

**COMPARISM BETWEEN EDO NUMERAL SYSTEM AND URHOBO NUMERAL
SYSTEM**

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BENIN CITY,

NIGERIA

OCTOBER, 2025.

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**BEING A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF LINGUISTICS
STUDIES, FACULTY OF ARTS, UNIVERSITY OF BENIN, BENIN CITY, IN PARTIAL
FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF
ART (B.A) DEGREE IN LINGUISTICS STUDIES**

OCTOBER, 2025.

APPROVAL

I, **HOPE OVOKE OGIDIAGBA**, a student of the Department of Linguistics Studies, University of Benin with Matriculation number **ART2100808** completed the requirements for the course work and research for the Bachelor of Arts Degree of the University of Benin. The work embodied in this project is original and has not been submitted in part or whole for any other degree or diploma programme of this or any other university or institution.

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PLAGIARISM CERTIFICATION

I, **HOPE OVOKE OGIDIAGBA** with matriculation number **ART2100808** declare that this work titled “**COMPARISM BETWEEN EDO NUMERAL SYSTEM AND URHOBO NUMERAL SYSTEM**” has successfully passed the anti-plagiarism test (with a score of %), and so does not violate any copyright regulations.

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DEDICATION

This work is dedicated to God Almighty for His unfailing grace and mercy shows me in the course of my academic journey in the University of Benin. This journey would not have been easy and successful without you Lord.

ACKNOWLEDGEMENTS

My immense gratitude goes to God Almighty for the gift of life, good health, wisdom, knowledge, understanding and perseverance needed to create this project.

My sincere appreciation goes to my wonderful Parents, Mr. and Mrs. Ogidiagba for their love, advice, financial and moral support. You both made this journey easy for me.

I sincerely appreciate the fatherly support of my reliable supervisor of inestimable value, Mr. G.O.Agharuwa, for creating time, making accurate corrections, his patience, guidance, great insight and professional advice at all stages of this project.

Also, I sincerely appreciate all the lecturers in the Department of Linguistics Studies, University of Benin among whom are Dr. (Mrs) O. R. Osewa, Prof. M. S. Agbo, Prof. (Mrs) E. M. Omoregbe, just to mention a few who have been supportive in one way or the other towards the completion of my programme.

To my lovely siblings, Success, Precious and Lucky, I thank you for your moral support and prayers in the course of my academic journey.

To my amiable friends, Peace, Gloria, Benedict, and co, I thank you for your support in one way or the other throughout this journey.

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ABSTRACT

This study examines a comparative analysis of the numeral systems of the Edo and Urhobo languages. The main aim was to identify the similarities and differences in their structure, formation, and cultural significance. Both languages belong to the Niger-Congo family and are spoken in southern Nigeria. The study adopted a descriptive and comparative research design, drawing data from native speakers and existing linguistic materials. Findings from the analysis show that both Edo and Urhobo use a decimal (base-ten) numeral system and share similar patterns of additive and multiplicative formation. Numerals from eleven to nineteen are formed through addition, while twenty and its multiples are formed through multiplication. The two languages also share several phonological and lexical similarities, especially in the lower numerals (one to ten), suggesting a shared historical background or long-term language contact. However, there are notable differences in word usage and pronunciation. Edo uses the conjunction *nye* (“and”) when combining numbers, while Urhobo uses *egbe* (“of” or “plus”). Minor sound variations also occur due to differences in tone and vowel length. Beyond their structural features, the study reveals that numerals in both languages carry cultural meanings and are used in naming, trade, and traditional counting systems. Overall, the study concludes that while Edo and Urhobo numeral systems share many linguistic features due to their historical and cultural connections, each language maintains its own distinct identity. The research contributes to the understanding of numeral formation in Nigerian languages and highlights the close relationship between language, culture, and cognition in human societies.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Numbers are an essential aspect of every language, serving as a tool for counting, measuring and expressing quantity. They form an important part of a language's grammatical and lexical system, revealing insights into the structure, history and cultural development of a speech community. The Edo and Urhobo language, both belong to the Edoid group of the Nigeria congo language family. Share certain historical and linguistic features due to their common ancestry. Difference's can be observed in their numeral systems in terms of form, structure and patterns of composition.

Edo is a generic name given to the group of people who have a common language. Edo is the language of the Ancients Benin Kingdom. According to Omozuwa(2003:246) History has it that the term Edo came into use during the reign of Oba Ewuare (1440 - 1473). Thus the land, the people and language became known as Otọ Edo,lvbi Edo and Edo respectively. The language is spoken in seven out of the eighteen local government areas of Edo state, with it's standard form spoken in the Benin metropolise, where the palace of the Benin monarch is situated. The seven LGAs are Orẹdo, Ikpoba-ọkha, Ego, Ovia- North East, uhumwuode Ovia- south west and Orhiọnonw

The Edo language does not have a generally accepted orthography. However the orthography used in this study is the proposed in Omozuwa(2010). According to Omozuwa (2010:10), Edo language has thirty nine orthographic symbols. They are: a, an, b, d, e, ẹ, en, f, g, gb, gh, h, i, in, k, kh, kp, l, m, mw,n, ny, o, ọ, on, p, r, rh,rr s, t, u, un, v, vb, w, y, and z. The Edo language also uses an SVO word order. However adjective often come after the nouns they modify unlike in English, where the adjectives come before the noun they modify.

According to Omoregbe (2012) Edo is largely a homogeneous language but varieties of it exist in some of the LGAs listed above. The varieties include Oza Nogogo, Oza Aibiokunla, Oza Nisi, Odiguetue, Errua, Eho, Oke, Urhonigbe and others.

The Urhobo language is the native language of the Urhobo people, who are mainly found in Delta state, southern Nigeria congo family, specifically classified under the Edoid subgroup of the Benue congo branch. Urhobo is spoken mainly in Ughelli, Effurun, Okpe, Sapele, Oghara, Abraka, Udu, Ughievwen, and other surrounding areas in Delta state.

