curricula. Similarly, Enyekit (2021) attributed the poor performance of shorthand teachers to lack of effective teaching strategies; deficient professional training; weak academic background, while a number of them lack required pedagogical skills and content knowledge needs to teach shorthand as outlined in the minimum academic standard. Study conducted by Enyekit (2021) disclosed that most shorthand lecturers in tertiary institutions in Nigeria lack the pedagogical skills and content knowledge needs to teach the subject. To this end, the Association of Business Educators of Nigeria (ABEN) and Business Educators Association in Vocational Education (BEAVE) have been organising national conferences and workshops to enhance the general skills and competencies of business teachers (Adamu & Mukthar, 2022). Despite the various capacity building organized by the associations, there is still complain on poor instructional delivery.

Abba (2021) attributed poor instructional delivery by shorthand lecturers to lack of integrating the content with specific effective methods of instruction. This researcher's interaction with some shorthand lecturers further affirmed that there is a gap between what they possessed and what is expected from them for effective teaching of shorthand. It is, therefore, against this background that this study was conducted to assess the pedagogical skills, self-efficacy and content knowledge need for shorthand instructional delivery of lecturers in public tertiary institutions in Northern-Nigeria.

### **Purpose of the Study**

The main purpose of this study was to assess the pedagogical skills, self-efficacy and content knowledge need for shorthand instructional delivery of lecturers in public tertiary institutions in Northern, Nigeria. The specific purposes were to;

1. Assess the pedagogical skills need for shorthand instructional delivery of lecturers in public tertiary institutions in Niger State, Nigeria.
2. Ascertain the self-efficacy need for shorthand instructional delivery of lecturers in public tertiary institutions in Niger State, Nigeria.
3. Assess the content knowledge need for shorthand instructional delivery of lecturers in public tertiary institutions in Niger State, Nigeria.

### Research Questions

The study was carried out to provide answers to the following specific research questions:

1. What are the pedagogical skills need for shorthand instructional delivery of lecturers in public tertiary institutions in Niger State, Nigeria?
2. What are the self-efficacy need for shorthand instructional delivery of lecturers in public tertiary institutions in Niger State, Nigeria?
3. What are the content knowledge needs for shorthand instructional delivery of lecturers in public tertiary institutions in Niger State, Nigeria?

### Research Hypotheses

In line with each of the specific research question, the following null hypotheses were formulated and tested in this study:

**Ho<sub>1</sub>** : There is no significant difference among mean responses of Colleges of Education and Polytechnics lecturers on their pedagogical skills need for shorthand instructional delivery in Niger State, Nigeria.

**Ho<sub>2</sub>** : There is no significant difference among mean responses of Colleges of Education and Polytechnics lecturers on their self-efficacy need for shorthand instructional delivery in Niger State, Nigeria.

**Ho<sub>3</sub>** : There is no significant difference among mean responses of Colleges of Education and Polytechnics lecturers on their content knowledge needs for shorthand instructional delivery in Niger State, Nigeria.

