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ASSESSMENT OF COGNITIVE READINESS OF SECONDARY SCHOOL ECONOMICS TEACHERS IN SOUTH-WEST, NIGERIA

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Abstract

In Nigeria, economics is a required subject in secondary education. Despite how well pupils do in economics classes, they hardly ever achieve credit on the Senior School Certificate Examination (SSCE). This problem needs urgent attention because knowledge of Economics is needed in solving economic problems. This study, therefore, assessed cognitive readiness of secondary school Economics teachers in South-west, Nigeria. The researchers employed descriptive survey research design. The population and the target population consisted of all the secondary school Economics teachers in South-west. A sample of 81 senior secondary schools and 185 Economics teachers was drawn from public and private schools in South-west, Nigeria using simple random and purposive sampling techniques respectively. Two instruments:- "Teacher-students Interaction Observation Schedule" and "Questionnaire on Teachers' Motivation and Disposition towards the Teaching of Economics" developed and validated by the researchers with reliability indices of 0.82 and 0.78 were used for measuring the cognitive readiness of the sampled teachers. The data collected were analysed using percentage, mean rating and Two-way Analysis of Variance. The findings of the study showed that the level of cognitive readiness of secondary school Economics teachers in South-west, Nigeria was high; the predominant cognitive readiness parameter of secondary school Economics teachers in South-west, Nigeria was content knowledge; and that there was no significant difference in cognitive readiness of secondary school Economics teachers in South-west, Nigeria based on academic qualification and teaching experience. It was recommended that secondary school Economics teachers in South-west should be encouraged to maintain their level of cognitive readiness which was found to be high.

Keywords
Assessment, Cognitive Readiness, Economics, Teachers

1. Introduction

Effective teaching and learning, which are markers of high-caliber teachers and teaching effectiveness, are fundamental to education at all levels. Teachers are regarded as the most crucial resource in all educational systems because, without the assistance of teachers who will direct and instruct the students, no educational system can work. At whatever level of education, the main goal of instruction is to fundamentally alter the student. Every educational process depends on interactions between the teacher(s) and pupils, and these interactions have the power to fundamentally alter the learner. Teachers are supposed to be cognitively prepared in order to affect a profound shift in the lives of learners. This implies that teachers' cognitive preparation will determine how much fundamental change may be affected in students' lives. According to (Morrison & Fletcher 2003), cognitive readiness is the mental preparedness needed to create and maintain effective performance within the multifaceted and unpredictable setting of operations. The mental readiness a teacher requires to develop and maintain competent performance in a challenging and unexpected educational setting is known as cognitive readiness in the context of instruction. According to (Morrison & Fletcher, 2003) such mental preparation encompasses the abilities, motivations, and personal traits required for successful teaching. Teachers must be prepared in cognitively based areas such as content knowledge, pedagogical expertise, enthusiasm, and individual disposition in order to succeed in the teaching profession. Being the manager of the instructional setting, the teacher or teachers' content expertise is crucial to the teaching-learning process. A teacher's knowledge of a specific subject area or subject is known as content knowledge (CK). Subject-specific content knowledge (SCK) refers to the facts, structuring ideas, and core ideas of the discipline(s) that teachers instruct udents (Isah, 2011). Subject-specific content knowledge can affect how lessons are taught in all subject areas since teachers cannot deliver successful instruction without a solid foundation in their respective fields (Chukwuemeka *et al.,* 2019; Shulman, 2008). As a result, the primary prerequisite for effective training is subject-matter understanding. While instructors with inadequate subject knowledge primarily depend on the textbook as their main source of subject matter material, instructors who are knowledgeable about the subject and have the ability to convey the subject to their students participate in lessons that support students' learning, such as the open-ended discussion in class regarding the material (Olorukooba, 2007). According to empirical research conducted by (Nimisha & Lalit 2019) teacher-educators in Punjab Region, India, have a high level of topic knowledge. Without mentioning pedagogical expertise, it is impossible to talk about teachers' cognitive preparation as a whole. The term "pedagogical knowledge" (PK) refers to the