The Urhobo language does not have a generally accepted orthography, However the orthography used in this study is the proposed Tanure (2007). According to Tanure (2007:5). Urhobo language has forty three orthographic symbols. They are: a, an, b, ch, d, dj, e, ẹ, en, ẹn, f, g, gb, gh, ghw, h, hw, i, j, k, kp, m, mw, n, in, on, ọn, ny, o, ọ, p, ph, r, rh, s, sh, t, u, un, v, vw, w,y, and z. The Urhobo language also uses an SVO word order, however adjective often come after the nouns they modify unlike, in English where the adjectives come before the noun they modify.

The first elaborate attempt at classifying Edoid languages was made by Elugbe (1989). The Edo language and Urhobo language both belong to the Kwa sub group of the Nigeria Congo phylum. Elugbe classification divides the Edoid area into three, which he further sub divides into four groups , these as the North western, North Central and North western. While the four sub group are proto Delta Edoid. The Edo language and Urhobo language is classified here as a member of the proto North Central Edoid group.

This study seeks to contribute to existing knowledge by comparing the Edo and Urhobo numeral system with the aim of identifying their similarities and difference. By analyzing their phonological, morphological and syntactic structures, the study highlights the linguistic

relationship between the two languages and explores how each has developed distinct numerical expressions over time. Such a comparison not only contributes to the understanding of Edoid languages classification but also provide valuable insights into the processes of language change and diversification with the Nigeria Congo linguistic family.

The present stud, which focuses on a comparison between Edo and Urhobo numeral system, is organized into five chapter. Chapter one provides the general introduction including the background of the study, the purpose of the study, the significance and justification, as well as the methodology employed. Chapter two present the literature review, covering the conceptual framework, previous studies and issues relevant to the present research. Chapter three discusses the theoretical framework that guides the study. Chapter four focuses on the analysis and discussion of the data obtained on Edo and Urhobo numeral systems. Chapter five concludes the study by summarizing the major findings, drawing conclusions and providing recommendations. The work end with the list of references.

1.2 Statement of the Problem

There is currently a lack of literature documents on the investigation and comparison between Edo and Urhobo numeral system. This study is therefore carried out in order to provide a material that investigates and documents numeral system of Edo and Urhobo language.

1.3 Purpose of the Study

This section shows the aim and objectives of the study as well as the statement of the problem that the study sets out to solve.

1.3.1 Aim and Objectives of the study

The aim of this study is to investigate and compare the numeral systems of Edo and Urhobo languages, focusing on their linguistic structures.

The Objectives of the study include:

- I To identify and describe the morphological structures of numerals in both Edo and Urhobo languages.
- II. Compare the numeral formation processes in both Edo and Urhobo language to determine their similarities and differences.
- III. Explore how the numeral systems contribute to the understanding of linguistic relationship and cultural heritage between Edo and Urhobo people.

1.4. Significance and justification of the study.

This research is significant because it contributes to the broader understanding of how language reflects culture. Numeral systems are not only tools for counting but also reveal the unique linguistic structures and cultural logic of a people. By comparing the Edo and Urhobo numeral system, this research highlight both the similarities and differences between the two languages , thereby shedding lights on their historical, cultural and linguistic relationships.

This study is justified as it addresses a gap in the existing linguistic research, where little attention has been given to the comparative analysis of numerals systems among Nigerian languages, particularly Edo and Urhobo. The findings will enhance documentation and preservation of indigenous language, promote linguistic diversity and serve as a valuable resources for scholars, educators and language planners, furthermore, the study could be used as aid in developing culturally relevant educational materials among speakers of the two languages, thereby contributing to cultural integration and heritage preservation.

1.5. Methodology

The data relied on for the study consisted of oral and written data. The oral data form the primary data, while the written data form the secondary data. The oral data were collected from

native speakers of Edo and Urhobo language, living in Ekosodin, Ugbowo, Ihogbe and Uselu areas of Benin city. A total number of twenty informants were consulted and they gave me not less than thirty numbers each. The informants are between the ages of forty and seventy years old and the minimum educational qualification was the primary school leaving certificate.

The oral data were collected through scheduled interviews that allowed for not just collection of numerals but also for a durative period of time where the speakers explain the significant of numerals system. The secondary data consisted of numerals that were collected from previous projects and articles on the numeral systems of Edo and Urhobo language.

The study adopted a descriptive study of numerals, using the descriptive theoretical framework of content analysis to discuss and examine the structural patterns in Edo and Urhobo numeral systems. Hence the study is a descriptive one.

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction

In this chapter, we present a review of definitions of concepts that are paramount to this research. It is divided into three sections, the first section is the conceptual reviews, the second section is the previous studies and the third section is the concern of the present study.

2.1 Conceptual Review

In this section the concepts that are review are:

- I Morphology
- II Derivational Morphology
- III Numeral systems.
- IV Linguistic Typology and Comparison

2.1.1. Morphology

According to Anderson's (1992) A-Morphous Morphology is a landmark contribution to linguistic theory, particularly in the study of morphology — the structure and formation of words. In this work, Anderson challenges traditional morpheme-based models that view morphology as the mere concatenation of discrete morphemes. Instead, he proposes a word-based and realization-oriented model of morphology. Anderson's central argument is that morphological structure cannot be fully explained by segmenting words into minimal meaning-bearing units (morphemes). Rather, morphology should be seen as a system of rules of realization that map abstract morphosyntactic properties onto phonological word forms. This approach moves away from "Item-and-Arrangement" models and embraces what Anderson terms an "A-morphous" (without morphemes) view of word formation. This work reshaped modern morphological theory

and influenced later models such as Paradigm Function Morphology and Distributed Morphology. It expanded the understanding of how morphology interacts with syntax and phonology, emphasizing flexibility and cross-linguistic diversity. Stephen Anderson (1992) offers a paradigm shift from morpheme-based to rule-based approaches, providing a more dynamic and realistic account of word formation. His “A-morphous” model remains foundational in theoretical and typological studies of morphology.