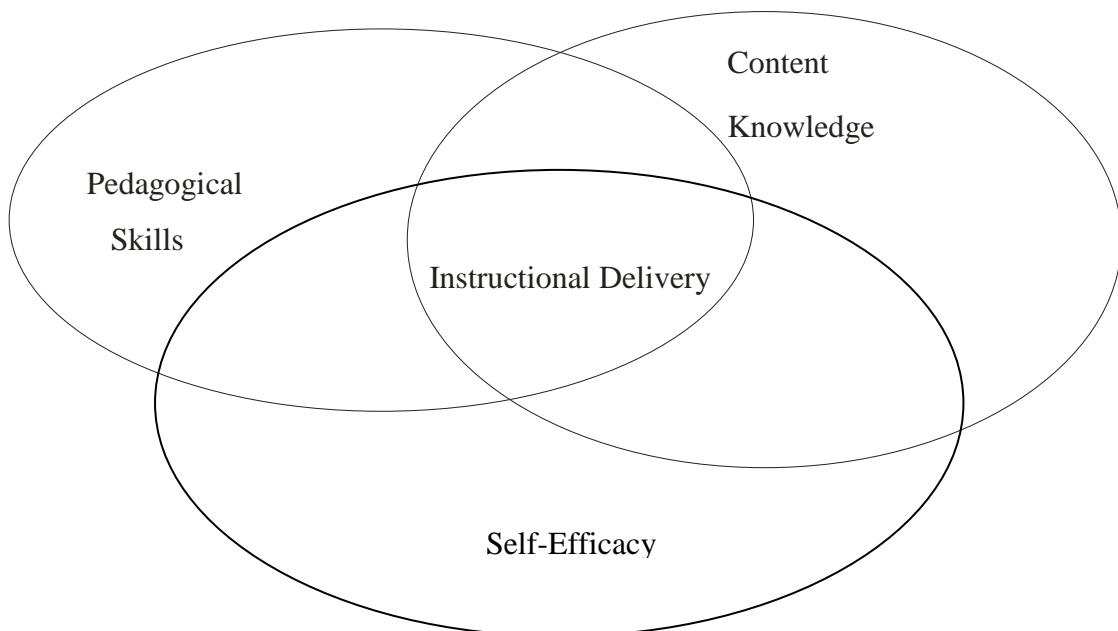
## LITERATURE REVIEW

### Conceptual Framework

The development of the PSCKSEID framework has been informed by a number of studies that focused on pedagogical skills and content knowledge needs being placed on teachers. The PSCKSEID framework articulated, in broad terms, the desired skills and knowledge components for beginning teachers. This conceptual framework builds on the strategies and pedagogical skills that will enable teachers to reflect on the values dimension of teaching and to develop the knowledge, values and skills necessary for inclusive practice, teaching and learning. While each attribute highlights a certain aspect of professional practice, it is, however, important to recognize that the attributes overlap and are interdependent and interconnected. This also reflects the interrelated aspects of the lecturer's work.

Pedagogical skill is a knowledge that a teacher uses to deal with everyday task of teaching and relating to students in the classroom. It is that kind of knowledge that teachers hope to improve when they say, they want to become better teachers because they realize that this is where they drew all the "tricks" to make their students learning experiences valuable (Sander, 2023). The National Science Teacher Association (2013) defined pedagogical knowledge skills as: actions and strategies of teaching, organization of classroom experiences, providing for diverse learner needs, evaluation and implementation of learners' prior notions, and transformation of ideas into understandable pieces.

Pedagogical knowledge is knowledge of principles and techniques of classroom behavior and management (Sander, 2023). Magnusson (2022) opines that a general way of presenting teaching knowledge and belief is to guide the prospective teachers on decisions about organization of activities, use of curricular materials, contents of students' assignment and evaluation of students learning through orientation. However, to get a realistic view of teaching, prospective teacher must practice teaching in lessons in which they have to plan, implement and evaluate (Magnusson, 2022). They need to understand and be able to use the general principles of good classroom management from standardized routines. For instructions and get knowledge of students' attitudes, interest and problems that are essential for effective teaching. This can only be acquired through extended classroom experience (Magnusson, 2022).



**Figure 1.** Conceptual Framework

Initial practice should be provided in controlled forms as peer teachings, microteaching or some kind of case studies. The prospective teachers also need experience in classroom settings by observing experienced teachers and working with pupils individually and in small groups to develop the pedagogical knowledge skills. Pedagogical skills enable the teachers to have background knowledge of their students and to build on that. It also seeks, to help students to learn scientific problems (Geddis, 2020) while Magnusson (2022) stated that pedagogical skills guide the teachers to plan experiences for their students to make inquiries. It also enables the teachers to elaborate on students' ideas and is able to link same to new contents.