understanding of instructional strategies, procedures, and methodologies. According to (Isah, 2011) pedagogical knowledge includes theories and principles of teaching and learning, knowledge about learners, and principles and methods for managing classroom behavior. In order to make students' learning experiences valuable, a teacher uses this information to manage the daily tasks of instructing and interacting with students in the classroom (Chukwuemeka *et al.,* 2019). Classroom teachers can better comprehend the subjects they teach thanks to their pedagogical knowledge, and they can also see how the knowledge they have amassed over time in their subject areas can be generated, arranged, and connected to other fields of knowledge. What sets professional instructors apart from nonprofessionals is their pedagogical expertise, often known as their technical skills. All children should feel comfortable and confident that they can succeed in school when teachers with strong pedagogical expertise exhibit a wide range of competencies and capabilities. Regarding the level of instructors' pedagogical understanding, the available studies appeared to be at odds with one another. In Peninsular Malaysia, for instance, (Tengku *et al.,* 2012) investigated teachers' pedagogical skills in a setting of subject-based instruction and discovered that teachers have strong pedagogical content knowledge. However, Kemboi *et al.,* 2017) examined teachers' pedagogical knowledgeability in teaching in secondary schools in Kenya's north rift region and discovered that a sizable portion of teachers lacked this knowledge for implementing the secondary school curriculum. It is impossible to talk about teachers' preparedness to teach without including motivation. Achievement motivation is another mental preparation that educators require to maintain competent performance. One of the factors affecting a teacher's performance is their motivation for achievement. According to (Sikhwari, 2014) motivation is what drives people to act in the ways that they do. The accomplishment and pursuit of necessary goals are outlined by motivation. A teacher needs to be driven by the desire to succeed in order to be deemed cognitively ready. According to (Sprinthall *et al.,* 2004), achievement motivation is an internal urge to do things merely for the purpose of accomplishing them. One of the psychological factors that significantly influence a man's performance and achievements is his need for achievement, and instructors are not an exception to this rule. Teachers that are highly motivated to achieve will take actions that will assist them to perform better than their peers, meet or exceed an excellence standard, or do something special (Sikwari, 2014). It should come as no surprise that the study by (Oni *et al.,* 2017) found a substantial correlation between instructors' motivation for accomplishment and their output. This indicates that it is important to underline the role that achievement motivation plays in assessing a teacher's cognitive preparation. Without addressing the teachers' individual disposition or attitude toward teaching

and the subject matter being taught, the discourse on teachers' cognitive preparedness will fall short. An individual's disposition, often known as attitude, or how they feel about something is a hypothetical construct. According to (MacDonald, 2005) attitude is the propensity to act favorably or unfavorably toward individuals, things, ideas, and events. A person's disposition, which can have a good or bad impact on performance, is a conviction or belief that influences how they think and behave. For example, a teacher's attitude can have a significant impact on how effectively they plan and prepare for their lectures, how punctual and consistent they are in class, and how they present their teachings. These factors might have an impact on lesson delivery intentionally or unconsciously. The teaching-learning process is influenced by teachers' attitudes, according to studies by (Sweeney, 2002; Kratz, 2009). To be considered cognitively ready, a teacher must demonstrate a positive attitude toward the vocation of teaching. This is because students may find it difficult to approach teachers who have negative or unfavorable attitudes, and as a result, these students may develop a bad attitude toward the subject, which would result in a poor learning experience. Because students are typically impacted by what they observe their instructor(s) demonstrating, if teaching and learning experiences are to be beneficial, the teacher must have a positive attitude about the teaching of the subject. It is important to be aware that a teacher must have solid subject-matter knowledge, solid pedagogical understanding, be driven by the desire to succeed, and consistently display favorable attitudes toward the teaching profession in order to be regarded cognitively ready. This shows that the term "cognitive readiness" serves as a catch-all for factors such as subject-matter knowledge, pedagogical understanding, motivation, and attitude or disposition. Teachers' cognitive preparedness can be influenced by a number of things. These characteristics include, among others, educational background and number of years of teaching experience. Academic credentials are one of the variables that can influence a teacher's readiness to teach cognitively. The level of education gained from the formal educational institution(s) determines a teacher's academic qualification. The most crucial component to guarantee that teachers are cognitively prepared for a career in teaching is the engagement of competent educators (Abe & Adu, 2013) this is done to ensure optimal instructional delivery. According to (Abe & Adu, 2013) one of the requirements for being a certified teacher in a primary or secondary school is having a teaching credential or teacher credential. The Nigeria Certificate in Education (NCE), the Bachelor of Education (B.Ed), the Bachelor of Science in Education (B.Sc/Ed), the Bachelor of Arts (Ed), and the Postgraduate Diploma in Education (PGDE) are just a few examples of such credentials. However, there are some individuals working as teachers without having the necessary credentials. Note that

