Migration Letters

Volume: 21, No: S9 (2024), pp. 883-898

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online)

www.migrationletters.com

Teaching Noun-Class To Primary School Students: A Socio-Cognitive Perspective

Nasir Mahmood[1] , Ghulam Ali[2] , Lubna Umar[3]

Abstract

This research paper investigates the instruction of noun class to primary students in the Pakistani education system by analyzing the English language curriculum materials used in grades one to five. Grammar serves as the bedrock upon which linguistic competence is based, wielding significant influence over language development in young learners. Among the intricate components of grammar, noun class emerges as a foundation, influencing how individuals perceive and interact with the world through language. To unravel the complexities of noun class instruction, this study adopts a corpus-based approach, methodically examining English language curriculum materials and drawing insights from cognitive development theories. This study aims to determine how n[1]oun class is introduced and taught to young learners of grade 1 to 5 and whether these methods align with cognitive development theories, specifically Piaget's abstract thinking theory and cognitive theory of learning. The overarching objective is to dissect curriculum materials, assess the naming strategy's efficacy, explore its congruence with cognitive development stages and investigate its application in the Pakistani educational landscape. Additionally, this study compares primary education materials to those from developed education systems in the world to gain insights into potential improvements in grammar instruction. The findings offer implications for primary educators, curriculum developers, and policymakers.

Keywords: *Noun Class; Cognitive development theory; Corpus-based approach; Piaget's abstract thinking theory; English language curriculum.*

INTRODUCTION

In the dynamic landscape of primary education, the task of teaching grammar to young learners is nothing short of pivotal. Grammar, often perceived as a daunting subject, becomes the foundation for building their linguistic competence. For primary students, this journey into the world of language complexities is not merely a scholastic endeavor but a profound investigation of cognitive development intertwined with the mechanics of grammar. This research endeavors to conduct a comprehensive study, focusing on the teaching of English language noun class, within the context of Grade-I to V primary school students. Rooted in the theory of naming as an instrumental teaching strategy, this study delves into the cognitive

[1]Vice Chancellor Allama Iqbal Open University.
[2]Associate Professor Centre for Languages and Translation Studies Allama Iqbal Open University.
[3]Assistant Professor Centre for Languages and Translation Studies Allama Iqbal Open University.

aspects of grammar learning, drawing upon the theoretical frameworks of Piaget's abstract thinking theory and cognitive theory of learning. Against the backdrop of an ever-evolving Pakistani Education system, this research explores the employment of naming as a pedagogical strategy and aims to contribute insights that enhance English language grammar instruction for primary students.

Teaching grammar in primary education forms the key element of linguistic competence, equipping young learners with the essential tools for effective communication, reading, and comprehension (Anderson, 1990). It is a complex endeavor that extends beyond rote memorization, demanding a nuanced understanding of cognitive development and pedagogical techniques that cater to the evolving cognitive capacities of young learners (Schleppegrell, 2004). Grammar instruction in primary education is integral to fostering language development, as it lays the groundwork for language proficiency and serves as a scaffold upon which higher language skills are constructed (Hinkel, 2002). Therefore, exploring effective methods for teaching English grammar, particularly to primary students, is crucial for their English language development.

Noun class, a subset of grammar, assumes particular significance in the language development of primary students. It is a linguistic concept that categorizes nouns into classes or categories based on shared grammatical features. In languages with noun class systems, such as Swahili or Zulu, nouns are grouped into classes according to various criteria, such as gender, shape, or size. Understanding noun class is essential for learners as it impacts not only the form of the language but also its meaning and interpretation (Corbett, 1991). For instance, in Swahili, the choice of noun class can affect verb agreement and sentence structure. Noun class is a subtle yet crucial aspect of grammar, making it an ideal subject for exploration in primary education, where language skills are in their formative stages. Mastery of noun class not only enhances linguistic competence but also facilitates more accurate and nuanced communication.

One prominent strategy in the teaching of grammar, especially to primary students, is the theory of naming. Naming, or labeling, involves explicitly identifying and labeling grammatical structures in language input. This strategy is particularly effective at the primary level as it provides learners with a tangible and concrete means of grasping abstract grammatical concepts (Ellis, 2005). By naming grammatical elements, educators make the implicit explicit, allowing young learners to recognize and internalize language structures more effectively. Naming can transform the opaque world of grammar into a comprehensible landscape, enabling students to comprehend it with confidence (Ellis, 2006). Consequently, it is imperative to investigate how naming is employed within the Pakistani Education system and whether it aligns with the cognitive development milestones of primary students.

To investigate the cognitive development aspects of grammar learning of the English language by Pakistani primary school students, this research adopts a theoretical framework grounded in Piaget's abstract thinking theory and the cognitive theory of learning. Piaget's theory posits that cognitive development occurs in distinct stages, progressing from concrete, tangible thinking to the ability to manipulate abstract concepts (Piaget, 1970). This framework provides valuable insights into the appropriateness of teaching specific grammatical concepts, such as noun class, at particular stages of cognitive development. It underscores the importance of aligning pedagogical strategies with the cognitive capacities of learners. Moreover, the cognitive theory of learning emphasizes the role of mental processes, such as memory, attention, and problem-solving, in language acquisition (Anderson, 2005). It sheds light on how learners acquire, store, and use grammatical knowledge, offering a deeper understanding of the cognitive mechanisms involved in grammar learning. By employing these theoretical lenses, this research aims to unravel the intricate relationship between cognitive development and the teaching of noun class to primary students.

OBJECTIVES OF THE STUDY

This research paper seeks to comprehensively analyze the integration of noun class into the English language curriculum materials of primary schools from Grade-I to V and investigate the effectiveness of naming as a teaching strategy within the Pakistani Education system and its alignment with the cognitive development milestones proposed by Piaget's abstract thinking theory. It also aims to assess the presence and progression of noun class within the curriculum, examine the cognitive development of Grade-I to V students in relation to their understanding of noun class, and ultimately, provide insights for effective pedagogy informed by cognitive development theories and empirical data.