Self-efficacy was first introduced by Bandura (2022). According to the study, self-efficacy refers to a person's belief in their ability to achieve something successfully. Self-efficacy beliefs are constructed from four primary sources of information or experiences. Bandura (2022) described these four types of experiences as *Performance outcomes* in which one successfully practices a skill or behavior, *vicarious experience* in which one observes respected role models, *verbal persuasion* in which one receives encouragement and support from valued others, and *physiologic and affective states* in which one learns to keep emotions and physiological arousal at a self-supporting level. The definition of self-efficacy was developed further by other scholars. Stajkovic and Luthans (2021) defined self-efficacy as self-confidence

and beliefs which would influence human resources. From this definition, it is clear that self-efficacy prepares a person with a confidence to utilize their human capital pool in order to achieve their goals

Content knowledge can therefore be defined as the teachers' knowledge which they teach their students and the content knowledge of the prospective teacher is developed primarily in shorthand courses taught in business education department (Jegede, 2022). Content knowledge provides the teachers with adequate knowledge to make connections and see relationship between concepts. Research on subject content indicates that lecturer's knowledge of subject matter influences instructional practices across subject area at different levels (Lee, 2023). Heading that without the essential base of subject matter knowledge, teachers are simply unable to produce effective instruction.

Content knowledge is particularly an important issue in education. Researches in education indicate that teachers who possess subject matter content expertise and ability to represent subject matter to their students engage in those class activities that facilitate students' learning, such as free ranging, class discussion of content (Anderson & Smith, 2021). Instructional delivery are methods, strategies, approaches or even techniques that a teacher employ to deliver his/her subject matter of a lesson to the learners. It can as well be regarded as a representation of a pattern in which a lesson is to be presented (Nwafor, 2022). The process of instructional delivery must be based on stated objectives of the lesson, it is based on this that when the process of instructional delivery is over, then the opportunity to determine if the aim of the lesson has been achieved or not comes, which is the evaluation act that will tell if the lesson met stated objectives (Buseri & Dorgu, 2021).

### **Concept of Pedagogical Skill**

Researches in teaching has drawn its attention to "what counts as knowledge base for teaching" recently has produced numerous findings that impact on the reform of teachers' education in terms of understanding how teachers' knowledge informs their practice. In 2006, by arguing that, the study of understanding of subject matter content and the relationships between such understanding and the teaching strategies teachers apply is the "missing paradigm" of educational research.

According to Shulman (2022) pedagogical skills is describes as the most useful forms of representation, the most powerful analogies, illustrations, examples, explanations, and demonstrations. Clark and Walsh (2022) define pedagogical skills as "consisting primarily of knowledge about classroom, assessment, and methods for the motivation of students, personal knowledge about particular students and their families, socio-interactional skills. From this, we can infer that not everyone in the classroom today possesses the needed pedagogical skills to influence student learning and by extension, their academic performance.

Similarly, the National Board for Professional Teaching Standards (NBPTS, 2020) in the United States of America defines pedagogy as follows:

*Content pedagogy refers to the pedagogical (teaching) skills teachers use to impart the specialized knowledge/content of their subject area(s). Effective teachers display a wide range of skills and abilities that lead to creating a learning environment where all students feel comfortable and are sure that they can succeed both academically and personally. This complex combination of skills and abilities is integrated in the professional teaching standards that also include essential knowledge, dispositions, and commitments that allow educators to practice at a high level (p. 1)*

It is observed that since effective teaching not only necessitates making difficult and principled choices but also exercising careful judgment and honouring the complex nature educational mission, teachers needs to be aware of the technical knowledge and skills in their daily practice. Teachers' pedagogical skills enable classroom teachers to have a good and thorough understanding of the subject

they teach (Social Studies for example) and appreciate how the knowledge gained overtime in their subject areas can be created, organized and linked to other areas of knowledge. Also, pedagogical skills make teachers to be aware of the preconceptions and background knowledge that students typically bring to each subject and of strategies and instructional materials that be of assistance in addition to understanding and solving the possible difficulties likely to arise in the classroom and modify their practice accordingly (NBPTS, 2020).