According to Baker’s (1991), “The Polysynthesis Parameter” presents a groundbreaking approach to understanding the structural variation among the world’s languages through a single parametric principle within generative grammar. Baker explores the phenomenon of polysynthetic languages—languages in which a single word often corresponds to an entire sentence in other languages (for example, Mohawk or Inuktitut). Baker proposes the Polysynthesis Parameter, a theoretical principle within the Government and Binding framework, to explain why polysynthetic languages display complex morphology and apparent differences in syntactic structure. According to this parameter, in polysynthetic languages, every argument of a verb must be expressed within the same morphological word. This leads to heavy incorporation of nouns and pronouns into verbal complexes. This work provides a unifying framework for understanding cross-linguistic diversity in morphology and syntax. It integrates morphological typology with the generative theory of syntax and reinforces the notion that linguistic variation can be systematically captured by a limited set of universal parameters. While Baker’s theory was innovative, later scholars debated the universality and sufficiency of the Polysynthesis Parameter, noting that polysynthesis is more of a continuum than a binary feature. Nonetheless, the paper has been profoundly influential in shaping discussions on morphosyntax, noun incorporation, and typological variation.

According to Lieber's (2014), *Introducing Morphology* offers a comprehensive and accessible overview of the field of morphology — the study of word formation and internal word structure. The book aims to make morphological concepts understandable to students and readers new to linguistics, while also engaging with current theoretical discussions. Lieber discusses the basic units of morphology, including morphemes, stems, roots, and affixes, and explains how they combine to form words. She explores word-formation processes such as derivation, inflection, compounding, and conversion, providing examples from a variety of languages. Her explanations bridge the gap between traditional descriptive approaches and modern theoretical perspectives. A major conceptual contribution of the book is its emphasis on the interface between morphology and other linguistic domains particularly syntax, phonology, and semantics. Lieber shows that morphological phenomena cannot be studied in isolation; rather, they interact with grammatical structure, sound patterns, and meaning formation. The book also touches on morphological typology, distinguishing between analytic, agglutinative, fusional, and polysynthetic languages, thus linking morphology to cross-linguistic variation. Lieber concludes with discussions of morphological productivity, lexicalization, and the mental lexicon, reflecting how morphology operates in both linguistic theory and cognitive processing. Overall, *Introducing Morphology* (2014) presents morphology as a dynamic field that connects form, meaning, and grammar. It combines conceptual clarity with analytical depth, making it a foundational reference for linguistic students and researchers.

2.1.2 Derivational Morphology

According to Spencer's (1991) *Morphological Theory*, provides a comprehensive introduction to the study of morphology within the framework of generative grammar. The book explores how words are structured, how they are formed from smaller meaningful units

(morphemes), and how morphology interacts with syntax and phonology. Spencer presents morphology as an independent component of linguistic theory, rather than a mere by-product of syntax or phonology. He examines key concepts such as inflection, derivation, and compounding, highlighting how these processes contribute to the systematic organization of word structure. The book also reviews various theoretical models, including item-and-arrangement and item-and-process approaches, and evaluates their explanatory power. A significant contribution of Spencer's work is his discussion of morphological rules and lexical representations, where he emphasizes the role of the lexicon in storing both regular and irregular word forms. He also addresses cross-linguistic variation, demonstrating how morphological theory can account for differences among languages while maintaining general principles of grammar. Overall, Spencer (1991) provides both a theoretical and descriptive framework for understanding word formation. His work bridges the gap between morphology and other areas of linguistics, making it a foundational text for students and researchers interested in the structure and function of words in human language.

According to Halle and Marantz's (1993), marks a significant shift in morphological theory through the introduction of Distributed Morphology (DM) — a framework that redefines the relationship between morphology, syntax, and phonology. The theory was developed as a response to earlier models, such as Lexical Morphology and Phonology (LMP), which treated morphology as a separate component from syntax. The central innovation of Distributed Morphology is the idea that morphological structure is not built in the lexicon but distributed across several components of grammar — primarily the syntax, the morphological component, and the phonological form (PF). Halle and Marantz proposed that: Word formation happens in the syntax, not in a separate lexicon. Morphemes are abstract bundles of grammatical features

inserted into syntactic structures after syntax, during a process called Vocabulary Insertion. This distributed organization contrasts with the traditional view of the lexicon as a single repository of words, meanings, and forms. Halle and Marantz's Distributed Morphology bridges the gap between syntax and morphology. It treats words as syntactic objects, meaning that morphological derivation is a continuation of syntactic computation. This approach integrates morphology into the generative grammar architecture, aligning it with Chomskyan principles of modularity and derivation. While highly influential, DM has been critiqued for its abstractness and for downplaying the role of the lexicon. Nevertheless, it has inspired extensive research in morphosyntax, inflectional morphology, and the interface between syntax, semantics, and phonology. The model's flexibility has allowed it to account for cross-linguistic variation in complex morphological systems, making it a foundational framework in modern morphological theory. Halle and Marantz (1993) redefined morphology as a distributed and derivational process, not confined to a single lexicon. Their framework emphasizes that morphology, syntax, and phonology interact dynamically in the generation of word forms. Distributed Morphology remains a cornerstone of theoretical linguistics, influencing both minimalist syntax and morphological typology.

2.1.3. Numeral System

According to Greenberg's (1990), proposed fifty four generalizations about numeral systems in language. In his paper, Greenberg's proposed fifty four cross linguistic generalization about how numeral systems are structured in the world's languages. His work is a foundational contribution to the typology of numeral systems, aiming to uncover the universal patterns and constraints that govern how human languages express numbers. Greenberg examined data from a large range of language and identified regularities in how numeral are formed and ordered. His

study focuses on the syntax, morphology and semantics of the numeral and how numeral systems expand from simple counting words to complex expressions. It established universal tendencies in numeral formation, revealing that numeral systems through diverse are constrained by cognitive, anatomical and linguistic principles. His work showed that structure of numerals systems is not random but follows predictable linguistic patterns shaped by human cognition and usage.

According to Crump (1990), the *Anthropology of numbers* offers a profound exploration of how numbers function as both cognitive tool and cultural symbols. Published (1990), the book bridges anthropology linguistics and mathematics to demonstrate that numbers are not only abstract entities for calculation but also expressions of cultural identity, social organization and human thought. Crump's work marks a major step in understanding different societies conceptualize numerical ideas and how these ideas shape human interaction and world view. Crump's central framework rest on the idea that numbers are culturally constructed systems of meaning. He rejects the notion that numerical concept are universal or purely mathematical. Instead he views counting, measurements and Classification as culturally embedded practices that arise from the everyday experiences and social needs of different communities.