teachers with teaching credentials may be more intellectually prepared for their jobs than their counterparts without teaching credentials. For instance, a teacher who has received training has been exposed to the concepts and theories of the teaching profession, which would have given them an advantage over other candidates for the position. Researchers (Idris *et al.,* 2007) looked into how training affected teachers' effectiveness and discovered that pre-service and in-service training is essential for teachers to give professional services. This suggests, however, that teachers' credentials have a great ability to predict students' cognitive aptitude. According to (Croninger & Rathbun, 2003) teachers' credentials and experience are crucial for giving high-quality instruction, but teaching experience is more crucial than any of these elements. Teachers with more experience can draw on a wider range of knowledge, which may add perspective and inspiration to the process of teaching and learning (Podolsky *et al.* 2019). This is in keeping with the adage that the best teacher is one who has the most experience since knowledgeable instructors will use prior difficulties as a barometer for creating a successful lesson plan. According to (Anita *et al.*, 2013), there is a correlation between teachers' experience and readiness to teach because more experienced teachers will have mastered the material and developed classroom management skills to deal with a variety of classroom problems. They are also more likely to be motivated by the need to succeed and to have developed a positive attitude toward teaching. Furthermore, more experienced teachers are thought to be better able to focus on the best way to teach specific topics to students who have a variety of abilities, backgrounds, and prior knowledge (Stringfield, 2014); this is only possible by drawing from the wealth of experience accumulated over the course of the year of service. Concerns have been raised over time regarding the cognitive readiness of the South-West Nigerian economics teachers. There have been concerns about the teachers' readiness to teach economics on a cognitive level. Such inquiries resulted from the reported negative trends in the West African Examination Council (WAEC) results published from 2015 to 2017 where only 46.6%, 44.7%, and 47.2% passed with at least a credit level (WAEC, 2017). These, however, fall short given that applicants for university entrance in the social sciences must have at least a passing grade in the subject. With such outcomes, one may start to question if the teachers were cognitively prepared in terms of subject matter mastery, solid pedagogical knowledge, drive to achieve instructional success and demonstration of a positive attitude toward teaching as a career. The economics philosophy calls for instruction to be pertinent to students' needs and experiences, emphasizes the fundamentals of resource allocation, and creates a solid foundation for the development of skills like rational decision-making (Kim *et al.,* 2018). The use of problem-solving exercises, open-ended laboratory activities, and discovery

approaches are among the instructional tools suggested for achieving the objectives (Halmo *et al.,* 2019). Along with effective teaching methods, teachers of economics should also have a strong command of the material, be driven to engage students and have a favorable attitude toward the topic. This implies that teachers of economics should possess subject-specific knowledge, and pedagogical skills to teach the subject content, be intrinsically motivated to teach, and display a positive attitude toward the teaching of the topic. But according to actual data presented by (Adetoyinbo, 2004) students struggle to comprehend the ideas and values outlined in the National core curriculum for secondary schools. These issues could be caused by a variety of things, including insufficient subject matter knowledge (Williams & Khalo, 2023), poor teaching abilities (Jeschke *et al.*, 2021), a lack of drive to succeed, a negative attitude toward teaching economics (Zhangming, 2018), and more. Studies pertaining to teachers' cognitive preparedness have been done. For instance, (Kemboi *et al.,* 2017) looked into the pedagogical knowledge and teaching skills of teachers in secondary schools in Kenya's north rift region. Additionally, in the Punjab Region of India, (Nimisha & Lalit 2019) investigated the technical pedagogical and content expertise of teacher-educators. Although similar to the present study, studies by (Kemboi *et al.,* 2017; Nimisha & Lalit., 2019) only focused on one element of cognitive preparedness. The studies are completely dissimilar from the present study in that they were carried out outside of Nigeria. To the best of the researcher's knowledge, there has not been a study that assesses the cognitive readiness of secondary school Economics teachers in South-west, Nigeria. Hence, there is a need for this particular study in order to fill the observed research gaps. The main purpose of the study was to assess the cognitive readiness of secondary school Economics teachers in South-west, Nigeria, with a focus on determining the main opportunities and challenges to improve the quality of Economics education in the zone. Specifically, the study assessed the:

1. level of cognitive readiness of secondary school Economics teachers in South-west, Nigeria;
2. the predominant cognitive readiness parameter of secondary school Economics teachers in South-west, Nigeria; and
3. difference in the cognitive readiness of secondary school Economics teachers in South-west, Nigeria based on academic qualification and teaching experience. ; and

1.1 Research Questions

The following research questions were raised and answered in the course of the study.

1. What is the level of cognitive readiness of secondary school Economics teachers in South-west, Nigeria?
2. What is the predominant cognitive readiness parameter of secondary school Economics teachers in South-west, Nigeria?

1.2 Research Hypotheses

The following hypothesis was tested in the study.