DELIMITATIONS OF THE STUDY

This study acknowledges several delimitations crucial for a focused examination of noun class instruction in Pakistani primary education by focusing primarily on dissecting the English language curriculum. First, the research concentrates on Grade-I to V primary school students, recognizing that the effectiveness of pedagogical strategies may differ across various age groups. Second, the study centers on the Pakistani education system, a diverse context where language dynamics may vary across regions and communities. While this context presents rich opportunities for exploration, findings may not be directly transferrable to educational systems in other countries with distinct linguistic landscapes. Third, the analysis predominantly relies on corpus-based examination and cognitive development theories as methodological and theoretical frameworks. While these provide valuable insights, the study does not incorporate extensive ethnographic or qualitative investigations into classroom dynamics. Finally, the study assesses the naming strategy within the constraints of available curriculum materials, acknowledging that pedagogical practices may evolve over time and in response to broader educational reforms. Despite these delimitations, this research endeavors to provide a comprehensive understanding of English language noun class instruction, its alignment with cognitive development theories, and its practical implications within the Pakistani primary education context, ultimately contributing to the enhancement of language learning strategies for young students.

SIGNIFICANCE OF THE STUDY

The significance of this study lies in its comprehensive exploration of English language noun class instruction of Pakistani students, a fundamental yet often overlooked aspect of grammar education, and its potential to profoundly impact language development in primary students. By focusing on Grade-I to V learners within the Pakistani education system, this research addresses a critical gap in pedagogical literature, offering insights and recommendations tailored to a diverse linguistic context. The utilization of a corpus-based approach and integration of cognitive development theories, specifically Piaget's abstract thinking theory and cognitive learning theory, provide a robust foundation for analyzing the naming strategy's effectiveness. Understanding how this strategy aligns with cognitive development stages and actively engages young learners is essential for enhancing language instruction methodologies. As such, this study has broader implications for educators and policymakers, not only in Pakistan but also in regions facing similar linguistic diversity and challenges in primary education. Ultimately, the research endeavors to contribute to the optimization of grammar instruction, enriching the language development journey of primary school students and fostering more effective teaching practices.

LITERATURE REVIEW

Teaching noun classes to Grade-I to V primary school students is a multifaceted exertion that demands a comprehensive understanding of several key dimensions in the realm of English

language grammar instruction and language development. The role of grammar instruction in primary education is pivotal, forming the base upon which linguistic competence and effective communication skills are constructed (Anderson, 1990). Cognitive development in primary students is intrinsically linked to grammar learning, with Piaget's abstract thinking theory providing valuable insights into the stages of cognitive growth that children undergo in their journey toward abstract thinking (Piaget, 1970). The transition from concrete to abstract thinking is particularly relevant to primary grammar education, as it underscores the importance of aligning the teaching of grammatical concepts, such as noun classes, with the cognitive readiness of young learners (Gombert, 1992). This theory holds significance in the context of primary grammar instruction, as it informs decisions about when and how to introduce complex grammatical structures like noun classes.

Naming, as an instrumental teaching strategy at the primary level, plays a crucial role in facilitating language acquisition and comprehension (Bates & Goodman, 2001). It enables students to associate linguistic labels with the objects, actions, and concepts they encounter, forming a bridge between their cognitive development and language learning. Naming, in the form of labeling objects, actions, and concepts, is a foundational step in language development (Mervis & Bertrand, 1994). Employing this strategy effectively in language teaching classes in the Pakistani education system necessitates a nuanced understanding of the sociocultural and contextual factors that shape curriculum materials and pedagogical approaches. It also involves considering the linguistic diversity present in the Pakistani context, as language plays a significant role in naming and concept development. Thus, exploring the application of naming as a teaching strategy while teaching language in the Pakistani education system becomes a critical aspect of enhancing primary language education.

Previous research on teaching grammar, particularly the noun classes, to primary students has shed light on various pedagogical strategies and challenges within this domain (Ellis & Shintani, 2014). These studies have explored the effectiveness of instructional techniques, ranging from traditional grammar drills to more context-based and interactive approaches. Noun classes, characterized by their complexity and abstract nature, have garnered specific attention due to the unique challenges they pose for young learners. Research has delved into the sequencing of noun class instruction, the role of contextualization, and the impact of form-focused versus meaning-focused approaches (Larsen-Freeman, 2003). Understanding the insights garnered from prior research is critical for crafting nuanced and effective curriculum materials tailored to the needs of primary students.

A comparative analysis of primary education systems in developed countries offers a broader perspective on the contextual factors that influence the teaching and learning of English grammar, especially noun classes (Seong, 2015). Educational policies, curricular frameworks, and pedagogical approaches differ significantly across nations, resulting in varying emphases on grammar instruction. Analyzing the experiences of developed countries with robust primary education systems can offer valuable lessons for crafting curriculum materials and teaching strategies that cater to the unique needs and challenges of primary students in diverse contexts.

Furthermore, the role of technology in modern primary education cannot be overstated. Developed countries have embraced technology-assisted language learning tools and applications in the primary classroom, which can offer interactive and engaging methods for introducing and practicing grammar concepts, including noun classes (Chen & Gao, 2015). These tools have the potential to enhance primary students' learning experiences by making grammar instruction more interactive and accessible. Understanding the integration of technology into grammar instruction is a vital aspect of the comparative analysis, as it highlights innovative approaches that can be applied globally to improve primary language education.

This literature review offers a comprehensive exploration of various dimensions related to teaching grammar, particularly noun classes, to Grade-I to V primary school students. It underscores the importance of grammar instruction in primary education and its role in nurturing language development. By grounding the research in Piaget's cognitive theories and integrating insights from previous studies, the paper aims to provide clarity on effective pedagogical strategies. Furthermore, through a comparative analysis of primary education systems in developed countries, it broadens the scope and highlights contextual factors influencing grammar teaching. This research seeks to contribute to the enhancement of primary language education, benefiting Grade-I to V students as well as educators and policymakers worldwide.

METHODOLOGICAL UNDERPINNINGS

The research methodology employed in this study is rooted in a comparative analysis framework. This approach seeks to systematically assess grammar instruction in primary education, focusing on the incorporation of noun class instruction. By analyzing a comprehensive corpus of curriculum materials spanning Grades one to five, this research aims to unveil patterns, variations, and developmental progressions in noun class pedagogy.

DATA COLLECTION SOURCES

The primary sources of data for this research consist of English language textbooks and educational materials utilized in grades one to five of primary education. Rigorous selection criteria were applied to ensure that the chosen materials are representative of mainstream educational resources. This corpus is designed to provide a comprehensive and authentic depiction of the noun class instruction encountered by primary students.