According to Ekundayo (1995), investigates how the yourba nune ooral system, especially it's vigesimal or "base twenty" component is not merely a straight forward counting device but a domain of rich derivational morphology reflecting speakers grammatical competence. His focus is on how higher numerals (beyond the basic ones) are systematically derived via morphological operations in Yoruba, thus showing how number words in Yoruba are formed by rule governed processes rather than being wholly lexicalised. Ekundayo situates numeral derivation within the broad view of grammatical competence. The idea that native speakers internalize morphological

and phonological rules that generates count word beyond the few basic ones. He treats number words in Yoruba not just as lexical entries but as derived forms built from underlying morphemes and combinatory operations,(such as addition, subtraction, multiplication,) embedded in the numeral system. The " vigesimal" nature of the system (base 20) is central, the unit Ogun (twenty) functions as a core morphological base from which many derived forms are constructed.

According to Chrisomalis (2021), *Numerals, Cognition and History* present an insightful interdisciplinary exploration of how humans have invented, used and understood numerals across time and cultures. The book combines perspective from anthropology, cognitive science, linguistic and the history of mathematics to show that numeral systems are not merely technical devices for compilation but are deeply embedded in social and cultural practices. The work is both a historical analysis and a cognitive reflection, challenging conventional assumptions about the universality and inevitability of the number system we use today. At the core of Chrisomalis work lies the concept that numeral systems are social and cognitive technologies. Rather than viewing numbers as abstract mathematical entities, he conceptualize them as tools that humans develop and adopt in response to cultural, material and communicative needs.

2.1.4 Linguistic Typology and Comparison

According to Croft (1990, 2nd ed. 2003), *Typology and Universals* is a foundational work in linguistic typology that systematically explores the patterns and principles underlying the world's languages. The book provides both a theoretical and methodological framework for understanding how languages differ and what structural properties they share, thus bridging linguistic diversity and universality. Linguistic typology as explained by Croft is the systematic study and classification of languages according to their structural and functional features. It aims

to uncover the range of variation in linguistic structures such as phonology, morphology, syntax, and semantics and to identify the limits of this variation. Croft emphasizes that typology does not merely describe differences but seeks to explain why certain linguistic patterns recur across unrelated languages. Croft distinguishes between absolute universals (features found in all languages) and statistical universals (features common but not universal). He introduces the concept of implicational universals, statements showing that the presence of one linguistic feature implies the presence of another linguistic (e.g. plural number). Universals, in his view, reflect constraints on possible human languages arising from cognitive, communicative, and functional pressures. A central argument in Croft's framework is the functional-typological perspective, which combines linguistic form with communicative function. He argues that linguistic structures evolve to meet communicative needs while maintaining cognitive efficiency. Therefore, cross-linguistic patterns and universals are not arbitrary but motivated by human cognition and social interaction. Croft's *Typology and Universals* reshapes how linguists understand the relationship between diversity and universality in language. It provides a unified theory that connects language structure to human cognition and social function. The book remains a cornerstone in linguistic typology, influencing research in syntax, morphology, and linguistic evolution.

According to Bisang's (1992), *Classifiers, Noun Phrases and the Pragmatics of Reference in Some East and Southeast Asian Languages*, Bisang's work is a major contribution to linguistic typology and the study of nominal classification systems. It focuses on the structure and function of noun phrases, especially classifiers, in East and Southeast Asian languages, including Chinese, Thai, Hmong, and Vietnamese. Bisang's research combines typological, functional, and pragmatic perspectives to explain how languages organize reference and categorization. Rather

than relying on inflectional morphology, Bisang examines classifiers—grammatical elements used to categorize nouns according to semantic properties such as shape, animacy, or function. Unlike Indo-European languages that mark number, gender, or case morphologically, classifier languages use separate words to specify these distinctions. Bisang's typological approach compares how different languages encode reference and categorization through classifiers, offering insight into alternative strategies of nominal structure. A key argument in Bisang's work is that classifiers serve not only grammatical purposes but also pragmatic . They guide the hearer's interpretation of referents in discourse, helping to manage definiteness, specificity, and shared knowledge. This functional-pragmatic view moves beyond purely structural analysis to show that classifier systems are deeply rooted in communicative needs and cognitive categorization. Bisang highlights that although classifier systems vary widely across languages, they follow certain universal cognitive principles. For instance, classifiers tend to emerge in languages with minimal morphological marking, compensating for the lack of inflection by providing semantic and referential clarity. This reflects a universal tendency toward linguistic balance where different languages employ diverse strategies to achieve the same communicative goals. Bisang's (1992), study is significant for its typological breadth and theoretical depth. It challenges Eurocentric grammatical assumptions by showing that languages without inflectional morphology are not "simpler" but rely on functional and pragmatic mechanisms to achieve precision. His work has influenced later research in linguistic typology, cognitive linguistics, and discourse analysis.

According to Bybee's (1994), the Evolution of Grammar, Tense, Aspect and Modality in the languages of the world. Bybee's work is a landmark in linguistic typology and cognitive-functional linguistics. It explores how grammatical systems—especially tense, aspect, and

modality (TAM)—develop and evolve across the world’s languages. The book offers a conceptual and empirical framework for understanding grammaticalization, the process by which lexical items gradually become grammatical markers. At the core of Bybee’s 1994 study is the theory of grammaticalization. She explains that linguistic forms often evolve from full lexical meanings (e.g., “go,” “want,” “have”) into grammatical functions (e.g., future, desire, possession markers). Bybee argues that this evolution is systematic, motivated by frequency of use, cognitive processes, and communicative efficiency. Thus, grammar is not static but a product of continuous change and adaptation. Based on a large typological database, Bybee identifies universal paths of grammatical change. For example, motion verbs often become future tense markers (“I am going to eat”), and verbs of possession or necessity evolve into modal markers (“I have to go”). These grammaticalization pathways reveal that language change follows predictable cognitive and semantic patterns shared by speakers worldwide. Bybee’s work is groundbreaking because it redefines grammar as usage-based and evolutionary. It rejects the idea of grammar as a rigid, innate system and instead presents it as a dynamic reflection of human interaction, frequency effects, and semantic generalization. The book has profoundly influenced research in typology, historical linguistics, and cognitive linguistics.