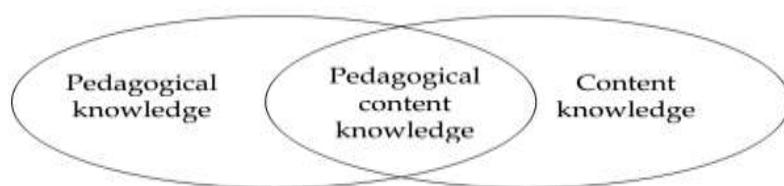
Also, Shulman (2022) advocated the comprehensive study of the three types of knowledge needed for classroom practice: subject matter knowledge, curricular knowledge, and pedagogical content knowledge known as knowledge base for teaching.

### **Relationship Between Pedagogical Skill and Content Knowledge**

It has now become clear that both teachers' pedagogical skills and content knowledge are crucial to good teaching (Shulman, 2022). The author further renewed emphasis on the importance of how pedagogical skills are related to subject content. Content knowledge is the teachers' knowledge of the specific content they teach their students including topics, facts and relationship within a subject (Lee, 2023). The pedagogical skills are the actions and strategies of teaching organization of classroom experiences, providing for diverse learners needs, evaluation and implementation of learners' prior notions, and transformation of ideas into understandable pieces (Lee, 2023). While pedagogical content knowledge is the integration or synthesis of lecturer's pedagogical skills and the content knowledge (Lee, 2023).

However, Shulman (2022) claimed that the emphasis on teacher content knowledge and pedagogical skills were treated as mutually exclusive domains. To address this dichotomy, he proposed to consider the necessary relationship between them by introducing the notion of pedagogical content knowledge (pedagogical content knowledge). Shulman (2022) argued that having knowledge of subject and general pedagogical strategies, though necessary were not sufficient for capturing the knowledge of efficient teacher. To characterize the complex ways in which teachers think about how particular content should be taught, he argued for pedagogical skills and content knowledge as the lecturer's bases of knowledge that distinguishes a teacher from a subject specialist. If teachers were to be successful they would have to confront both issues (of pedagogy and content) simultaneously by embodying "the aspect of content most germane to its teaching ability" (Shulman, 2022).

The heart of pedagogical skills and content knowledge is the manner in which subject matter is transformed for teaching. This occurs when teachers interpret the subject content, find ways to represent it and make it accessible to learners (Shulman, 2022). Diagrammatically, Shulman's contribution to the scholarship of teachers' knowledge can be represented by connecting the two circles, so that their intersection represents (pedagogical content knowledge) as the interplay between pedagogy and content. In Shulman's words, this intersection contains within it, "the most regularly taught topic in one's subject area, the most useful forms of representation of those ideas, the most powerful analogies, illustrations, explanations in a word, the ways of representing the subject that make it comprehensible to others".



**Figure 2. Relationship Between Pedagogical Knowledge and Content Knowledge.**

**Source:** Shulman (2022)

Developing literacy and the ability to transform this knowledge into learning opportunities require more than an understanding of content and pedagogy. It requires an understanding of the intersection. The content segment expects the teachers to be able to make connections and see relationship between concepts. Shulman (2022) the pedagogical segment seeks to help students learn about scientific problems. Making connections requires an understanding of the problems faced in learning science. Therefore, the content also expects shorthand teachers to learn and teach about the process of transcribing shorthand, while the pedagogy expects teachers to plan experiences for their students to make inquiries. This presents the intersection in the learning and how to teach the process. Making similar connections relies on the understanding of both the contents students are learning and how they learn. This is because the teacher knows about "organization of classroom experiences". However, to design such "organizations" requires a deep understanding of the content. This is what Shulman (2022) described as "the key to distinguishing the knowledge base of teaching lies at the intersection of content and pedagogy".