Once the corpus is compiled, the next step involves tagging the corpus to create a standardized database. This process entails the annotation of grammatical linguistic features, such as categories of nouns and their collocations to enable systematic analysis. Biber et al. (1998) and McEnery and Hardie (2012), provide valuable insights into the techniques and methodologies employed in corpus tagging and annotation. Tools such as concordancers, part-of-speech taggers, and frequency analyzers are utilized to extract quantitative data on grammatical patterns (Biber et al., 1998). These programs enable researchers to identify patterns and trends in the use of specific constructions, syntactic structures, and grammatical collocations.

While quantitative analysis provides valuable insights, it is important to complement it with a qualitative, microscopic interpretation of the functional characteristics underlying the detected grammatical language traits and dimensions. This involves examining the specific collocations in which certain grammatical features are employed and exploring the rhetorical and communicative purposes they serve as cognitive development devices. Trosborg (1997) and Baker (2006), offer theoretical frameworks and methodologies for the qualitative interpretation of grammatical linguistic data.

DATA ANALYSIS METHODS

The research employs a multifaceted approach to data analysis provided below:

1. **CONTENT ANALYSIS**: Content analysis serves as the cornerstone of the study. It involves a systematic examination of the curriculum materials to categorize, quantify, and assess the presence and progression of English noun class instruction across various grade levels. This method offers a comprehensive view of how noun class concepts are introduced, developed, and reinforced within the curriculum.
2. **COGNITIVE ANALYSIS**: In tandem with content analysis, cognitive analysis is employed to scrutinize the alignment of noun class instruction in the English language

with cognitive development theories, including Piaget's stages of cognitive development. This analytical lens explores how the curriculum materials cater to the cognitive developmental needs of primary students as they engage with noun class concepts.

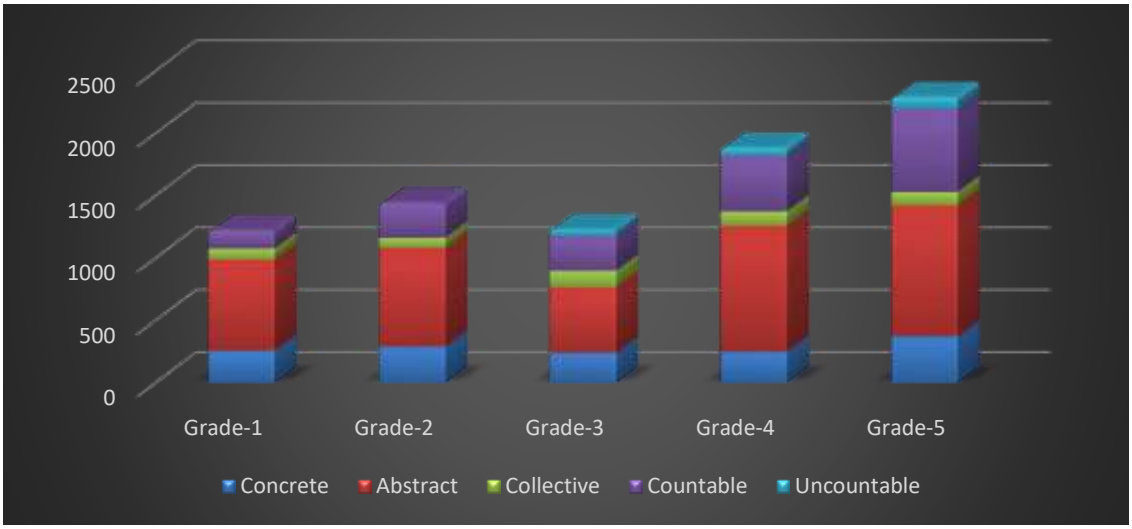
3. **COMPARATIVE ANALYSIS**: Comparative analysis plays a pivotal role in identifying both divergences and commonalities in noun class instruction across different grade levels. It enables the research to discern trends, disparities, and potential areas for improvement in the pedagogical approaches applied in teaching noun classes. Comparative analysis serves as a valuable tool for evaluating the efficacy of curriculum materials.

This research methodology provides a robust framework for investigating the teaching of the noun class in primary education. Through a comparative analysis of curriculum materials, combined with content analysis, cognitive analysis, and strict ethical considerations, this study aims to contribute valuable insights into the alignment of curriculum materials with cognitive development theories and effective pedagogical practices, ultimately benefiting primary students and educators alike.

DATA ANALYSIS

In the realm of primary education, grammar instruction plays a fundamental role in shaping linguistic competence. Specifically, within the intricate structure of grammar, noun class holds a pivotal position, influencing how language users perceive and engage with the world. The research investigates the data analysis phase, spanning Grade-I to Grade-V primary education, employing a corpus-based methodology, examining English language curriculum materials, and drawing insights from cognitive development theories. In the ensuing sections, it presents not just an analysis but a scholarly endeavor—a journey deep into the nuances of noun class education, uncovering its profound significance, and offering a promising pedagogical approach to enrich the language development journey of Grade-I to Grade-V primary school students. The initial phase of the analysis entails a thorough comparison for the frequency of different types of nouns at every level. The objective of this step is to discern patterns and trends in instruction of grammar, especially noun class, within the Pakistani education system by conducting a comprehensive study of the corpus as a cohesive entity.

FIGURE 1 Comparative Frequency of Different Types of Nouns from Grade 1-5



The data presented in the figure 1 encompassed four primary types of nouns: Concrete, Abstract, Collective, and Countable. Concrete nouns denote tangible, physical objects and entities. The frequency of concrete nouns exhibited a gradual increase with advancing grades, from 260 instances in Grade 1 to 374 instances in Grade 5. This ascending trend suggests that the curriculum strategically introduces a wider spectrum of concrete objects as students advance academically, aiding cognitive development by enhancing their grasp of the physical world.

Abstract nouns, representing intangible concepts, emotions, and ideas, displayed a substantial presence across all grades. Notably, the frequency of abstract nouns surged as students progressed through the grades, with Grade 1 featuring 728 instances and Grade 5 highlighting 1050 instances. This progression strongly correlates with Piaget's abstract thinking theory, indicating that as students mature, they increasingly engage with abstract concepts and emotions in their learning materials, thus promoting cognitive development.

The frequency of collective nouns, on the other hand, exhibited variability across grades, with Grade 3 registering the highest count at 134 instances and Grade 5 recording the lowest count at 107 instances. This fluctuation suggests a deliberate curriculum design that introduces the concept of collectives at different developmental stages, aligning with cognitive theories pertaining to social and structural understanding.