2.2. Previous Studies

Efeakpor and Ikhimwin in their study, presents a comparative phonological analysis of the numeral systems in Urhobo and Edo, two closely related Southwestern Edoid languages spoken in southern Nigeria. The primary aim is to identify and analyse both shared and language-specific phonological processes involved in the formation of cardinal numerals, with particular attention to processes triggered during numeral compounding. Drawing on data elicited from native speakers, the study employs a descriptive-comparative method complemented by the

theoretical framework of Autosegmental Phonology, which allows for the representation of tonal and segmental features on separate tiers. Analysis reveals that both languages exhibit several shared phonological strategies, including vowel elision, glide formation, nasalisation, and tonal assimilation. These processes are especially prominent at morpheme boundaries, where they serve to maintain syllable harmony and resolve hiatus, with vowel elision emerging as the most frequent strategy in both systems. However, notable divergences also surface: Urhobo demonstrates a process of vowel backing, whereby front vowels are retracted under specific phonological conditions, while Edo exhibits tonal downstep, a pitch-lowering phenomenon arising from floating low tones following vowel deletion. These differences underscore each language's unique phonological evolution, even within a shared typological framework. The findings contribute to the documentation and comparative analysis of under-researched numeral systems and offer broader implications for understanding phonological variation within the Edoid language group.

Iwvorin and Ifesieh in their study "A comparative study of numeral and counting system of Urhobo and Igbo. Numeral system of a language reflects its culture, history, and cognition. Despite Urhobo and Igbo coexisting as neighbors and utilizing the base-10 numerosity, significant differences exist in the operationalization of these systems, often leading to ambiguity. This research objectifies the elucidation of the similarities and disparities between the two numeral systems employing the descriptive analytical approach. The conceptual framework underlying this research is the numeral segmentation principle, whose core assumption is that numerals deviate from their base form. Data was collected through oral interviews, documentation, and online sources. The findings reveal that higher complex numerals are formed through both morphological and arithmetic methods. Morphological methods involve compounding (for

cardinal numerals), while arithmetic methods entail addition or multiplication of numerals in both Igbo and Urhobo. In Igbo, multiplication involves juxtaposition of elements in an incremental relationship. For instance, 'eleven,' *iri na otu*, is '10+1' (addition) in Igbo, while 'forty,' *iri an?*, (multiplication), involves compounding. Addition of numerals in Igbo is indicated by 'na' (and), while in Urhobo, it's 'gbe' (and). Igbo has four weekdays: Eke, Orie, Afor, Nkwo, while Urhobo also has four weekdays too: Edewo, Ediruo, Eduhre, Edebi. However, only Edewo is considered a major market day in Urhobo, while in Igbo, all weekdays are market days categorized into major and minor or small market days. While Urhobo adaptes names for the Gregorian seven weekdays, Igbo does not. Both languages use 'which' ('*n?ke?*' in Igbo and '*ore?*' in Urhobo) along with numerals to express ordinal numerals. The research further reveals that Urhobo's days of the week differ from its market days, unlike Igbo, where weekdays are the same as market days. Conclusively, both Urhobo and Igbo employ the base-10 numeral system intricately, yet distinctly, to cognitively assess and represent both concrete and abstract events.

2.3 Concern of the Present Study

This study is mainly concerned with comparing how numbers are formed and used in the Edo and Urhobo languages. It looks at the words for numbers, how they are joined together, and how people use them in daily life. The aim is to find out the ways the two languages are alike and how they are different in their numeral systems. The study also wants to understand what numbers mean in the culture of both Edo and Urhobo people. Numbers are not only for counting — they can show how people think, trade, and understand their world. In general, the study is concerned with showing the special features of Edo and Urhobo number systems and helping people understand more about how numbers work in these two languages

CHAPTER THREE

THEORETICAL FRAMEWORK: CONTENT ANALYSIS

3.0 Introduction

Content analysis is a research method used in linguistics to study and interpret communication—whether spoken, written, or visual. It helps researchers identify patterns, meanings, and relationships that exist within language use. In this study, content analysis serves as the framework for comparing the Edo and Urhobo numeral systems. It allows for a detailed look at how both languages form and use number words, and how these reflect each people's ways of thinking about counting and quantity.

This method is rooted in ideas from semiotics, discourse analysis, and linguistic anthropology, which focus on how language carries meaning and reflects culture. It uses both quantitative and qualitative approaches—so researchers can study numeral forms statistically while also interpreting their meanings in context. The idea of analyzing symbols and meanings goes back to Harold D. Lasswell, one of the early thinkers who showed how language and communication reveal cultural values and patterns.

3.1 Theoretical Foundations of Content Analysis

Content analysis is based on several key ideas that make it useful for comparing the Edo and Urhobo numeral systems. It allows the researcher to study linguistic elements—like number words, counting patterns, and structures—in a systematic way to find similarities and differences. From a semiotic point of view, numerals are signs that represent both quantity and meaning.

Looking at Edo and Urhobo through this lens helps reveal how each language encodes number concepts and reflects the worldview of its speakers. From a discourse analysis

perspective, numerals can also be seen as part of social interaction, showing how people communicate, trade, and express hierarchy or value through numbers.

By combining these perspectives, content analysis gives a clearer picture of how language, meaning, and culture work together in the Edo and Urhobo numeral systems.

3.2 Theoretical Orientation of Content Analysis

The orientation of content analysis provides a broad and flexible way to explore how languages organize and express meaning. In comparing the Edo and Urhobo numeral systems, it helps explain how both languages build number expressions and how these reflect their cultural background.

Communication theory plays a role here by focusing on how information is sent and understood. In this study, it helps explain how Edo and Urhobo speakers use numeral words in communication whether for counting, trading, or storytelling and how these forms reflect cultural habits and ways of thinking.

In addition, insights from social psychology show how language influences how people think and behave. Studying the Edo and Urhobo numeral systems through this lens helps reveal how people in both groups understand and relate to numbers in everyday life.

3.3 Theoretical Organization of Content Analysis

In practice, content analysis involves organizing data and applying different theoretical models to guide interpretation. When used to compare the Edo and Urhobo numeral systems, it helps researchers study the structure and meaning of number words in an orderly and meaningful way.