Thinking about pedagogy and content enables teachers to identify the needs of each student so that each learning experience can be matched to the current needs of the students (Shulman, 2022). Applying notions of pedagogy to shorthand content helps to reveal what might be problem for some groups. It also allows for greater flexibility within classroom based on the ability and interest of students. This will enable teachers to modify learning goals and activities that are in line with educational curriculum. Shulman (2022) some critical amount of subject content knowledge seems to be necessary to develop the pedagogical content knowledge required for teaching. Integration of knowledge domains is important to excellent teaching. Telling prospective teachers what to do does not enable them to put ideas into practice. They must have opportunities to learn in meaningful and supportive context. Integrating course content and field assignment are necessary to provide prospective teachers with integrated teaching knowledge (Magnusson, 2022).

From all the foregoing, pedagogical content knowledge includes knowing what teaching approaches fit the content and likewise knowing how element of the content can be arranged for better teaching. This knowledge is unique to teaching and is based on the manner in which teachers relate their pedagogical knowledge (what they know about teaching) to their subject knowledge (what they know about what they teach). It is the integrated or the synthesis of teacher subject content knowledge and their pedagogical knowledge skills (Shulman (2022).

## METHODS

Survey research design was used in this study. The choice of the design was based on the advice of Kerlinger (2021) who emphasized that this design is used when a research work involves the use of questionnaire to seek opinion of respondents. The basis for adopting this design was to enable the researcher to obtain the opinions of shorthand lecturers on their pedagogical skills, self-efficacy, and content knowledge need for shorthand instructional delivery in public tertiary institutions in Niger State, Nigeria. The study covered shorthand lecturers from sixty public tertiary institution offering shorthand in Northern Nigeria. The design for the study was descriptive survey and the population was 125 shorthand lecturers. The entire 125 shorthand lecturers were used for the study. The instrument for data collection was a 4-points structured questionnaire developed by the researcher titled "Pedagogical Skills, Self-Efficacy and Content Knowledge Need for shorthand instructional Delivery" (PSSECNSID). The instrument was validated by 4 experts. Pilot study was conducted using tertiary institutions in Ekiti, Osun and Oyo state who were not part of the subjects. The data collected from pilot study was analyzed using Cronbach Alpha method for reliability test and reliability co-efficient of 0.70 was obtained. The instrument was

administered to the target respondents using direct approach and the researcher was assisted by two (2) research assistants. Mean and standard deviation were used to answer the research questions, while Analysis of Variance (ANOVA) was used to test the null hypotheses at 0.05 level of significance.

## RESULTS AND DISCUSSION

### Research Question One

What are the pedagogical skills need for shorthand instructional delivery of lecturers in public tertiary institutions in Niger State, Nigeria?

Table 1: Pedagogical skills of lecturers for shorthand instructional delivery of lecturers in public tertiary institutions

S/N	Items	Mean Scores			Remark
		$\bar{X}_c$	$\bar{X}_p$	$\bar{X}_y$	
1	flexible use of whole-class, group where students discuss a shared task for shorthand instructional delivery.	3.39	3.12	3.17	HN
2	Appropriate presentation of lesson for shorthand instructional delivery.	3.42	3.53	3.41	HN
3	Questioning techniques for shorthand instructional delivery.	3.28	4.00	3.58	VHN
4	Material for instruction are needed for shorthand instructional delivery.	3.16	3.71	3.50	VHN
5	Effective language for shorthand instructional delivery.	3.24	3.59	3.49	HN
6	Appropriate time management for shorthand instructional delivery.	3.33	3.65	3.54	VHN
7	Appropriate evaluation tool for shorthand instructional delivery.	3.36	3.88	3.50	VHN
8	planning and varying lesson sequences for shorthand instructional delivery.	3.42	3.71	3.62	VHN
9	Appropriate teaching strategies for shorthand instructional delivery.	3.89	3.59	3.61	VHN
10	Appropriate tool for development of cognitive skill. for shorthand instructional delivery.	3.89	3.71	3.81	VHN
<b>Grand Mean</b>		<b>3.44</b>	<b>3.65</b>	<b>3.52</b>	<b>VHN</b>

**Source:** Field Work (2023)

**Note**  $\bar{X}_c$  Mean of Colleges of Education Respondent

$\bar{X}_p$  Mean of Polytechnics Respondent

$\bar{X}_y$  Mean of Universities, Colleges of Education and Polytechnics Respondent

The result of the descriptive statistics presented in Table 1 indicated pedagogical skills of lecturers for shorthand instructional delivery in Colleges of Education as 3.44 and Polytechnics as 3.65. The grand mean score of 3.52 was obtained, which indicated that pedagogical skills need for shorthand instructional delivery of lecturers was highly needed.

