International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 22s, 2025
https://theaspd.com/index.php

The Type of Linguistic Vocabulary and its Relationship to Social Behavior in Children Aged 3–6 Years

Ghaniya Hassan Tarad[1], Noor Faisal Adnan[2], Zaman Karim Mhyason Abbas[3]
[1]Assistant Lecturer, University of Wasit, College of Basic Education, Kindergarten Department, Wasit, Iraq, ghaniyahassan0@gmail.com
[2]Assistant Lecturer University of Wasit, College of Basic Education, Kindergarten Department, Wasit, Iraq, noorfaisal87878787@gmail.com
[3]Assistant Lecturer, University of Wasit, College of Basic Education, Kindergarten Department, Wasit, Iraq, zaman.karim@uowasit.edu.iq

Abstract
This study aimed to explore the level of linguistic vocabulary type in kindergarten children and its relationship with social behavior among children aged 3–6 years in the Al-Aziziyah district of Wasit Governorate. A correlational descriptive approach was adopted, with a final sample size of 140 children (boys and girls) of different ages, randomly selected from kindergartens in Al-Aziziyah.
To achieve the research objective, a linguistic vocabulary type scale was developed, consisting of 72 images distributed across 5 categories, after ensuring its validity and reliability.
The results showed that:
- *The level of linguistic vocabulary type among kindergarten children in Al-Aziziyah was high,*
- *There were no statistically significant differences in the overall scores of children on the linguistic vocabulary scale based on gender or birth order, and*
- *There was no statistically significant relationship between the level of linguistic acquisition and birth order among kindergarten children.*

Key Terms: *Early childhood, Language acquisition, Linguistic repertoire , Kindergarten stage.*

STATEMENT OF THE PROBLEM:

The early childhood stage is one of the most critical phases in an individual's life, as it is a formative period where the foundations of personality and behavior are established. Language acquisition is considered a fundamental aspect of cognitive, social, and emotional development, serving as a vital tool for interaction, communication, and the expression of thoughts and feelings. Proficiency in language is one of the most significant developmental achievements for a child.

The kindergarten stage (ages 3–6) is particularly crucial, as children begin shaping their personalities and life approaches. This period plays a key role in developing their linguistic repertoire, as the kindergarten environment allows them freedom of movement, expression, and social interaction with peers and adults. Additionally, they learn language in a structured and systematic manner, which enhances their vocabulary acquisition and comprehension.

Understanding the relationship between linguistic development and influencing factors, such as gender and birth order, can help regulate and guide language growth. However, previous studies on this topic have been limited (based on the researchers' review), highlighting the need for further research. This study seeks to explore the type of linguistic vocabulary and its relationship with social behavior in kindergarten children by addressing the following question:

1. What is the level of linguistic vocabulary type among kindergarten children?
2.Does the level of linguistic vocabulary type differ among kindergarten children based on gender?
3.Does the level of linguistic vocabulary type differ among kindergarten children based on birth order?

Significance of the Research:

Language is a fundamental pillar of social life and a crucial necessity for human interaction. It serves as the basis for communication, allowing individuals to express their needs, desires, emotions, and perspectives, as well as navigate daily life and fulfill social instincts.

While language plays multiple vital roles in adult life, a child's acquisition and mastery of language are even more critical. Linguistic proficiency helps children construct their understanding of the world in all its dimensions, enabling them to recognize and interpret their surroundings (Al-Dabaa, 2001).

A child's linguistic repertoire refers to the number of words they acquire, which become part of their cognitive framework and are used to communicate, whether through listening, speaking, or expressing thoughts and emotions (Al-Rimawi, 2003).

Moreover, linguistic development is closely linked to a child's thinking patterns, intelligence, and overall cognitive growth. Consequently, any delay or impairment in language acquisition can significantly impact a child's cognitive abilities and intellectual development (Al-Ma'touq, 1996).

Language mastery stands as one of the most significant developmental achievements in early childhood. As one of the most complex aspects of human development, language acquisition during the critical early years (3-6 years old) lays the foundation for linguistic growth and vocabulary expansion, with lasting impacts on future language competence (Hurmuz, 1989).

A child's linguistic repertoire is profoundly shaped by their life experiences. Kindergarten environments play a pivotal role by providing structured language training through storytelling, discussions, and dialogue sessions. Additionally, they facilitate interactive and social play, creating rich, stimulating environments that promote linguistic growth (Qasim, 2002). Research by Shash (2006) demonstrates that kindergarten children show superior language development compared to their non-kindergarten peers, highlighting the importance of these early educational experiences.

Vocabulary development follows a remarkable progression during the kindergarten years. First words emerge by age 1, increasing to approximately 900 words by age 3, around 1,500 words by age 4, and nearly 2,500 words by the end of kindergarten (Al-Dabaa, 2001). This growth becomes particularly evident when compared to earlier developmental stages, starting with 50 words at 18 months, 200 words at age 2, and expanding to 8,000-14,000 words by age 6. Notably, children learn an estimated 6-10 new words daily during this period (Abu-Jado, 2004).

Children's language complexity evolves significantly as they grow. At age 2, they typically use 2-word sentences, progressing to 3-4 word sentences by age 3, and eventually forming 5-word sentences by the end of kindergarten (Al-Dabaa, 2001). This structural development reflects their increasing ability to organize thoughts and communicate more effectively.