1. There is no significant difference in the cognitive readiness of secondary school Economics teachers in South-west, Nigeria by academic qualification and teaching experience.

2. Methodology

This study employed descriptive survey research design. The population of the study comprised all the teachers in 6, 509 secondary schools in South-west, Nigeria while the target population consisted of all the 8, 543 secondary school Economics teachers in South-west. A sample of 185 secondary school Economics teachers was drawn from public and private schools in South-west, Nigeria. This was achieved using multi-stage sampling procedure. At the first stage, simple random sampling technique was used to select three states (Ogun, Oyo and Ekiti) out of the six states in South-west zone of Nigeria. At the second stage, simple random sampling method was used to select 81 (27 from each state) secondary schools for the study. At the third stage of the sample selection, purposive sampling was used to select all the Economics teachers in the selected school for the study. The choice of purposive sampling was based on the fact that the study involved only Economics teachers. Two instruments were used for measuring cognitive readiness of the sampled teachers. These were: Teacher-students Interaction Observation Schedule (TsIOS) and Questionnaire of 4-point Likert type on "Teachers' Motivation and Disposition towards the Teaching of Economics" developed and validated by the researcher. The TsIOS was used to determine the content knowledge and pedagogical knowledge of the teachers by observing each of the sampled teachers teach for 10 minutes. The TsIOS contains 20 items on four diverse dimensions of the teaching-learning process ranging from preparation, introduction-presentation, organization and evaluation. The second instrument contains 10 items each for "Teachers' Motivation" and "Disposition towards the Teaching of Economics". When validated by the researcher, the instruments yielded reliability indices of 0.82 and 0.78 for the TsIOS and the questionnaire respectively. The data collected were analysed using percentage, mean rating and Two-way Analysis of Variance. The formulated hypotheses were tested at 0.05 level of significance.

3. Findings

3.1 Research Question 1

What is the level of cognitive readiness of secondary school Economics teachers in South-west, Nigeria? To answer the research question, responses obtained from the research instruments on cognitive readiness of secondary school Economics teachers in South-west, Nigeria were summed and subjected to percentage analysis. The minimum score obtainable from the instruments, maximum score obtainable, and range score of the respondents were 40, 160 and 120. The range was divided by the two levels of cognitive readiness (high and low) and the cut off was 60. Scores between 40-80 and 81-160 are categorized as low and high level of cognitive

readiness respectively. The result is presented in Table 1.

Table 1: Level of Cognitive Readiness of Secondary School Economics Teachers in South-West, Nigeria

Levels	Frequency	Percentage (%)
High	126	68.1
Low	59	31.9
Total	185	100.0

Results in Table 1 show the level of cognitive readiness of secondary school Economics teachers in South-west, Nigeria. As shown in the table, 59 (31.9%) of the respondents had low level of cognitive readiness, while 126 (68.1%) of the sampled respondents had high level of cognitive readiness. This means that the level of cognitive readiness of secondary school Economics teachers in South-west, Nigeria was high.

3.2 Research Question 2

What is the predominant cognitive readiness parameter of secondary school Economics teachers in South-west, Nigeria? To answer the research question, responses obtained from the research instrument on the predominant cognitive readiness parameter of secondary school Economics teachers in South-west, Nigeria were summed and subjected to descriptive statistics of mean. The output is presented in Table 2.

Table 2: The Predominant Cognitive Readiness Parameter of Secondary School Economics Teachers in South-West, Nigeria

S/N	Items	Mean	Ranking
1	Content Knowledge of Economics	3.03	1st
2	Pedagogical Knowledge	2.48	4th
3	Motivation	3.01	2nd
4	Disposition towards the Teaching of Economics	2.53	3rd

Results in Table 2 show predominant cognitive readiness parameter of secondary school Economics teachers in South-west, Nigeria. As shown in the table, the predominant cognitive readiness parameter of secondary school Economics teachers in South-west, Nigeria was content knowledge which was ranked 1st with means score of 3.03.

3.3 *Hypothesis Testing*

There is no significant difference in the cognitive readiness of secondary school Economics teachers in South-west, Nigeria by academic qualification and teaching experience. To test the null hypothesis, responses obtained from the research instrument on cognitive readiness of secondary school Economics teachers in South-west, Nigeria were summed and subjected to Two-way Analysis of Variance. The result of the analysis is presented in Table 3.