Countable nouns, representing objects that can be individually counted, displayed a consistent upward trajectory from Grade 1 to Grade 5. Grade 1 featured 149 instances, a number that steadily climbed to 666 instances in Grade 5. This trend underscores the gradual development of counting skills, resonating with Piaget's cognitive development theory, where children progress from concrete operational thinking to more abstract cognitive processes.

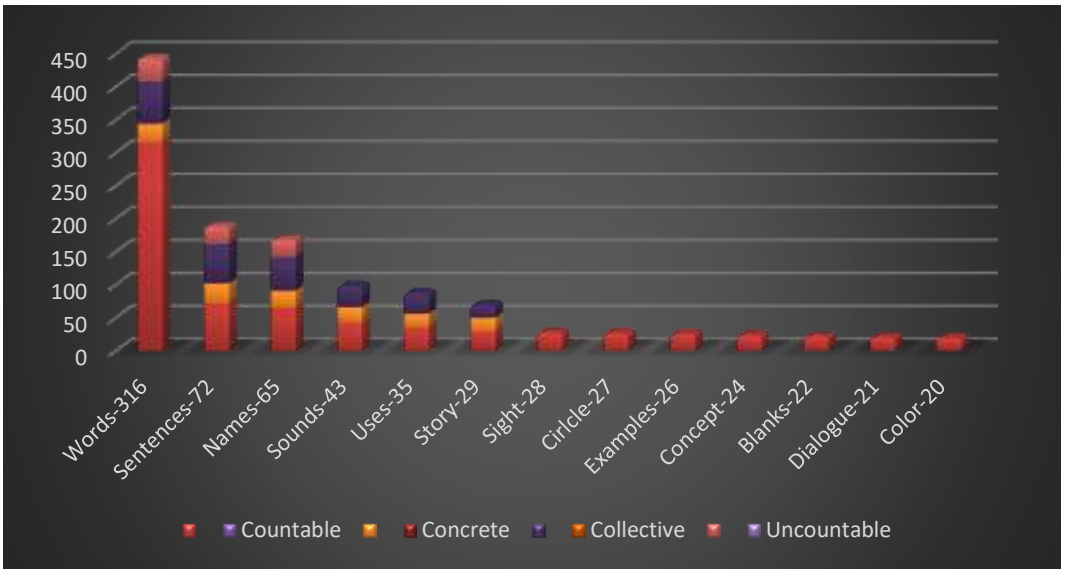
The presence of uncountable nouns, signifying substances or concepts that cannot be counted individually, became discernible from Grade 2 onward. Grade 5 recorded 96 instances of uncountable nouns. This data implies that the curriculum strategically introduces the notion of mass and quantity at a slightly later stage, contributing to cognitive development by enhancing students' understanding of abstract concepts.

IMPLICATIONS

The comparative analysis of noun frequencies across grades unravels a pedagogical approach that aligns with cognitive development theories. Early exposure to concrete nouns serves as a foundation for tangible knowledge. As students advance, abstract nouns become more prevalent, fostering abstract thinking, in line with cognitive theories.

The variable introduction of collective nouns potentially reflects the development of social understanding in students. The significant increase in countable nouns underscores the cultivation of counting skills, while the later introduction of uncountable nouns supports students' comprehension of mass and quantity.

FIGURE 2 Types of Nouns with Frequency in Grade-1



The data exhibited in figure 2 suggests that in the Grade 1 curriculum materials, an extensive analysis of noun frequencies provides valuable insights. Abstract nouns (316 instances) are prominent, nurturing abstract thinking. Countable nouns (e.g., "animals", 28 instances) help students grasp counting and quantification, essential for foundational cognitive development. Concrete nouns (e.g., "pictures", 64 instances) offer tangible, real-world references, aiding language and cognitive development. Collective nouns (e.g., "classroom", 36 instances) introduce group concepts, promoting understanding of collective entities. While uncountable nouns are not explicitly identified, they can be inferred from abstract nouns like "use" and "concept", representing uncountable ideas or things. Sentences (72 instances), although not traditional nouns, are fundamental for grammar teaching and language structure comprehension.

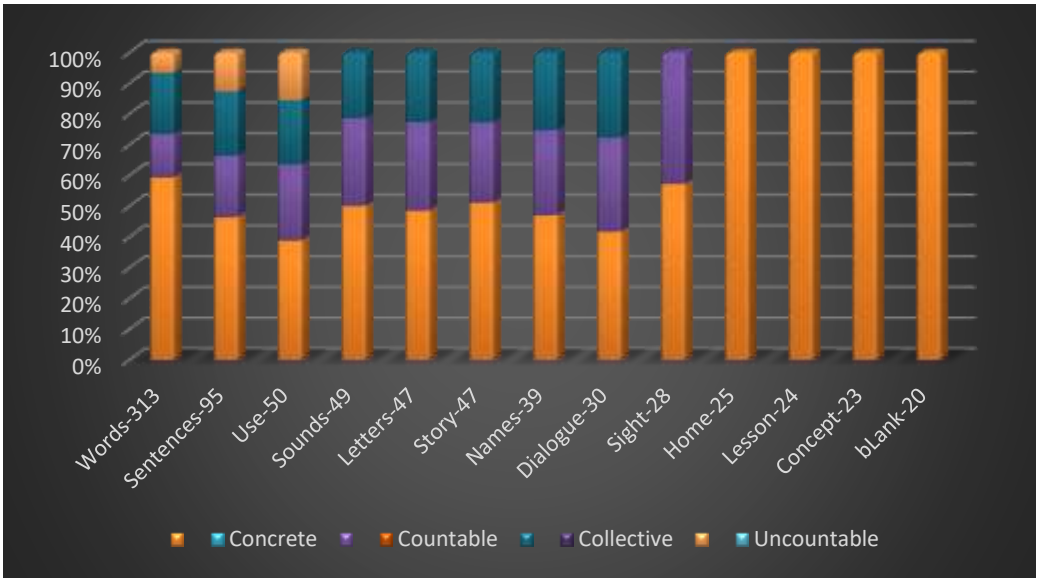
Proper nouns (e.g., "names", 65 instances) aid in identification and naming strategies, contributing to language development. Countable nouns like "fruits" (26 instances) introduce categorization concepts. Concrete, countable nouns such as "pencils" (30 instances) provide tangible references supporting language acquisition. Concrete, countable nouns like "friends" (21 instances) facilitate social interaction and interpersonal relationship comprehension.