### Research Question Two

What are the self-efficacy need for shorthand instructional delivery of lecturers in public tertiary institutions in Niger State, Nigeria?

The result of the statistical findings documented in Table 2 disclosed that self-efficacy needs of lecturers for shorthand instructional delivery in all the three tertiary institutions (i.e., Colleges of Education and Polytechnic) was high. The mean scores of the Colleges of Education and Polytechnics stood at 3.35 and 3.77 respectively. The grand mean score of 3.50 also indicated that the performance outcomes need of lecturers for shorthand instructional delivery was highly needed.

Table 2. Self-efficacy need for shorthand instructional delivery of lecturers in public tertiary institutions

S/N	Items	Mean Scores			Remark
		$\bar{X}_c$	$\bar{X}_p$	$\bar{X}_y$	
11	Outstanding performance for shorthand instructional delivery.	3.28	3.82	3.49	HN
12	Possible roadblocks could arise while pursuing goal for shorthand instructional delivery	3.28	3.88	3.51	VHN
13	Ability to use resources to accomplish goal for shorthand instructional delivery	3.34	3.59	3.43	HN
14	Ability to align goals with, support, or advance the teams for shorthand instructional delivery	3.30	3.82	3.52	VHN
15	Ability to determined success for shorthand instructional delivery	3.41	3.88	3.58	VHN
16	specific results or outcomes for shorthand instructional delivery	3.43	3.71	3.47	HN
17	Effective reasons for pursuing goal for shorthand instructional delivery	3.41	3.71	3.52	VHN
<b>Grand Mean</b>		<b>3.35</b>	<b>3.77</b>	<b>3.50</b>	<b>VHN</b>

**Source:** Field Work (2023)

**Note:**  $\bar{X}_c$  Mean of Colleges of Education Respondent

$\bar{X}_p$  Mean of Polytechnics Respondent

$\bar{X}_y$  Mean of Universities, Colleges of Education and Polytechnics Respondent

### Research Question three

What is the content knowledge need for shorthand instructional delivery of lecturers in public tertiary institutions in Niger State, Nigeria?

Table 3: Content Knowledge need for shorthand instructional delivery of lecturers in public tertiary institutions

S/N	Items	Mean Scores			Remark
		$\bar{X}_c$	$\bar{X}_p$	$\bar{X}_y$	
18.	Knowledge of vowels for effective shorthand instructional delivery.	3.36	3.67	3.45	HN
19.	Knowledge of consonants for effective shorthand instructional delivery.	1.93	3.11	2.96	HN
20.	Knowledge of diphthongs for effective shorthand instructional delivery.	4.00	3.56	3.85	VHN
21.	Speed writing and accuracy in transcription for shorthand instructional delivery.	2.79	4.00	3.60	VHN
22.	Knowledge of assessment shorthand for shorthand instructional delivery.	4.00	4.00	4.00	VHN
23.	Knowledge of instructional strategies for shorthand instructional delivery.	3.93	4.00	3.81	VHN
24.	Knowledge of curriculum as guide for shorthand instructional delivery.	4.00	3.89	3.91	VHN
<b>Grand Mean</b>		<b>3.43</b>	<b>3.74</b>	<b>3.65</b>	<b>VHN</b>

**Source:** Field Work (2023)

**Note:**

$\bar{X}_c$  Mean of Colleges of Education Respondent

$\bar{X}_p$  Mean of Polytechnics Respondent

$\bar{X}_y$  Mean of Universities, Colleges of Education and Polytechnics Respondent

The result of the statistical findings documented in Table 3 disclosed that the content knowledge need of lecturers for shorthand instructional delivery was very high for Polytechnics with mean scores of

3.74 while the mean score 3.43 for Colleges of Education lecturers suggested their content knowledge need was high. The grand mean for the three categories of tertiary institutions was 3.65 which suggested that shorthand lecturers highly need content knowledge for effective instructional delivery in public tertiary institutions in northern Nigeria.