Children demonstrate distinct patterns in word learning, with nouns being acquired fastest and most easily, followed by verbs, while adjectives present greater difficulty. By age (5), children can understand and assimilate most terms they encounter, showcasing their rapidly expanding cognitive and linguistic capabilities (Abu-Jado, 2004).

Language becomes increasingly sophisticated during the kindergarten years through the gradual perfection of pronunciation and the mastery of grammatical structures. Children begin to differentiate gender in nouns (masculine/feminine) and learn plural forms, including regular feminine and masculine plurals (Al-Rimawi, 2003). This comprehensive development underscores the critical importance of the kindergarten years in establishing a child's linguistic foundation and cognitive-linguistic abilities.

Several key factors contribute to the growth of linguistic competence in young children. First, auditory perception plays a crucial role, as children imitate sounds they hear, requiring clear auditory discrimination to develop proper pronunciation and vocabulary. Memory development is equally important, enabling children to store, recall, and reproduce sounds when needed. Additionally, comprehension precedes verbal expression, children must understand word meanings before articulating them, making semantic awareness foundational for language acquisition (Al-Dabaa, 2001). Early experiences, particularly in kindergarten settings, further enrich vocabulary through structured activities like storytelling and social interaction, which also enhance academic readiness (Qasim, 2002).

Two primary factors shape linguistic outcomes: **intelligence** and **gender**.

1-Intelligence and Language Development

Language serves as a key manifestation of general cognitive ability, with intelligence being closely linked to linguistic growth. Research demonstrates that intellectually gifted children acquire language skills more rapidly, exhibiting faster verbal development and richer vocabulary compared to their peers (Al-Dabaa, 2001). These children show distinct advantages in word comprehension, mastery of complex grammatical structures, and lexical diversity, constructing longer sentences and utilizing abstract concepts more effectively. They also demonstrate superior semantic differentiation, the ability to discern nuanced meanings between words (Qasim, 2002). This correlation underscores language as both a product and indicator of broader intellectual capacity, where cognitive advantages directly translate to linguistic proficiency.

2-Gender Differences in Language Acquisition

Research consistently demonstrates that girls tend to develop language skills earlier and more proficiently than boys, showing advantages in vocabulary size, sentence complexity, and speech clarity (Karim Al-Din, 2004). Qasim (2002) explains this phenomenon through socialization patterns, noting that girls typically bond more closely with their mothers, who provide richer verbal interaction, while boys often have less linguistic engagement with frequently absent fathers. However, studies show this gender gap in language proficiency gradually diminishes and nearly disappears by age six (Hawashin & Hawashin, 2003).

The female advantage in language development stems from both biological and social factors. Biologically, girls' brains mature earlier in language-related areas, facilitating faster speech production and language acquisition. Socially, mothers tend to engage in more verbal exchanges with daughters than with sons, as boys often prefer physical play over conversation. These frequent mother-daughter interactions provide girls with more opportunities for questioning, word repetition, and other language-enhancing behaviors that collectively strengthen early linguistic competence (Hawashin & Hawashin, 2003; Qasim, 2002).

3-Birth Order and Social Behavior in Language Development

Research indicates that a child's birth order significantly influences their linguistic development, with firstborn children typically receiving more parental attention, care, and verbal interaction than their younger siblings (Al-Dabaa, 2001). This increased exposure to dialogue and discussion positively impacts their vocabulary acquisition, as parents generally devote more time to conversing with their first child (Qasim, 2002). However, closely spaced births can negatively affect the linguistic development of older siblings, though firstborns still maintain better language skills than subsequent children, with a gradual decline observed from second to third-born children and so on. These findings highlight how family dynamics and birth spacing shape early language acquisition through differential social interactions within the household.

Research Significance and Dual Importance

This study's importance stems from its examination of the relationship between linguistic vocabulary levels and influential factors like gender, social behavior, and birth order in kindergarten children. Understanding these dynamics enables more objective evaluation of language acquisition and helps educators guide and enhances children's linguistic development. The research holds both theoretical and practical significance:

a-Theoretical Importance:

The findings provide empirical evidence about how gender and birth order influence preschool children's vocabulary development, enriching theoretical frameworks in this field with practical research data. The study contributes to educational psychology literature by strengthening the theoretical foundation for future research in child development, while also offering a psychometrically validated tool for subsequent studies.

b-Practical Importance of the Study:

This research offers several practical benefits for educators, specialists, and parents:

1.Diagnostic and Intervention Support:

The findings provide indicators to help specialists and educators in diagnosing language development issues and creating appropriate intervention and guidance plans for preschool children.

1. **Parental Guidance:**

The study offers preventive measures for parents by helping them understand their children's linguistic vocabulary levels in relation to social behavior and gender, enabling them to better support their children's developmental needs.

2. **Professional Insight:**

It gives educational counselors and psychology researchers clearer understanding of the correlational relationships between linguistic vocabulary levels, social behavior, and birth order.

3. **Future Research Foundation:**

The study opens new avenues for other researchers to explore additional variables not covered in this investigation, potentially leading to more comprehensive understanding of child language development.