One useful model here is Critical Discourse Analysis (CDA), which studies how language relates to power, culture, and identity. Applied to numerals, it helps show how counting

systems might reflect cultural values or traditional ways of organizing society. For example, certain numeral terms might carry symbolic meanings in trade, rituals, or social ranking.

Through this organized approach, content analysis helps researchers understand how the Edo and Urhobo people use numerals not only for counting but also as a reflection of their social and cultural life.

3.4 Theoretical Applications of Content Analysis

The application of content analysis in this study helps to explore how numerals function in both Edo and Urhobo languages. It provides tools for identifying patterns in numeral formation, usage, and meaning.

For example, content analysis can be used to examine how both languages form numbers beyond ten, how compound numbers are created, or how number words appear in proverbs and daily speech. It also helps uncover how numerals are used in real-life contexts such as trade, education, and traditional ceremonies—revealing the cultural role of numbers in each society.

By applying content analysis, this study doesn't just compare words, it looks at the deeper ways each community understands and uses numbers in communication and culture.

3.5 Relevance of Content Analysis to the Comparison between Edo and Urhobo Numeral Systems

Using content analysis in the comparison of Edo and Urhobo numerals is especially relevant because it allows for a systematic and objective look at both languages. It helps to identify similarities and differences in how the two groups build, express, and use numbers. Through this method, researchers can study how numerals are formed, how they reflect cultural practices, and how speakers use them in everyday communication. It also allows for the exploration of semantic, morphological, and syntactic features that shape each numeral system.

Importantly, content analysis supports cross-linguistic comparison, helping to place Edo and Urhobo numerals within the larger context of Niger-Congo languages. It also makes it possible to study how social factors such as tradition, region, or contact with other languages affect numeral usage. By combining both descriptive and interpretive analysis, content analysis offers a rich understanding of how numbers function as part of language and culture in both Edo and Urhobo communities.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter presents and analyzes the data collected for the comparison between the Edo and Urhobo numeral systems. The focus is to identify the similarities and differences in their numeral formation, structure, and usage. The analysis aims to reveal the linguistic patterns that underlie both systems, showing how each language expresses numbers through its morphological features. The chapter begins with a presentation of the numeral data from both Edo and Urhobo languages, covering the basic numerals (one to ten), the decades (ten, twenty, thirty, etc.), and higher numerals. It further examines the derivational and compositional strategies employed in numeral formation, such as addition, subtraction, multiplication, and compounding. Finally, the discussion interprets the findings within the broader linguistic and cultural context, highlighting how the numeral systems reflect the cognitive and cultural orientations of the Edo and Urhobo people. The insights from this analysis will contribute to the understanding of numeral typology in Nigerian languages and the historical relationship between Edoid and Urhoboid linguistic groups.

4.1 Analysis

This section provides a detailed analysis of the similarities and differences between the Edo and Urhobo numeral systems. The analysis focuses on their structure, formation processes, counting patterns, and linguistic features. Both Edo and Urhobo belong to the Niger-Congo language family and share certain cultural and linguistic traits, yet their numeral systems reveal

unique structural characteristics influenced by their individual linguistic histories and cultural evolution.

4.1.1 DERIVATION OF 11- 20

Numbers	Edo Expressions.	Literal meaning.
11.	Owọro	Eleven
12	Iweeva	Twelve
13	Iweera	Thirteen
14	Iweene	Fourteen
15	Ekesugie.	Count to twenty
16	Enèn ei rro vbe ugie.	Four remaining for it to be twenty
17.	Eha ei rro vbe ugie.	Three remaining for it to be twenty
18	Eva ei rro vbe ugie.	Two remaining for it to be twenty
19	Okpa ei rro vbe ugie.	One remaining for it to be twenty
20	Ugie	Festival

Numbers	Urhobo Expressions	Literal meaning
11.	Ihwe egb ovo.	Ten plus one
12.	Ihwe egb ive.	Ten plus two
13.	Ihwe egb eha.	Ten plus three
14.	Ihwe egb ene.	Ten plus four
15.	Ihwe egb iyorin.	Ten plus five
16.	Ihwe egb esan.	Ten plus six
17.	Ihwe egb ighwre.	Ten plus seven
18.	Ihwe egb erenre.	Ten plus eight
19.	Ihwe egb ihirin.	Ten plus nine
20.	Uje.	Festival

Explanation

In Urhobo language, the addition model was used from 11- 20 except number twenty, which is a base number. In Edo language, from 11 to 14, the addition model was used and from 16 to 19, the substration model was used, while 11, 15 and 10 are base numbers.

4.1.2. DERIVATION OF 30-40

Numbers	Edo Expressions	Literal meaning
30.	Ọgban.	Thirty
31	Okpa nye Ọgban.	One plus thirty
32	Eva nye ọgban.	two plus thirty
33	Eha nye ọgban.	three plus thirty
34	Enen nye ọgban.	four plus thirty
35	Isen nye ọgban.	five plus thirty
36	Enen ei rro vbe yieva	four remaining to be forty
37	Eha ei rro vbe iyeve	three remaining to be forty
38	Eva ei rro vbe iyeve.	two remaining to be forty
39	Okpa ei rro vbe iyeve	one remaining to be forty
40	Iyeve	forty

Numbers	Urhobo Expressions	Literal meaning
30	Ọgban.	Thirty
31.	Ọgban egb ovo.	Thirty plus one
32.	Ọgban egb ive.	Thirty plus two
33.	Ọgban egb eha	Thirty plus three
34.	Ọgban egb ene.	Thirty plus four
35.	Ọgban egb iyorin.	Thirty plus five
36.	Ọgban egb esan	Thirty plus six
37.	Ọgban egb ighwre.	Thirty plus seven
38.	Ọgban egb erenre.	Thirty plus eight
39.	Ọgban egb irhirin.	Thirty plus nine
40.	Ujuve	Forty

Explanation

Edo and Urhobo language both used additional model from number thirty to thirty five, while Urhobo language continue with the addition model in the remaining numbers which is number thirty six to thirty nine, Edo language switch to substratum.