### Research Hypothesis One

There is no significant difference among mean responses of Colleges of Education and Polytechnics lecturers on their pedagogical skill need for shorthand instructional delivery public tertiary institutions in Niger State, Nigeria.

Table 4. One-way Analysis of Variance for mean difference among the public tertiary institutions on lecturers' pedagogical skills need for shorthand instructional delivery

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.627	2	.313		
Within Groups	71.605	113	.634	.495	.611
Total	72.232	115			

**Source:** Field Work (2023)

The result of Analysis of Variance in Table 4 indicated that statistically there was no significant difference in the mean responses of lectures on pedagogical skills need of shorthand instructional delivery:  $F (2, 113) = .495, p = .611$ . Hence, Hypothesis one was retained. This result of the finding indicated there was no significant difference on the pedagogical skills need for shorthand instructional delivery among lecturers of Colleges of Education and Polytechnics. Based on Nwagu (2022) were calculated value was less than table value the null hypothesis was accepted and were the calculated value of any of the null hypothesis is greater than the table value the null hypothesis was rejected. All the null hypotheses were tested at 0.05 level of significance.

### Research Hypothesis Two

There is no significant difference among mean responses of Colleges of Education and Polytechnics lecturers on their Self-efficacy need for shorthand instructional delivery public tertiary institutions in Niger Statre, Nigeria.

Table 5. One-way Analysis of Variance for mean difference among the public tertiary institutions on lecturers' self-efficacy need for shorthand instructional delivery.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.598	2	1.299		
Within Groups	83.850	113	.742	1.751	.178
Total	86.448	115			

**Source:** Field Work (2023)

The statistical result of Analysis of Variance presented in Table 5 revealed that the  $F (2, 113) = 1.751, p = .178$ . Hence, Hypothesis two was retained. The result of the finding indicated that there is no significant difference among the mean responses of Colleges of Education and Polytechnics lecturers on their self-efficacy need for shorthand instructional in Niger State, Nigeria. Based on Nwagu (2022) were calculated value was less than table value the null hypothesis was accepted and were the calculated value of any of the null hypothesis is greater than the table value the null hypothesis was rejected. All the null hypotheses were tested at 0.05 level of significance.

### Research Hypothesis Three

There is no significant difference among mean responses of Colleges of Education and Polytechnics lecturers on their content knowledge need for shorthand instructional delivery in public tertiary institutions in Niger State, Nigeria.

Table 6. One-way Analysis of Variance for mean difference among the public tertiary institutions on lecturers' content knowledge needs for shorthand instructional delivery

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.737	2	.368		
Within Groups	87.645	113	.776	.475	.623
Total	88.382	115			

**Source:** Field Work (2023)

The statistical evidence document in Table 6 shows the  $F(2, 113) = .475, p = .623$ . The p-value obtained was greater than the level of significance ( $.623 > 0.05$ ). The outcome of the analysis suggested that there was no significant difference in the mean responses of Colleges of Education and Polytechnics lecturers on their content knowledge need for shorthand instructional delivery in public tertiary institutions in Niger State, Nigeria. The hypothesis was upheld. Based on Nwagu (2022) were calculated value was less than table value the null hypothesis was accepted and were the calculated value of any of the null hypothesis is greater than the table value the null hypothesis was rejected. All the null hypotheses were tested at 0.05 level of significance