-Research Objectives

This study aims to investigate the types of linguistic vocabulary among children aged 36-60 months and its relationship to social behavior by addressing the following questions:

1. What is the level of linguistic vocabulary among kindergarten children?
2. Does the level of linguistic vocabulary differ according to the child's gender?
3. Does the level of linguistic vocabulary differ according to the birth order of kindergarten children?

-Study Limitations

- **Human Boundaries:** The study was conducted on kindergarten children aged 3-6 years in Al-Aziziyah district schools.
- **Spatial Boundaries:** The research was implemented in kindergartens within Al-Aziziyah district.
- **Temporal Boundaries:** The study was conducted during the second semester of the 2024-2025 academic year.

Definition of Terms:

-Linguistic Vocabulary:

Defined by Barhouma and Al-Bashir (2007) as: "Socially agreed vocabulary expressed through the basic units of a child's language, including both spoken and written words." Operationally, it refers to scores obtained by kindergarten children on a standardized vocabulary assessment. (2007, p.162)

-Kindergarten Children:

Defined as children enrolled in preschool institutions to achieve comprehensive development (physical, cognitive, psychological, and social) through play-based activities. Operationally, they are children aged 3-6 years attending kindergarten.

- Social Behavior:

Defined by Al-Hawarna (2012) as: "The behavioral organization of a child among siblings within a family, classified into four levels: only child, firstborn, middle child, and youngest child." Operationally, it refers to the child's birth order position (firstborn, middle, youngest, or only child). (2012, p.231)

Theoretical Background and Previous Studies:

Stages of Language Development in Children

From psychological and social perspectives, language is a human behavioral manifestation like fear, courage, laughter, and crying. While the roots of language exist inherently in individuals, its refinement occurs through acquisition and social interaction. Without linguistic community exposure, language fails to develop - as evidenced by cases of isolated children adopting animal communication in wilderness settings. Language thus exists latently in humans, emerging through developmental and social processes, where its inherent potential lacks conventionality but its expression follows sociocultural norms. Many scholars consider language a coding system that translates universal phenomena into generalized verbal symbols.

From birth, children are immersed in oral language, which constitutes their first step toward fluency. Language enables reading, writing, and communication. Researchers have identified strategies through which children actively acquire language by engaging in problem-solving - first formulating hypotheses based on existing knowledge, then interacting with linguistic models in their environment. Early vocalizations express needs, eliciting caregiver responses, while subsequent language development facilitates clearer, more mature expression of requirements. This linguistic development connects individuals with their broader society through physical, social, psychological, and motor growth, with educational institutions playing crucial roles in refining communication skills.

Preschool children exhibit characteristic linguistic behaviors:

- **Verbosity**: They demonstrate spontaneous, context-switching speech during physical movement
- **Imitation**: They extensively replicate adult linguistic patterns and social conventions
- **Rapid Acquisition**: Typically adding 500-600 words annually to their vocabulary

Studying childhood development proves critical because this sensitive period shapes enduring personality traits and behavioral patterns. Linguistic development serves as:

1. A primary indicator for assessing cognitive, social, and emotional growth
2. A developmental milestone reflecting neurological and articulatory maturation (Firth's stage theory emphasizes each phase's unique linguistic contributions)
3. A transformative tool that alters children's physical and social environmental relationships
4. An educational cornerstone enabling:
   - Emotional/ideational expression
   - Need fulfillment
   - Social exchange
   - Cognitive development

The early years constitute a critical window for vocabulary development, where insufficient linguistic exposure creates lasting deficits. Language mastery represents one of humanity's most complex

developmental achievements, with initial vocabulary expansion fundamentally reshaping children's environmental interactions and communicative capacities.

The importance of language development stems from its fundamental connection to other core aspects of human development—cognitive, motor, social, and moral. Prominent theorists have highlighted this interdependence through distinct yet complementary perspectives:

1. **Jean Piaget** views language as a direct product of cognition, emphasizing that linguistic abilities emerge from and reflect underlying cognitive structures.
2. **Jerome Bruner** assigns language a catalytic role in shaping cognition and personality, proposing that linguistic development precedes and facilitates other developmental domains, with cognition being a logical outcome of language maturation.
3. **Maria Montessori** underscores the dynamic link between language and motor development, asserting that progress in one domain nurtures growth in the other, with movement-based education serving as a scaffold for linguistic advancement.

Together, these perspectives illustrate language as both a mirror of developmental progress (Piaget), a driver of cognitive-personal growth (Bruner), and an interdependent skill refined through physical interaction (Montessori). This tripartite relationship positions linguistic competence as a cornerstone of holistic human development.

Language plays a vital role in cognitive, social, and personal development. Before detailing its developmental stages, we highlight the following critical facts:

1. Brain Lateralization and Language

- Language primarily engages the left hemisphere of the brain, which governs symbolic and analytical functions (e.g., language, mathematics).
- The right hemisphere, in contrast, handles visual-spatial processing, imagination, and expressive movements.

2. The Critical Period for Language Acquisition (Ages 3-6)

- This phase is decisive for both native and foreign language development.
- Contrary to concerns, learning additional languages enhances cognitive flexibility and creativity without hindering the mother tongue.
- Exposure to diverse linguistic structures enriches fluency and expressive versatility in the native language.