4.1.3. THE DERIVATION OF 80-100

Numbers	Edo Expressions	Literal meaning
80.	Iy enen.	eighty
81	okpa nye iyen.	one plus eighty
82	eva nye iyen.	two plus eighty
83	eha nye iyen.	three plus eighty
84.	ene nye iyen.	four plus eighty
85.	isen nye iyen.	five plus eighty
86	ehan nye iyen	six plus eighty
87	ihinrɔn nye iyen.	seven plus eighty
88.	ehenren nye iyen.	eight plus eighty
89.	ihinrin nye iyen	nine plus eighty
90.	iyen kevb igbe	eighty plus ten
91.	okpa nye iyen kevb igbe	one plus eighty plus ten
92.	eva nye iyen kevb igbe	two plus eighty plus ten
93.	eha nye iyen kevb igbe.	three plus eighty plus ten
94.	ene nye iyen kevb igbe.	four plus eighty plus ten
95.	isen nye iyen kevb igbe	five plus eighty plus ten
96.	ehan nye iyen kevb igbe.	six plus eighty plus ten
97.	ihinrɔn nye iyen kevb igbe	seven plus eighty plus ten

98.	ehenren nye iyenen kevb igbe	eight plus eighty plus ten
99.	ihinrin nye iyenen kevb igbe.	nine plus eighty plus ten
100.	iyisen.	Hundred

Numbers	Urhobo Expressions	Literal meaning
80	ujone.	Eighty
81	ujone egb ovo.	Eighty plus one
82.	ujone egb ive.	Eighty plus two
83	ujone egb eha.	Eighty plus three
84	ujone egb ene	Eighty plus four
85	ujone egb iyorin	Eighty plus five
86.	ujone egb esan.	Eighty plus six
87.	ujone egb ighwre.	Eighty plus seven
88.	ujone egb erenre.	Eighty plus eight
89	ujone egb irhirin	Eighty plus nine
90.	ujone egb ihwe	Eighty plus ten
91	ujone egb ihwe egb ovo	Eighty plus ten plus one
92	ujone egb ihwe egb ive.	Eighty plus ten plus two
93	ujone egb ihwe egb eha.	Eighty plus ten plus three
94.	ujone egb ihwe egb ene	Eighty plus ten plus four
95.	ujone egb ihwe egb iyorin	Eighty plus ten plus five
96	ujone egb ihwe egb esan	Eighty plus ten plus six
97	ujone egb ihwe egb ighwre	Eighty plus ten plus seven
98	ujone egb ihwe egb erenren.	Eighty plus ten plus eight
99.	ujone egb ihwe egb irhirin	Eighty plus ten plus nine
100	ujorin.	Hundred

Explanation

Edo and Urhobo language's used the same patterns in the numbers from eighty to eighty nine, they used additional model. Note, the Edo numeral system can make use of both addition and subtraction as seen in the data presented above. From ninety, because there is no particular concept for ninety in both language, they made use of addition. Adding ten plus eighty to form ninety.

4.1.4 THE DERIVATION OF 200, 300, 400 and 500

Numbers	Edo Expressions.	Literal meaning
200.	Uri or iy isen eva	hundred two
300.	Iy isen eha.	hundred three
400.	Iy isen enèn.	hundred four
500.	Iy isen isen.	hundred five

Numbers.	Urhobo Expressions	Literal meaning
200.	Uri or ujorin Ivi	hundred two
300.	Ujorin eha.	hundred three
400.	Ujorin ene.	hundred four
500.	Ujorin iyorin	hundred five

Explanation

The numeral systems of both languages used multiplication model for these numbers.

Multiplying by hundred to get two hundred, three hundred, four hundred and five hundred.

4.2. Discussion of Findings

This section discusses what the comparison between the Edo and Urhobo numeral systems has revealed. The findings show that both languages share many similarities in how they form numbers, but there are also some clear differences that make each system unique. These similarities and differences reflect their shared cultural background as well as their individual language developments

The similarities are that both languages use addition and multiplication, when forming morphological structure of the numeral system. Both Edo and Urhobo use a decimal system — that is, they count in groups of ten. This means that after ten, new numbers are formed by adding or multiplying smaller numbers. They also have cognate words, (erha for Urhobo and eha for Edo, ene, oḡban, uri, etc). Many Edo and Urhobo numerals sound alike, especially from one to ten. This shows that the two languages are closely related and have come from the same ancestral language.

Even though the structure is similar, there are some small but clear differences in how the two languages build their numerals. While the Edo language uses "Nye" as plus or addition, the Urhobo language uses egbe as it own. Edo language can either make use of addition or subtraction in their numeral system.

4.3. Summary of Chapter

This chapter focused on the analysis and discussion of the Edo and Urhobo numeral systems. The study found that both languages use a base-ten (decimal) system, which means they count in groups of ten. Numbers from eleven to nineteen are formed by adding to ten, while twenty is formed through multiplication. Edo and Urhobo share many similarities in the way their numbers are formed and pronounced, especially from one to ten. However, there are also

some clear differences. For example, Edo uses the word *nye* (meaning “and”) to connect numbers, while Urhobo uses *egbe’* (meaning “of” or “plus”). There are also small sound differences, like vowel length and tone, which make each language unique.

The study also showed that numbers in both languages are not just for counting—they carry cultural meanings and are used in naming, trading, and traditional activities. This shows how language and culture are closely connected in both communities. In general, the findings reveal that the Edo and Urhobo numeral systems are closely related, reflecting a shared cultural and historical background, but each has developed its own special features over time. The next chapter will present the summary, conclusion, and recommendations of the study.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter brings the study to a close by presenting the main findings, conclusions, and recommendations. The research set out to compare the numeral systems of the Edo and Urhobo languages, with a focus on how numbers are formed, structured, and used in each language. In the earlier chapters, the study discussed the background of the research, reviewed existing studies on numeral systems, and analyzed the data collected from both languages. Through this, it became clear that Edo and Urhobo share certain features in the way they form and use numbers, yet they also have distinct differences that reflect their unique linguistic identities. This final chapter summarizes these findings, draws conclusions from the comparison, and gives useful recommendations for further research. It also emphasizes the importance of preserving indigenous numeral systems as part of our cultural and linguistic heritage.