Concrete nouns like "text" (32 instances) and "lines" (20 instances) contribute to reading and writing skill development, vital for cognitive growth. Abstract nouns like "story" (29 instances) enable engagement with narratives and abstract concepts, aligning with cognitive development stages. While not traditional nouns, "dialogue" (21 instances) is essential for teaching communication and language usage, promoting cognitive development. Concrete nouns like

"color" (20 instances) help identify and describe tangible attributes, supporting cognitive and language development.

Overall, Grade 1 curriculum materials deliberately integrate various noun types, fostering abstract thinking, counting skills, tangible language references, group understanding, and proper naming. This data underscores the thoughtful alignment of grammar instruction with cognitive development theories for primary school students.

FIGURE 3 Type of Nouns with Frequency Grade-2



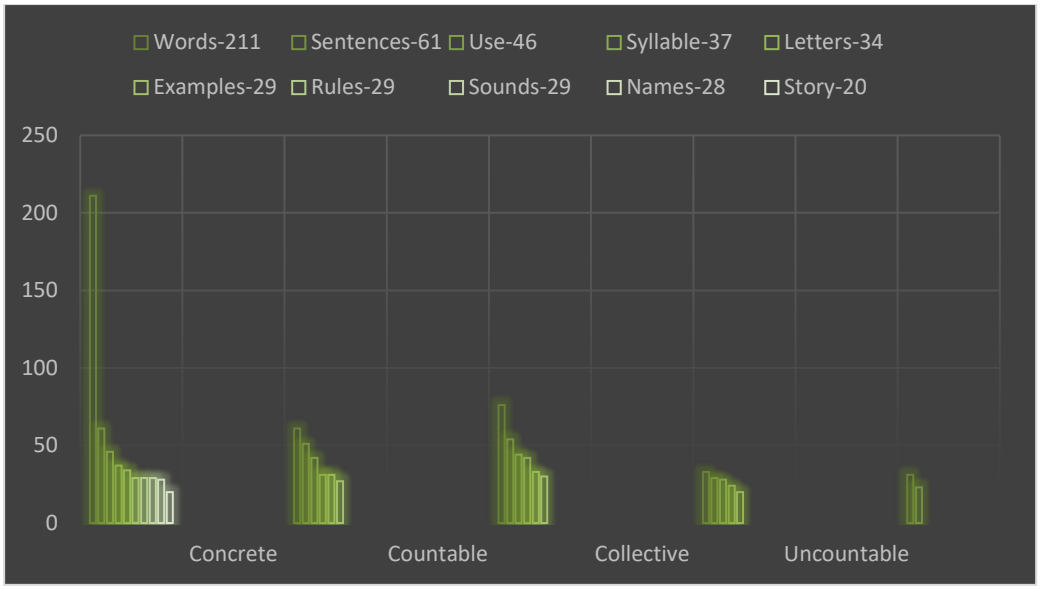
The above figure presents a comprehensive analysis of the frequency of different types of nouns in Grade 2 curriculum materials. The data given in the above table suggests that:

In Grade 2 curriculum materials, abstract nouns are notably present, with 313 instances. Abstract nouns represent intangible concepts and emotions, and their relatively high frequency suggests that students are exposed to abstract thinking early in their educational journey. Similarly, concrete nouns, which denote tangible and physical objects, are also prominent, with "pictures" (75 instances) and "things" (32 instances) being frequently encountered. This might indicate that the curriculum includes a substantial focus on tangible references, which can aid in language development and provide students with a concrete foundation for understanding the physical world. Furthermore, countable nouns, as represented by "students" (105 instances) and "days" (43 instances), are prevalent in Grade 2 materials. This exhibits that the curriculum is actively developing students' counting skills, aligning with cognitive development theories that emphasize the importance of numerical understanding in early education. Moreover, collective nouns, like "class" (26 instances) and "classroom" (20 instances), introduce the concept of collectives and are found in relatively moderate frequencies. This indicates a balanced approach to teaching social and structural understanding, which aligns with cognitive theories emphasizing social interaction in learning. On the other hand, the table doesn't explicitly mention uncountable nouns, but the absence of such nouns in this grade suggests a deliberate sequencing in the curriculum. Uncountable nouns often represent abstract concepts related to mass and quantity, and their absence at this stage might imply that these concepts are introduced at a later grade when students are developmentally ready to comprehend them.

Comparatively, Grade 2 curriculum materials exhibit a balanced inclusion of abstract and concrete nouns, emphasizing both abstract thinking and tangible references. Countable nouns feature prominently, indicating a focus on developing counting skills. The introduction of

collective nouns supports social understanding. The absence of uncountable nouns suggests a thoughtful curriculum design that aligns with cognitive development theories, introducing more complex concepts as students' progress through their education. This data underscores the importance of aligning instructional materials with cognitive development milestones to ensure that students receive age-appropriate and cognitively meaningful content in their learning journey.