3. Child Language vs. Adult Language

- Children's speech is simpler and more abbreviated (e.g., "Mama phone" for "Mom is talking on the phone").
- Yet, it is also highly creative, often producing novel expressions uncommon in adult speech but still comprehensible.

4. The Primacy of Family in Language Development

- Family interactions have a greater impact than formal education in early language acquisition.
- The first six years, especially ages 3-6, are physiologically optimal for language learning due to innate neural plasticity.

5. Vocabulary Development and Environmental Influence

- Early words typically relate to immediate needs (e.g., mama, baba, water, milk).
- Children understand words long before they can articulate them.
- They begin imitating frequently heard words by age one, initially with approximate pronunciations.

6. Egocentric Speech and Its Decline

- Early language (ages 0-3) is highly self-centered, revolving around the child's needs.
- This self-referential speech decreases to:
  - 51% by age 3
  - 45% by age 6
  - 28% by age 7
- The shift occurs due to social interaction, where children adopt shared terms, social norms, and ethical concepts.

7. Transition to Socialized Language (Age 8+)

- By age eight, egocentric speech fades, replaced by structured, cooperative communication.

- As Piaget notes, this aligns with the child's growing ability to regulate emotions, perceive others' perspectives, and collaborate.

Language development is a dynamic interplay of neurological maturation, environmental input, and social interaction. The early years (particularly 3-6) are foundational, shaping not just linguistic ability but also cognitive and social growth. Family remains the primary influence, while schooling and peer interactions refine language into a tool for both self-expression and social cohesion.

-Language Acquisition: A Multidisciplinary Inquiry

Language acquisition stands as a pivotal subject in humanistic studies, representing a holistic cognitive phenomenon that intersects multiple disciplines, psychology, neuroscience, linguistics, and education, while bridging foundational theories with practical applications. The central question persists: How is language acquired? Researchers have long debated whether language is an innate, instinctive phenomenon or a socially constructed skill. What happens if a child grows up isolated from human society? What factors beyond environment shape linguistic development?

To address these questions, language development can be divided into the following stages:

1. The Crying Stage (Birth – 3 Months)

The first vocal manifestation of life is the birth cry, a reflexive response triggered by air rushing through the infant's larynx as the lungs begin functioning. This stage serves two critical purposes:

- **Physiological Training**: Strengthens vocal apparatus and auditory perception.
- **Emotional Communication**: Cries differentiate between distress (e.g., hunger, discomfort) and attempts to attract attention.

Two Subtypes of Vocal Behavior:

- Emotional Vocalizations: Reflexive cries expressing anger or need.
- Exploratory Sounds: Partial syllables, often spontaneous or reactive to external stimuli.

2. The Babbling Stage (4 – 7 Months)

Babbling emerges during periods of contentment, characterized by repetitive syllables (e.g., "ba-ba," "ga-ga"). This reflexive activity stems from the infant's sensorimotor exploration of articulatory organs (lips, tongue, throat).

Two Types of Babbling:

- **Nasalized Sounds**: High-pitched, tense noises signaling discomfort.
- **Relaxed Sounds**: Produced at the back of the mouth, indicating comfort.

3. The Imitation Stage (7 – 11 Months)

Children begin imperfectly mimicking adult speech, often distorting, omitting, or transposing sounds (e.g., saying "tup" for "cup"). Key features include:

- **Vocal Imitation**: Attempts to replicate heard phonemes.
- **Gestural Communication**: Nonverbal cues like head-shaking (for "no") or reaching (to request objects).
- **Social Interaction**: Responding to others' actions through mimicry.

4. The Semantic Stage (Linking Words to Meaning)

(1–5+ Years Old)

This phase marks the child's ability to connect verbal symbols to their meanings, progressing from single words to structured sentences.

-Phonetic Development Sequence

Children acquire sounds in a predictable order:

- Vowels first (early months), then consonant-vowel combinations.
- Early consonants (by age 4): م (m), ن (n), و (w), ق (q).
- Age 4.5: ن (n), د (d), ل (l) — requiring advanced neuromuscular coordination.
- Age 5: ف (f), ي (y).
- Age 5–6: ل (l).
- Age 6.5–7: ر (r), س (s), ز (z), ج (j).

1. Single-Word Stage (8–12 Months)

- First words emerge around 12 months (e.g., "ماما" / "mama," "حليب" / "milk").
- Holophrastic speech: One word conveys full ideas (e.g., saying "كرة" / "ball" to mean "I want the ball").
- Slow initial growth: ~10 words in 3–4 months, then rapid expansion to 50+ words by age 2, eventually reaching hundreds.

Example Interaction:
- Child: "سيارة" (car).
- Parent interprets: "Do you want to go in the car?"

2. Two-Word & Sentence Formation Stage (1.5–2+ Years)

Children combine words into **telegraphic speech** (minimal, meaning-packed phrases):
- Examples:
  - "عمر حلاوة" (Omar candy) → "Omar wants candy."
  - "احمد كرة" (Ahmed ball) → "Ahmed kicked the ball."
- Parental role: Guessing intent through context (e.g., expanding "اروح" / "go" to "Let's go for a car ride!").