### Discussion of Findings

The finding of research question one and its corresponding null hypothesis one revealed that pedagogical skills need of lecturers for shorthand instructional delivery was high. The finding is consistent with Chang (2021) that pedagogical knowledge of teachers is needed in teaching high class settings. The categories of the pedagogical skills structures needed include: knowledge of educational aim, knowledge of assessment; knowledge of content (teaching about and teaching as content knowledge); knowledge of curriculum; knowledge of learners; knowledge of professional self. Pedagogical skills guide the teacher to plan experiences for their students to make inquiries (Geddis, 2020 & Magnusson, 2022). It also enables the teachers to elaborate on students' ideas and is able to link same to new contents. Geddis, (2020) the transition from a lecturer-centred to a student's-centred model of instruction requires that lecturers learn a variety of new skills and instructional techniques, and this process may be challenging.

The result of research question two and its corresponding null hypothesis two revealed that self-efficacy need of lecturers for shorthand instructional delivery was high. The finding is in line with the study of Nurudeen (2023) and Adeboye (2023) which reveals that effectiveness of the pedagogy skill is of paramount importance and should be developed in the university system. Bandura (2021) emphasized, "Simply adopting a goal without knowing how to it will not have lasting motivational effect". Hepworth *et al* (2021) reported, self-efficacy are very essential for effective instructional delivery. The author further argued that, when the skill has been introduced and modeled, the teacher provides repetition using various role-playing vignettes. Bandura (2021) suggested that, teacher can be attentive to students' learning curve to support their experience in overcoming challenges through sustained effort. The author maintained that teacher's encouragement has significant influence on the learning outcome of students.

The finding of research question three and its corresponding null hypothesis three revealed that the content knowledge of lecturers for shorthand instructional delivery was very high. The finding is

consistent with the submission of Adebayo (2022) that the performance of the teachers in the class is always hindered by their content knowledge. Lee, (2023) stated that teacher's content knowledge is significantly important to the improvement of teaching and learning in the classroom. The author maintained that, teachers need to have deep knowledge of the subjects they teach; a strong understanding of the learners and the ways in which learners think about the content; ability to evaluate the thinking behind learners' own methods, and identify learners' common misconceptions. Ball and Bass (2023) noted the importance of deep conceptual knowledge for lecturing and found that lecturers with deep conceptual understanding of subject were able to present content knowledge to their students in different ways. Ball and Bass (2023) described pedagogical content knowledge as a special form of knowledge that "bundles teacher knowledge with knowledge of learners, learning, and pedagogy". Following a year-long study of lecturer work, Ball and Bass (2023) introduced the construct of content knowledge for lecturing. This construct has resulted in a new understanding of the knowledge required for lecturing.

## CONCLUSION

The findings of the present study indicated that pedagogical skills, self-efficacy and content knowledge of lecturers for shorthand instructional delivery are needed in all the public tertiary institutions in Niger State, Nigeria. This cannot be achieved in the hands of lecturers that lack pedagogical skills, self-efficacy and content knowledge for teaching shorthand. The study confirmed that lecturers need to apply pedagogical skills, self-efficacy and content knowledge in teaching shorthand in public tertiary institutions in Niger State, Nigeria, while the professional business educators adjudged that pedagogical skills and contents knowledge is highly needed, if there should be proper transfer of learning. There is need for training and re-training of lecturers in pedagogical skills, self-efficacy and content knowledge to enable them impact such knowledge to the learner's which will in turn help them to acquire relevant skills to cope with challenges faced in mastering and teaching the subject effectively and this will help to enhance the academic performance of the students in the shorthand subject.

Based on the outcome of the study, it was recommended that:

1. The management of Colleges of Education and Polytechnics should organize workshop that will help to improve the pedagogical skills needed by shorthand lecturers for effective instructional delivery in Niger State, Nigeria.
2. Shorthand lecturers in tertiary institutions in Niger State Nigeria should be encouraged to attend seminars and conference that will boost their self-efficacy needed for instructional delivery.
3. Federal and state ministry of education should organize programme that will provide shorthand lecturers with the needed content knowledge for effective instructional delivery in public tertiary institutions in Nigeria.

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