5.1 Summary of the Study

This study focused on the comparative analysis of the Edo and Urhobo numeral systems to understand their linguistic structures, morphological formations, and cultural meanings. Chapter One introduced the concept of numeral systems as an essential aspect of human language, showing how they reflect the cognitive, social, and cultural development of different communities. It explained that numerals are not merely mathematical tools but also linguistic expressions shaped by history, culture, and worldview. The chapter provided background information on both Edo and Urhobo languages—two Niger-Congo languages spoken in southern Nigeria—highlighting their linguistic affiliations, geographical distribution, and cultural

significance. It also presented the aims and objectives of the research, justified its relevance, and outlined the organization of the study into five chapters.

Chapter Two reviewed relevant literature and theoretical perspectives that guided the study. It was divided into three main parts: the conceptual review, the review of related studies, and the concerns of the present study. The conceptual review discussed key linguistic concepts such as morphology, derivational morphology numeral systems, linguistic typology and comparison. Numbers was described as a uniquely human tool for counting and cultural expression, following the views of scholars like Croft (1990) and Bisang (1992). The review further examined numeral formation and classification, noting that numeral systems reveal how languages express quantity and conceptualize counting.

The review of related studies discussed previous works on African numeral systems, including analyses of morphological and semantic structures across Niger-Congo languages. It revealed that while some studies have described Edo and Urhobo numerals individually, few have provided a direct comparison between both systems. The final section, “concerns of the present study,” identified the motivation behind the research — to highlight the similarities and differences between the two numeral systems and to show how these systems reflect cultural logic, linguistic creativity, and cognitive processes. Overall, Chapter Two provided the theoretical and conceptual foundation for understanding how Edo and Urhobo numeral systems function and interact linguistically.

Chapter Three discussed the theoretical framework adopted for the study which was content analysis. These frameworks emphasize the structure and function of morphemes in word formation and enable systematic comparison between related languages. They help explain how

numerals are derived, combined, and represented within linguistic systems. This chapter therefore provided the methodological and theoretical basis for the content analysis.

Chapter Four presented and analyzed the data on Edo and Urhobo numeral systems, focusing on the derivation, structure, and semantic organization of numerals. The discussion revealed both shared and distinct features between the two systems. Edo and Urhobo share a decimal base (base-10) structure, but they differ in their morphological processes and lexical representations. The study identified how both languages form numerals beyond 10 using addition, subtraction, and multiplication strategies. The findings were organized thematically around derivational patterns, morphological processes, and semantic features. The analysis showed that although both languages reflect similar numerical logic, their expressions are shaped by morphological, and cultural distinctions.

5.2. Summary of Findings

The study compared the Edo and Urhobo numeral systems to identify their structural and semantic similarities and differences. The findings revealed that both languages operate within a decimal-based system, demonstrating the cognitive universality of base-ten counting among Niger-Congo languages. However, the two languages exhibit unique morphological and semantic features that distinguish their numeral constructions.

Four major findings emerged from the comparison:

1. **Morphological Structure:** Both Edo and Urhobo form numerals through compounding and reduplication, but the patterns differ slightly. Edo numerals often use more compact morphological forms, while Urhobo displays more transparent additive constructions.

2. Derivational Process: The derivation of numerals beyond 10 in both languages involves addition and subtraction. However, Edo sometimes uses subtractive strategies (e.g., expressing 9 as “10 minus 1”), whereas Urhobo tends to employ additive ones.
3. Phonological Features: Sound patterns in numeral formation differ between the two languages, reflecting distinct phonotactic rules and tone systems.
4. Cultural Implications: Both numeral systems reveal cultural perceptions of order, completeness, and hierarchy. Numerals in both Edo and Urhobo serve not just mathematical but also symbolic purposes in rituals, trade, and oral traditions.

Overall, the findings confirm that while Edo and Urhobo share a common linguistic ancestry and cognitive approach to counting, their numeral systems reveal language-specific strategies that reflect their unique phonological and cultural identities.

5.3 Conclusion

This study set out to compare the Edo and Urhobo numeral systems to explore their linguistic structures, derivational patterns, and cultural meanings. Through morphological and comparative analyses, it demonstrated that both systems are structurally related yet distinct in their expressions and semantic organization. The study confirmed that numeral formation in both languages is systematic and meaningful, rooted in shared Niger-Congo linguistic principles and shaped by each community’s linguistic creativity.

By applying morphological and comparative linguistic frameworks, the study revealed that numeral systems are not merely tools of arithmetic but vital components of linguistic identity. The Edo and Urhobo numeral systems reflect both linguistic heritage and cultural worldview — showing how people conceptualize numbers, hierarchy, and order within their environment.

In essence, Edo and Urhobo numerals exemplify how language encodes culture and cognition. Their similarities affirm historical and genealogical connections between the two speech communities, while their differences highlight linguistic innovation and cultural individuality. This comparative study thus contributes to a deeper understanding of how numeral systems mirror the intellectual and cultural life of African societies.

Ultimately, the research reaffirms that the study of numeral systems goes beyond mathematical counting; it is also a study of language, culture, and human thought. The Edo and Urhobo numeral systems stand as linguistic evidence of how communities preserve their worldview through structured and meaningful patterns of expression.

5.4 Recommendations

This study recommends that greater attention be given to the preservation and promotion of the Edo and Urhobo numeral systems. Indigenous languages should be taught and used in schools, especially in early education, to strengthen cultural identity and language awareness. More comparative research should be conducted between Edo, Urhobo, and other Niger-Congo languages to deepen understanding of their linguistic relationships.

Proper documentation of both numeral systems in textbooks, dictionaries, and digital archives is essential to prevent language loss. Educational institutions should include topics on indigenous numeral systems in their curricula to encourage further study. Lastly, government and cultural organizations should support efforts aimed at preserving and promoting these languages through funding, awareness programs, and community engagement.

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APPENDIX

One to Ten

Numbers	Urhobo.	Èdo
1.	Qvo.	Owo
Two.	Ivẹ.	Eva
Three.	Erha.	Eha
Four.	Ène.	Ene
Five.	Iyorin.	Isen
Six.	Esan.	Ehan
Seven.	Ighwẹn.	Ihinrọn
Eight.	Èrenren.	Ehenren
Nine.	Irhirin.	Ihini
Ten.	Ihwe.	Igbe