FIGURE 4 Types of Nouns with Frequency Grade-3

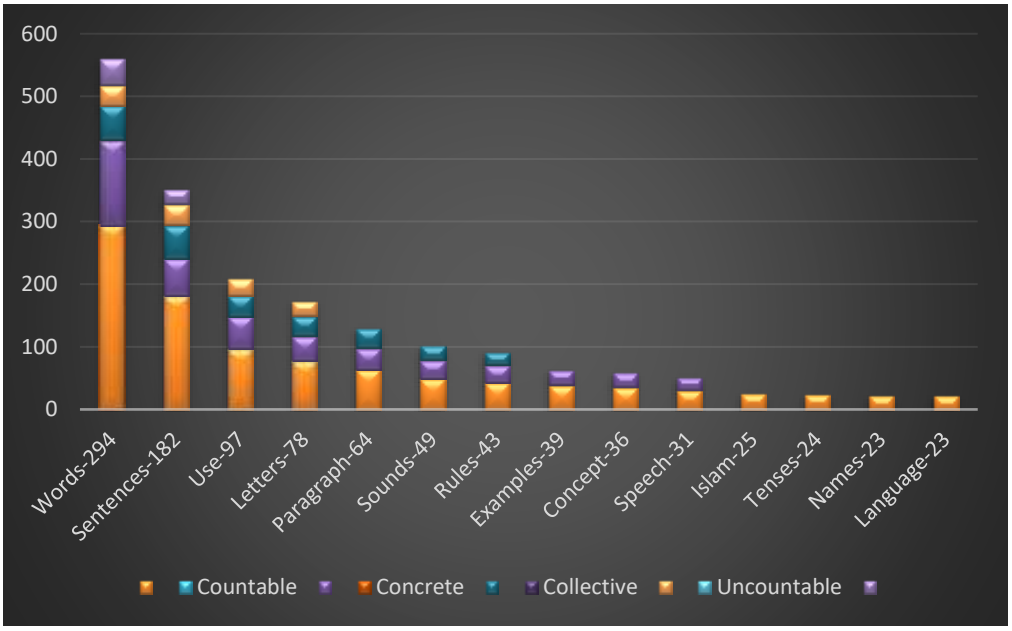


The analysis of Grade 3 curriculum materials reveals the prevalence of different noun types - abstract, concrete, countable, collective, and uncountable. Abstract nouns, with 211 instances, promote abstract thinking. Concrete nouns like "teachers" (61 instances) provide tangible references for language comprehension. Countable nouns, notably "students" (76 instances), enhance counting skills. Collective nouns, represented by "class" (33 instances), introduce group concepts. Uncountable nouns, including "water" (31 instances), explain uncountable substances.

Sentences, though not traditional nouns, are crucial for language development (61 instances). "Text" (51 instances) enriches vocabulary, while "games" (54 instances) support recreation and social interaction. "Days" (44 instances) teach time concepts. Concrete nouns like "family" and "people" (28 and 24 instances, respectively) support social understanding. "Syllable" (37 instances) aids phonetic skill development. "Home" (31 instances) provides a tangible reference point, and "children" (42 instances) expand vocabulary. "Classroom" (20 instances) offers tangible references, and "things" and "friends" (27 and 30 instances, respectively) enrich vocabulary. "Rules" (29 instances) engage with abstract concepts, and "sounds" (29 instances) enable auditory comprehension. Proper nouns like "names" (28 instances) aid personalization, and "story" (20 instances) engages with narrative and abstract concepts.

In essence, Grade 3 curriculum materials, in line with Grade 2 curriculum materials, effectively incorporate various noun types, promoting abstract thinking, counting, vocabulary enrichment, and social understanding. Proper nouns facilitate personalization. The data highlights the alignment of grammar instruction with cognitive development for primary school students.

FIGURE 5 Types of Nouns with Frequency Grade-4



The data of Grade 4 curriculum materials presented in figure 5 above extensively analyze the instruction of noun class types - abstract, countable, concrete, collective, and uncountable – in Grade 4, illuminating their significance in the context of cognitive development. Abstract nouns, exemplified by "words" (294 instances), accentuate abstract thinking and conceptual grasp. Countable nouns, like "students" (136 instances), bolster counting skills vital for cognitive development.

Concrete nouns, such as "things" (55 instances), enhance vocabulary and provide tangible references. Collective nouns, represented by "people" (33 instances), introduce the concept of groups and social structures. Uncountable nouns, like "time" (43 instances), facilitate comprehension of abstract temporal concepts. Sentences (182 instances), though not traditional nouns, are essential for language development. Concrete nouns like "notebook" (59 instances) and "text" (54 instances) enrich vocabulary and promote language development. "Traffic" (33 instances) aids vocabulary and spatial awareness. Abstract nouns like "life" (24 instances) encourage engagement with profound abstract concepts. "Use" (97 instances) enables students to explore abstract utility concepts, fostering problem-solving.

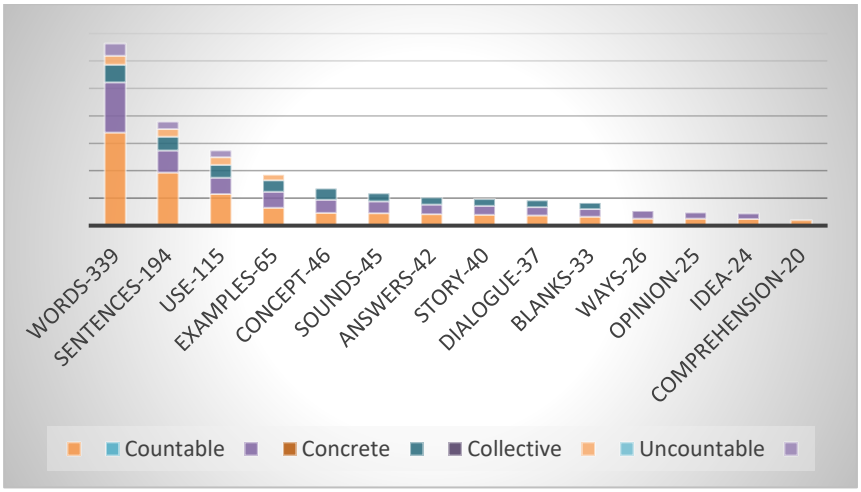
Furthermore, concrete nouns such as "friends" (51 instances) support vocabulary and social skills. "Pictures" (34 instances) enhance visual literacy. "School" (27 instances) provides tangible educational references. Concrete nouns like "letters" (78 instances) contribute to vocabulary and literacy development. "Chocolate" (39 instances) enriches vocabulary and sensory experiences. Concrete nouns like "mother" (32 instances) offer personalization. "Groups" (24 instances) introduce collections. "Paragraph" (64 instances) enriches vocabulary and language comprehension. "Days" (34 instances) teach calendrical concepts. Proper nouns like "Sara" (32 instances) aid personalization. "Sounds" (49 instances) engage auditory concepts.

Concrete nouns like "places" (30 instances) enrich spatial concepts. "Food" (23 instances) engage sensory experiences. Abstract nouns like "rules" (43 instances) foster comprehension of abstract regulations. Concrete nouns "fox" and "father" (28 and 21 instances) enrich vocabulary. "Examples" (39 instances) illustrate abstract ideas. "Concept" (36 instances) encourages abstract thinking. Concrete nouns like "strangers" (23 instances) introduce

unfamiliar individuals. "Speech" (31 instances) enhances language skills. "Trees" (20 instances) engage with the natural environment. Proper nouns like "Islam" (25 instances) introduce cultural references. "Tenses" (24 instances) engage with abstract verb concepts.

Proper nouns like "names" and abstract nouns like "language" (23 instances each) aid identification and language comprehension. In summation, Grade 4 curriculum materials thoughtfully integrate diverse noun types with cognitive development, emphasizing abstract thinking, counting, vocabulary enrichment, and social understanding. Proper nouns facilitate personalization. This data underscores intentional grammar instruction aligning with cognitive development milestones for primary school students.