3.Sentence Development Phases

1. Holophrastic: One word = full sentence ("حليب!" = "I want milk!").
2. Telegraphic: Two-word combos with omitted grammar ("بابا راح" / "Daddy go").
3. Complete Sentences: Gradually include articles, verbs, and syntax ("أريد الحليب" / "I want the milk").

For a child to develop speech, the following four foundational elements must be in place:

1. Linguistic Competence (Innate Capacity)
- Every child is born with an innate language faculty, including an implicit understanding of grammatical rules (as proposed by Chomsky's Universal Grammar).
- Children do not merely imitate speech passively but actively hypothesize about language structure, testing and refining their mental grammar—similar to adults but in a developmental context.
- Example: A toddler might say "أكلت التفاحة" (I ate the apple) correctly, then later overgeneralize to "أكلت اللعبة" (I ate the toy), showing rule-application rather than mimicry.

2. Role of the Immediate Social Environment (Family Influence)
- The family acts as the primary linguistic model, continuously:
  - Correcting errors (e.g., repeating "سيارة" clearly if the child says "تيارة").
  - Expanding utterances (e.g., turning "ماما حليب" into "ماما، أريد الحليب").
- Children adjust their speech based on feedback and their vocal apparatus's physical readiness.

3. Physiological Maturation (Neurological Basis)
- Language development follows a fixed biological sequence, even in children with disabilities (though vocabulary may be limited due to reduced caregiver interaction).
- Universal Stages: All children, regardless of language or culture, progress through the same milestones (crying → babbling → words → sentences), driven by:
  - Brain size (larger cortex in humans).
  - Myelination (enhanced neural connectivity).
  - Auditory-visual association areas (e.g., Broca's and Wernicke's regions).

4. Language Comprehension (Reception Precedes Production)
- Children understand speech long before they can articulate it.
  - Evidence: A 12-month-old may follow "أحضر الكرة" (bring the ball) but only say "كرة" months later.
  - Sound Discrimination: They recognize familiar phonemes (e.g., distinguishing "بابا" from "ماما") early on.

II. Previous Studies

1. Pine (1995)

Investigated linguistic differences between children and their siblings in relation to birth order. The study included 9 infants and their English-speaking siblings from Greater Manchester. Mothers recorded vocabulary acquisition using a standardized linguistic inventory.

Key Findings:
- Significant differences emerged in the acquisition of the first 50 and 100 words among siblings.
- No statistical correlation was found between vocabulary development and birth order or age.

Implication: Early lexical development varies individually, with minimal influence from sibling position.

2. Takane, Goods, & Derevensky (1996)

Examined birth order's impact on early language development. Observed 32 English children (16 firstborns, 16 later-borns) over 21 months, analyzing pronoun use and general linguistic progress.

Key Findings:
- Second-born children demonstrated superior pronoun usage (e.g., "I," "you") but no overall language delay.

- Siblings mutually aided language development, particularly in mastering pronouns.

Implication: Birth order influences specific linguistic features (e.g., pronouns) but not general language milestones.

3. Dubois, Eitel, & Felnei (2000)

Explored the link between parental interaction and children's linguistic growth. Surveyed 159 parents of children aged 3–5 years, assessing home literacy practices (e.g., discussions, shared reading).

Key Findings:

- Verbal engagement (e.g., topic discussions) significantly boosted language skills compared to passive activities.
- Early directed speech (e.g., labeling objects) was critical for foundational vocabulary.

Implication: Active parental communication, not just exposure, drives lexical and syntactic advancement.

In a 2006 study conducted by Shin in Pennsylvania, USA, the research aimed to examine linguistic communication skills (reading, writing, listening, and speaking) at the household level. The study sample consisted of five kindergarten children and their five mothers and lasted for six months. During this period, video recordings were used for several hours each week to document how mothers trained their children in linguistic communication skills through conversation, listening, reading, and writing. The results indicated a significant impact on the development of linguistic skills among the children, attributed to the mothers' involvement in teaching communication skills within the research framework .

Similarly, Barhouma and Al-Bashir (2007) conducted a study to determine the social environment's influence on the language of preschool children in Amman. The study sample included 270 randomly selected children aged 4–6 years from Amman. Interviews and observations were used as tools to assess the linguistic vocabulary of the sample. The results revealed variations in the total number of spoken and distinct words across three different environments, with the affluent environment ranking first, the middle-class environment second, and the underprivileged environment third. Additionally, the findings showed that female children used a greater number of spoken or distinct words compared to their male counterparts .

Al-Zaabi (2007) conducted a study to determine the linguistic vocabulary of preschool children in Zarqa, Jordan. The study sample consisted of 180 children from kindergartens in Zarqa, using illustrated questionnaires covering various topics to engage the children's interests. One of the key findings was that the average number of spoken words among the sample was 74.16 words per child. The results also indicated that females outperformed males in linguistic vocabulary. Nouns had the highest frequency of spoken words, followed by verbs in second place, and prepositions and tools in third and last place .