Table 3: Two-Way Analysis of Variance on Cognitive Readiness of Secondary School Economics Teachers in South-West, Nigeria Based on Academic Qualification and Teaching Experience

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1301.032[a]	7	185.862	4.835	.000
Intercept	262643.510	1	262643.510	6833.093	.000
Qualification	107.531	1	107.531	2.798	.096
Teaching Experience	100.870	3	33.623	.875	.455
Qualification * Teaching Experience	1146.085	3	382.028	9.939	.000
Error	6803.346	177	38.437		
Total	402791.000	185			
Corrected Total	8104.378	184			

a. R Squared = .161 (Adjusted R Squared = .127)

The result in Table 3 shows that there was no significant difference in the cognitive readiness of secondary school Economics teachers in South-west, Nigeria based on academic qualification and teaching experience. This is evident with the F-observed value of 2.798 and p-value of 0.096 for qualification, and F-observed value of 0.875 and p-value of 0. 455 for teaching experience which was greater than 0.05 level of significance (0.096 and 0.455 > 0.05). However, there is a significant interaction effect of academic qualification and years of teaching experience on the cognitive readiness of secondary school Economics teachers in South-west, Nigeria with F-value of 9.939 and p-value of 0.00.

4. Discussion of Findings

The cognitive readiness of secondary school Economics teachers in South-West Nigeria was evaluated in this study. The study found that secondary school Economics teachers in South-West Nigeria had a high degree of cognitive preparedness. This indicates that the vast majority of the sampled teachers were cognitively capable of instructing in economics. This outcome is feasible when the teachers possessed strong economic understanding, strong pedagogical expertise, were driven to succeed, and displayed a positive attitude toward teaching economics. The findings of (Tengku *et al.,* 2012), who discovered that teachers possess strong pedagogical content knowledge, were corroborated by this outcome. The study's findings also support those of (Nimisha & Lalit, 2019) who claimed that teacher-educators had a high level of content understanding. The findings of this study, on the other hand, did not corroborate those of (Kemboi *et al.,* 2017) who looked into teachers' pedagogical knowledge for use in instructing students in Kenya's north rift region and discovered that a sizable number of them lacked it for the implementation of the secondary school curriculum. The results of this study and those of (Kemboi *et al.,* 2017), may differ due to differences in study locations. The findings of this study also indicated that content

knowledge was more important to secondary school Economics teachers in South-West Nigeria than pedagogical expertise, which was less important. This indicates that the sampled Economics teachers have a higher level of topic knowledge than is required to assess cognitive preparedness. When the teachers were appropriately introduced to the concepts of economics throughout their preparatory years (years spent in school), this outcome was feasible. This outcome was also possible when the teachers understood that motivation can be ineffective without educational understanding and achievement. This finding corroborated the finding by (Chukwuemeka *et al.,* 2019) that every instructor must possess strong subject-matter expertise in order to make lessons meaningful for their pupils. In conclusion, this study's findings showed that, regardless of academic background and prior teaching experience, secondary school Economics teachers in South-West, Nigeria did not differ significantly in their cognitive preparation. This implies that regardless of their educational background and prior teaching experience, Economics teachers' cognitive preparedness is independent. This conclusion is believable given that the majority of the sampled Economics teachers, regardless of their educational background and prior teaching experience, possess a high degree of cognitive preparedness. The findings of (Anita *et al.,* 2013) who argued that more experienced teachers would have mastered the subject matter and acquired classroom management skills to deal with various types of classroom problems, are likely to be motivated by the need to succeed and would have formed a positive attitude toward teaching, are in direct opposition to this finding. The findings of this study also contradicted (Stringfield's 2014) findings, which claimed that teachers with more experience are better equipped to focus on finding the most effective ways to teach specific subjects to students with a range of abilities, backgrounds, and prior knowledge.

5. Conclusion

This study assessed the cognitive preparedness of the secondary school Economics teachers in South-West Nigeria. It was concluded that these teachers have a good knowledge of Economics content knowledge, conceptual understanding and teaching skills, high level of achievement motivation and positive attitude towards teaching the subject. Moreover, the study also found out that these attributes are not affected by their academic qualifications as well as the experience in teaching, thus this confirm that the sampled populace is generally of a moderate competency level. The study also concluded that the sampled teachers' knowledge of Economics, pedagogical knowledge, achievement motivation, and disposition toward the teaching of Economics does not depend on academic qualification and teaching experience.

6. Recommendations

Based on the results and conclusion of this study, it is recommended that:

1. Secondary school Economics teachers in South-west should be encouraged to maintain their level of cognitive readiness which was found to be high.

2. Economics teachers should be sensitized on the need to improve on their pedagogical knowledge/skills which were found to be the least among the cognitive readiness parameters.

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