FIGURE 6 Types of Nouns with Frequency Grade-5



The above graphical figure 6 presents a detailed breakdown of noun frequencies in Grade 5 curriculum materials, offering insights into the instruction of noun classes and their relationship to cognitive development. The data analysis of the above table proposes that:

In Grade 5 curriculum materials, abstract nouns are abundant, with 339 instances. Abstract nouns represent intangible concepts and ideas. This significant presence suggests that students at this grade level are exposed to a wide range of abstract concepts. This aligns with Piaget's theory of cognitive development, particularly the formal operational stage, where abstract reasoning becomes more prominent. The increase in abstract nouns from Grade 1 to Grade 5, as mentioned in previous findings, indicates the development of abstract thinking as students mature. Countable nouns, represented by "students" (183 instances) and "days" (35 instances), are prominent in Grade 5 materials. This continued emphasis on countable nouns reflects the development of counting skills. Children progress from concrete operational thinking to more abstract cognitive processes, and counting skills are a fundamental component of this development. Similarly, concrete nouns, denoting tangible objects, are well-represented with "text" (65 instances), "notebook" (80 instances), and "pictures" (50 instances). The presence of concrete nouns provides students with tangible references, aiding in their understanding of the physical world. Furthermore, collective nouns, such as "school" (32 instances) and "cluster" (27 instances), introduce the concept of collectives. While not as numerous as other noun types, their presence indicates the continued development of social understanding. This aligns with cognitive theories emphasizing the importance of social interaction and structural understanding in learning. Moreover, uncountable nouns, represented by "times" (44 instances) and "life" (27 instances), signify abstract ideas related to mass and quantity. Their presence

suggests that Grade 5 curriculum materials introduce students to the notion of mass and quantity at a more advanced stage, contributing to their cognitive development by enhancing their understanding of abstract concepts. This is consistent with the previous findings that uncountable nouns become discernible from Grade 2 onward, aligning with cognitive development theories.

Comparatively, Grade 5 curriculum materials exhibit a rich inclusion of abstract nouns, indicating a focus on abstract thinking and conceptual understanding. Countable nouns remain prominent, emphasizing continued development of counting skills. Concrete nouns feature frequently, providing students with tangible references. The introduction of collective nouns supports the ongoing development of social understanding. The presence of uncountable nouns reflects a deliberate curriculum design aimed at enhancing students' understanding of abstract concepts as they progress through their cognitive development. This data underscores the importance of aligning curriculum materials with cognitive development milestones, ensuring that students are exposed to content that is developmentally appropriate and meaningful, ultimately enhancing their learning experiences and cognitive growth.

FINDINGS AND DISCUSSION

The comprehensive analysis of noun frequencies in the corpus of Grade 1 to 5 curriculum materials employed in Pakistan provides valuable insights into the teaching of noun classes. Here are the key findings and results of the analysis:

- Abstract nouns gradually increase in frequency from Grade 1 (316 instances) to Grade 5 (339 instances). This progression aligns with Piaget's theory of abstract thinking, indicating that as students mature, they increasingly engage with abstract concepts and emotions in their learning materials.
- Concrete nouns, denoting tangible, physical objects, also increase in frequency as students progress through the grades. This progression suggests that the curriculum introduces a wider spectrum of concrete objects as students advance academically, aiding cognitive development by enhancing their grasp of the physical world.
- Countable nouns consistently increase in frequency across all grades, reflecting the development of counting skills in students. This trajectory also resonates with Piaget's cognitive development theory, where children progress from concrete operational thinking to more abstract cognitive processes.
- The frequency of collective nouns exhibits variability across grades, with Grade 3 registering the highest count. This fluctuation suggests a deliberate curriculum design in Pakistani education system that introduces the concept of collectives at different developmental stages according to the specific social and structural needs of the country.
- Uncountable nouns, signifying substances or concepts that cannot be counted individually, become discernible from Grade 2 onward. This data implies that the curriculum strategically introduces the notion of mass and quantity at a slightly later stage, contributing to cognitive development by enhancing students' understanding of abstract concepts.

IMPLICATIONS

These findings reveal a pedagogical approach that aligns with cognitive development theories on most fronts, apart from instruction of collective nouns that demonstrate a slight difference

from these theories, especially with fluctuating nature presence in the curriculum. Early exposure to concrete nouns serves as a foundation for tangible knowledge. As students advance, abstract nouns become more prevalent, fostering abstract thinking, in line with cognitive theories.

The variable introduction of collective nouns potentially reflects the development of social understanding in students. The significant increase in countable nouns underscores the cultivation of counting skills, while the later introduction of uncountable nouns supports students' comprehension of mass and quantity. Furthermore, these findings demonstrate a curriculum that thoughtfully aligns with cognitive development theories by systematically introducing more complex noun types as students progress through primary education. This approach ensures that students not only acquire language skills but also engage in cognitive development that corresponds to their age and cognitive abilities. The teaching of noun class in the curriculum appears to be strategically designed to support students' linguistic and cognitive growth.

COMPARISON WITH THEORIES

The study's findings regarding the instruction of noun classes in Pakistan's curriculum show a notable alignment with Jean Piaget's Cognitive Development Theory while also revealing some distinctions. Firstly, the study notes a gradual increase in the frequency of abstract nouns from Grade 1 to Grade 5, indicating a progression toward more abstract thinking, which resonates with Piaget's recognition of abstract thinking's emergence as children mature (Piaget, 1954). Secondly, the rising occurrence of concrete nouns as students advance in grades, signifying tangible objects, is seen as aiding cognitive development—a concept in harmony with Piaget's concrete operational stage, where children engage in logical thinking about tangible experiences (Piaget, 1970). Thirdly, the consistent growth in countable nouns across all grades, reflecting the development of counting skills, aligns with Piaget's notion of cognitive progression from concrete operational thinking to more abstract processes (Piaget, 1970). Fourthly, the variability in the introduction of collective nouns across grades suggests a potential reflection of social understanding development, which corresponds with Piaget's emphasis on the growth of social and structural understanding among children (Piaget, 1952). Lastly, the emergence of uncountable nouns from Grade 2 onward is seen as contributing to cognitive development by enhancing understanding of abstract concepts, mirroring Piaget's idea of the gradual development of abstract thinking as children grow (Piaget, 1954).