Vidaurre's (2007) study aimed to verify the effectiveness of parental involvement in school programs on the development of linguistic communication skills among a group of Spanish-speaking kindergarten students in Los Angeles. The sample consisted of seven students and their parents, all of whom struggled with linguistic communication skills. The study lasted two weeks in schools located in the Unified School District, during which an intensive workshop was held for participating parents. Parents were equipped with linguistic skills and teaching methods suitable for developing these skills in their children. The study concluded that parental involvement significantly reduced the pressure of learning English as a second language while increasing parents' confidence and engagement in language education programs, ultimately improving their children's school performance .

Al-Hawarna (2012) conducted a study to examine the impact of variables such as socioeconomic status, family cultural background, intelligence, gender, family size, fears, and birth order on the linguistic development of kindergarten children. The study sample included 110 children aged 4–6 years. Among the key findings was a correlational relationship between children's linguistic development and the family's socioeconomic status, as well as intelligence quotient (IQ). The results also indicated no statistically significant differences attributed to gender.

A study by Nielsen, Fink, and Friesen (2012); the study aimed to examine the effectiveness of a linguistic instructional model in developing the vocabulary of kindergarten children. The sample included 22 children (9 females and 13 males) in a program that ran for four consecutive days per week over 12 weeks. Researchers used the Test of Oral Language Development (TOLD) to collect data. The results indicated that integrating direct verbal experiences with the model could enhance linguistic comprehension and improve students' vocabulary acquisition.

Finally, a study by Al-Darwish (2013); this study explored the perceptions of Kuwaiti kindergarten teachers and parents regarding children's language acquisition and learning in Kuwaiti kindergartens.

The sample included 12 Arabic-speaking kindergarten teachers, and data was collected during the 2010-2011 academic year using observation and interviews. The findings revealed that students' ability to acquire vocabulary largely depends on the teacher's competence in teaching and training them in linguistic skills.

-RESEARCH METHODOLOGY

The study employed a correlational descriptive approach to examine the relationship between children's linguistic vocabulary and their social behavior using statistical correlation methods. This methodology is considered reliable as it describes linguistic vocabulary variables among a sample of kindergarten children and explores their connection to other factors, aligning with the principles of correlational descriptive research.

-Research Population and Sample

The study population included all kindergarten children in the Al-Aziziyah district, Wasit Governorate, totaling 435 children (221 males and 214 females). A random sample of 140 children (10 children from each of the 14 kindergartens in Al-Aziziyah) was selected. The selection considered gender and birth order to ensure representativeness.

Table (1): Sample Distribution by Gender and Birth Order

Variable	Category	Frequency	Percentage (%)
Gender	Male	56	40.0%
	Female	84	60.0%
	Total	**140**	**100.0%**
Birth Order	Oldest Child	38	27.1%
	Middle Child	46	32.9%
	Youngest Child	34	24.3%
	Only Child	22	15.7%
	Total	**140**	**100.0%**

Research Tool

The researchers developed a tool to measure the linguistic vocabulary of kindergarten children based on a review of theoretical literature and previous studies, such as:

- Al-Zaabi's study (2007)
- Barhouma & Al-Bashir's study (2007)
- Al-Hawarna's study (2012)

The preliminary assessment tool consisted of 72 images, divided into 5 thematic groups, as in table (2).

Table (2): Assessment tool consisted of 72 images, divided into 5 thematic groups

Group	Content	Number of Images
Group 1	Human body parts	15
Group 2	Animals & plants	15
Group 3	Vehicles & public facilities	15

Group	Content	Number of Images
Group 4	Various professions	15
Group 5	General social situations	12
Total		72

This tool was designed to assess children's vocabulary recognition and linguistic development across different semantic categories.

The researchers employed two methods to validate the linguistic vocabulary scale; Face validity and internal consistency.

-For **face validity**, the scale was reviewed by a panel of experts in educational psychology, psychological counseling, curriculum and teaching methods, and measurement and evaluation. The experts evaluated whether the images belonged to their designated categories, effectively measured linguistic vocabulary, and could assess kindergarteners' language levels. An 80% agreement threshold was set for image acceptance, with only equivalent replacements made to maintain the original 72-image total.

To examine **internal consistency**, correlation coefficients were calculated between individual items and total scores, items and their assigned groups, and groups and the total score. A pilot study with 30 kindergarten children from Al-Aziziyah (separate from the main sample) demonstrated strong correlations: item discrimination indices ranged from 0.30 to 0.96, while group-to-total correlations ranged from 0.31 to 0.96. All correlations were statistically significant ($p < 0.05$), confirming the scale's reliability without needing item removal. The results validated the tool's effectiveness in measuring linguistic vocabulary, with each thematic group (body parts, animals/plants, vehicles/public facilities, professions, and social situations) showing significant correlations to the overall score. This rigorous validation process ensured the scale's appropriateness for assessing kindergarten children's language development. The correlation coefficients between the different groups and the total score are presented in Table (3) as follows:

Table (3) shows the correlation coefficients between the various groups themselves and with the total score.

Group	**Group 1**	**Group 2**	**Group 3**	**Group 4**	**Group 5**	**Total Score**
Group 1	0.945*					
Group 2	0.941**	0.913*				
Group 3	0.861**	0.881**	0.862*			
Group 4	0.907**	0.832**	0.883**	0.826*		
Group 5	0.767*	0.917**	0.930**	0.969**	0.939*	
Total Score	0.976**	0.930**	0.969**	0.917**	0.939*	

All coefficients are statistically significant at $p < 0.05$.

Reliability of the Linguistic Vocabulary Scale

The reliability of the linguistic vocabulary scale was verified using the test-retest method. The scale was administered to a sample of 30 children (not part of the main study sample) from the (Tyre) region in Palestine, then read ministered after two weeks. Pearson's correlation coefficient was calculated between the two administrations, yielding an overall reliability coefficient of 0.90, which is considered highly reliable.

Table (4): Test-Retest Reliability Coefficients for Scale Groups and Total Score

Domain	Internal Consistency (α)	Test-Retest Reliability (r)
Group 1 (Body Parts)	0.81	0.83
Group 2 (Animals & Plants)	0.87	0.86
Group 3 (Vehicles & Public Facilities)	0.87	0.88
Group 4 (Professions)	0.84	0.89
Group 5 (Social Situations)	0.79	0.85
Total Score	**0.92**	**0.90**

The researchers also calculated the difficulty index for the linguistic vocabulary scale, finding that the image-based questions ranged between 0.30 and 0.62 in difficulty level. This range is considered acceptable in measurement and evaluation sciences, as experts recommend retaining items with difficulty coefficients between 0.30 and 0.70.

Additionally, the discrimination index of the scale was computed, with values ranging from 0.41 to 0.89 - an excellent range since discrimination coefficients between 0.40 and 1.00 are considered valid. These psychometric analyses confirm that all items on the scale demonstrate appropriate difficulty levels and strong discriminatory power, making the instrument effective for assessing children's linguistic vocabulary across different proficiency levels. The balanced difficulty range ensures the scale can properly differentiate between children with varying language abilities while maintaining accessibility for the target age group.

The study employed a binary scoring system (0 or 1) to assess kindergarten children's linguistic vocabulary levels, where correct identification of an image earned 1 point and incorrect responses received (0) points. Each child obtained sub-scores for different vocabulary categories (body parts, animals, etc.) and a total score representing their overall linguistic ability, with possible scores ranging from (0 to 72). To facilitate interpretation, raw scores were converted to percentage averages, categorized into three achievement levels: low performance (below 50%), intermediate (50-85%), and high performance (above 85%). This classification system corresponds with the standardized assessment framework used in Al-Aziziyah kindergartens, enabling educators to effectively identify students requiring additional support (scoring below 70%) and those demonstrating advanced vocabulary mastery (scoring above 85%). The conversion to percentage-based evaluation provides a practical and intuitive method for interpreting children's language development progress within this educational context.

RESEARCH FINDINGS AND DISCUSSION:

To address the first research question, "What is the level of linguistic vocabulary among kindergarten children in Al-Aziziyah?", the study calculated arithmetic means, standard deviations, and percentage averages of the children's vocabulary scores. The results, presented in descending order based on percentage averages (see Table-5), reveal the distribution of linguistic proficiency levels across the sample. Table (5) displays the arithmetic means, standard deviations, and percentage averages, providing a clear hierarchy of vocabulary acquisition among the children, from highest to lowest performance. These metrics offer a comprehensive overview of the linguistic capabilities observed in the study, highlighting variations in vocabulary mastery within the kindergarten population of Al-Aziziyah, as in;

Table (5): Linguistic Vocabulary Levels of Kindergarten Children in Al-Aziziyah (Ranked by Percentage Average)

Proficiency Level	Arithmetic Mean	Standard Deviation	Percentage Average	Vocabulary Domain	Rank
High	5.87	0.376	97.86%	Group 1 (Body Parts)	1

Proficiency Level	Arithmetic Mean	Standard Deviation	Percentage Average	Vocabulary Domain	Rank
High	4.84	0.372	96.71%	Group 5 (Social Situations)	2
High	12.91	1.059	92.19%	Group 4 (Professions)	3
High	5.44	0.825	90.71%	Group 2 (Animals & Plants)	4
High	5.32	0.742	71.96%	Group 3 (Vehicles & Public Facilities)	5
High	62.22	5.109	86.42%	**Total Linguistic Score**	

Table (5) reveals that kindergarten children in Al-Aziziyah demonstrate high levels of linguistic vocabulary acquisition. The overall percentage average across all vocabulary domains reached 86.42%, indicating strong language development. Performance varied by category, with scores ranging from 97.86% (highest) to 71.96% (lowest).

The study results demonstrate abundant linguistic vocabulary development among kindergarten children in Al-Aziziyah, with children showing excellent language acquisition and high levels of vocabulary mastery. This outcome likely stems from teachers' and kindergartens' emphasis on developing children's linguistic abilities through direct experiences like peer-to-peer and teacher-child interactions, as well as indirect experiences such as using images, story-based reality simulations, and various classroom activities. The findings suggest that these educational approaches effectively create a rich language-learning environment that fosters vocabulary growth.

Additionally, the strong results may reflect parents' engagement in their children's language development through imitation, social interaction, and frequent conversations about kindergarten activities. This regular linguistic exchange between children and adults appears to significantly enhance vocabulary acquisition. Kindergartens in Al-Aziziyah thus provide a fertile environment for dialogue, verbal exchange, and play among peers, along with meaningful adult-child communication - all of which enrich children's direct experiences and contribute to their advanced linguistic development. The combination of these school-based and home-based language stimulation strategies creates optimal conditions for vocabulary growth in early childhood.