These research findings largely align with Piaget's Cognitive Development Theory, particularly in terms of the progression from concrete to abstract thinking and the development of cognitive skills over time. However, there are nuanced differences, particularly in the instruction of collective nouns, which may be specific to the curriculum design in Pakistan. Nevertheless, the overall approach to teaching noun classes appears to be thoughtfully crafted to support both linguistic and cognitive growth in students, in accordance with Piaget's emphasis on aligning instruction with cognitive readiness. (Piaget, 1952, 1954, 1970).

EXAMPLES OF DEVELOPED COUNTRIES

The findings of the study further line up with many elements of the noun class instruction in the curriculum of many developed countries. But at the same time there are certain strategies and practices in the curriculum of these countries that can be adopted in Pakistani education system for the efficient instruction of noun class in specific and grammar in general. For instance, in countries like Canada and the United Kingdom, advanced teaching practices often leverage interactive multimedia tools to teach noun class and related concepts. Educators use computer programs, educational apps, and interactive websites that provide engaging lessons on grammar, including the noun class. These multimedia resources incorporate visuals,

animations, and interactive exercises that allow students to explore and practice identifying noun classes, in a dynamic and stimulating environment. For instance, students might use an interactive app that presents them with images of objects, and they must drag and drop these objects into appropriate noun class categories. This approach not only enhances students' understanding of noun class but also caters to diverse learning styles, making it inclusive for all students. It aligns with the cognitive theory of learning, emphasizing active engagement and hands-on learning (VanPatten & Williams, 2015).

Similarly, in nations such as Sweden and Australia, progressive teaching methodologies frequently incorporate the cross-disciplinary integration of noun class instruction. Educators design interdisciplinary lessons that connect grammar, particularly noun class, with other subjects like science, history, or literature. For example, in a science class, students might learn about the classification of living organisms, aligning this with the concept of noun classes. By categorizing animals and plants into different classes, students not only grasp biological concepts but also reinforce their understanding of noun classes in language. This approach aligns with, as it encourages students to apply abstract grammatical concepts in various contexts, fostering cognitive growth (Piaget, 1970).

Incorporating advanced teaching practices such as interactive multimedia learning and cross-curricular integration into noun class instruction not only makes the learning process engaging but also enhances students' comprehension and retention of grammatical concepts.

CONCLUSION

This research has delved into the intricate world of grammar instruction, specifically noun classes, in primary education. The findings illuminate a thoughtful pedagogical approach that aligns with cognitive development theories, primarily Piaget's Cognitive Development Theory, with minor nuances, especially in the instruction of collective nouns. These findings offer valuable insights for enhancing grammar instruction in primary education, ensuring that it supports both linguistic and cognitive growth in students of Grade-I to V. Additionally, by comparing these practices with those of developed countries, the study identifies innovative teaching strategies that can be adapted to further enrich grammar education in Pakistan at primary level. This study further contributes to the ongoing dialogue on effective pedagogy and its intersection with cognitive development in primary education in Pakistan.

References

Anderson, J. R. (1990). Cognitive psychology and its implications. NY: WH Freeman/Times Books/Henry Holt & Co.

Bates, E., & Goodman, J. C. (2001). On the inseparability of grammar and the lexicon: Evidence from acquisition, aphasia and real-time processing. Language and Cognitive Processes, 16(5-6), 507-584.

Bates, E., & Goodman, J. C. (2001). On the inseparability of grammar and the lexicon: Evidence from acquisition. NY: Backwell Publishing.

Biber, D., Conrad, S., & Reppen , R. (1998). Corpus Linguistics: Investigating Language Structure and Use. NY: Cambridge University Press. Retrieved from http://dx.doi.org/10.1017/CBO9780511804489

Chen, N. S., & Gao, T. (2015). The effects of different multimedia materials on performances, attitudes, and problem-solving skills in a physical science course. Computers & Education, 81, 107-114.

Corbett, G. (1991). Corbett, G. (1991). Gender. . Cambridge: Cambridge University Press.

Ellis, R. (2005). Principles of instructed language learning. Science Direct, 33, 209-224.

Ellis, R. (2006). Current Issues in the Teaching of Grammar: An SLA Perspective. TESOL Quarterly, 40, 83-107.

Gombert, J. E. (1992). Metalinguistic development. Hong Kong: Harvester Wheatsheaf.

Hinkle, E. (2002). Why English passive is difficult to teach (and learn). In E. Hinkle, & S. Fotos, New perspectives on grammar teaching in second language classrooms (pp. 233-259). NY: Lawrence Erlbaum Associates.

Larsen-Freeman, D. (2003). Teaching language: From grammar to grammaring. Boston: Thomson Heinle.

Larsen-Freeman, D., & Anderson, M. (2013). Techniques and principles in language teaching. Oxford: OUP.

Malik, N. A. (2012). Mother tongue as a barrier to communication: A study of language use in primary education in Pakistan. Language in India (pp. 17-34). Malik, A. (2010). Mother tongue as a barrier to communication: A study of language use in primary education in Pakistan. Language in India, 10(11), 17-34.: British Council.

McEnery, T., & Hardie, A. (2012). Tony McEnery and Andrew Hardie. Corpus Linguistics: Method, Theory and Practice. Cambridge: Cambridge University Press.

Mervis, C. B., & Bertrand, J. (1994). Acquisition of the novel name–nameless category (N3C) principle. Child Development 65(6), 1646-1662.

Piaget, J. (1952). The origins of intelligence in children (M. Cook, Trans.). Madison: International University Press.

Piaget, J. (1954). The construction of reality in the child. NY: Basic Books.

Piaget, J. (1964). Part I: Cognitive development in children: Piaget development and learning. Journal of Research in Science Teaching, 2(3), 176-186.

Piaget, J. (1970). Piaget's Theory. In P. H. MUssen, Carmichael's manual of child psychology (pp. Vol. 1, pp. 703-732). UK: Wiley.

Piaget, J. (1972). Intellectual Evolution from Adolescence to Adulthood. Human Development, 15(1), 1-12.

Schleppegrell, M. J. (2004). The language of schooling: A functional linguistics perspective. NY: Lawrence Erlbaum Associates Publishers.

Seong, J. K. (2015). Comparative analysis of primary education systems of Pakistan and Canada: A case for quality education in Pakistan. . Educational Studies, 39(5), 483-499.

VanPatten, B., & William, J. (2015). Theories in second language acquisition: An introduction. NY: Routledge.