Theoretical literature supports these findings, as Al-Jamal (2011) demonstrated that kindergartens enhance children's opportunities for social interaction with peers and help them develop social adaptation skills through classroom activities, particularly play. Play serves as a crucial factor in fostering proper social development, improving social communication skills, and facilitating interaction with the surrounding environment. These kindergarten experiences create a foundation for both linguistic and social growth during early childhood.

The researchers' interpretation aligns with previous studies by Eitel & Felnei (2000) and Shin (2006), which emphasized parental influence on language development. Eitel & Felnei found that home-based parental communication, particularly discussions about school topics, significantly impacts children's linguistic growth more than other forms of parental involvement. Similarly, Shin's research highlighted mothers' substantial role in developing their children's communication skills. Together, these studies confirm that both educational environments and family interactions critically contribute to early language acquisition.

"Does the level of linguistic vocabulary development differ by gender among kindergarten children?"

To address this research question regarding potential gender differences in linguistic vocabulary development among kindergarten children, the study employed a rigorous statistical analysis approach. Researchers calculated separate arithmetic means and standard deviations of vocabulary scores for boys and girls to examine performance patterns by gender. To determine whether any observed differences

were statistically significant, independent samples t-tests were conducted, with the full results of these comparative analyses presented in Table (6). This table systematically displays the key findings, including: (1) gender-specific mean scores across all vocabulary domains, (2) corresponding standard deviations indicating score variability, and (3) t-test values with significance levels that objectively assess whether gender differences in linguistic development exist within this population. The methodological approach ensures reliable, quantitative evidence for evaluating gender as a potential factor in early language acquisition.

Table (5): Gender Differences in Linguistic Vocabulary Development Among Kindergarten Children

Group	Gender	N	Mean	SD	df	t-value	Sig.
Group 1	Male	56	5.93	0.260	138	1.473	Not Significant
	Female	84	5.83	0.434			
Group 2	Male	56	13.05	0.942	138	1.340	Not Significant
	Female	84	12.81	1.124			
Group 3	Male	56	8.77	1.128	138	1.873	Not Significant
	Female	84	8.40	1.121			
Group 4	Male	56	5.34	0.745	138	0.232	Not Significant
	Female	84	5.31	0.744			
Group 5	Male	56	5.64	0.554	138	2.382	Not Significant
	Female	84	5.31	0.944			
Total Score	Male	56	63.05	3.993	138	1.582	Not Significant
	Female	84	61.67	5.689			

The results of this question revealed no statistically significant differences in the total vocabulary scores of kindergarten children attributable to gender, with the exception of Group 5 (at $p < .05$), where differences favored male children. This finding indicates comparable linguistic vocabulary acquisition between boys and girls during the kindergarten stage. The researchers attribute this gender parity to the shared developmental factors influencing children's lexical growth, including physiological maturation, cognitive development, and social-emotional advancement - all of which progress similarly in both genders when children experience normal development across these domains. The equivalent performance suggests that fundamental language acquisition mechanisms operate comparably in early childhood regardless of gender, provided children receive equivalent developmental opportunities and environmental stimulation. The single exception in Group 5 (social situations vocabulary) may reflect subtle gender-based socialization patterns, though the overall pattern confirms that vocabulary development in kindergarten primarily reflects universal developmental processes rather than gender-specific learning trajectories. These findings align with contemporary understanding of early language acquisition as a predominantly experience-dependent rather than gender-determined competency.

The study's findings reflect how children's linguistic development is shaped by both intrinsic and environmental factors. As noted by Shash (2006), human development, whether in males or females, is influenced by a combination of personal and contextual elements. Since language development

constitutes a fundamental aspect of human growth, it is similarly affected by various factors, some related to biological and psychological constitution, while others stem from the child's living environment.

Understanding this relationship between linguistic development and its influencing factors enables more objective evaluation of this growth process. Moreover, it facilitates better regulation, guidance, and enhancement of language acquisition, ensuring optimal developmental outcomes for all children regardless of gender.

The observed gender parity in vocabulary development may also stem from the similar social environments experienced by the children. Since all participants were selected from kindergartens serving comparable communities, both boys and girls were exposed to equivalent social and linguistic experiences. This shared environmental context likely contributed to the absence of significant gender differences in vocabulary acquisition. Shash (2006) similarly found that kindergarten attendees demonstrate superior language development compared to non-attendees, highlighting the crucial role of institutional early education. The standardized experiences provided in these educational settings appear to neutralize potential gender-based variations in language learning trajectories.

The kindergarten environment offers rich, structured linguistic stimulation through various developmentally appropriate activities.

Storytelling sessions, guided discussions, interactive play, and social dialogues create an enriching atmosphere filled with diverse experiences and stimuli that foster language growth. These carefully designed pedagogical approaches, equally accessible to both genders, provide balanced opportunities for vocabulary expansion and communicative skill development. The study suggests that when children, regardless of gender, receive comparable quality and quantity of linguistic input through systematic early education programs, they achieve similar levels of lexical development, underscoring the power of equitable educational environments in shaping language competencies during formative years.

C) Results of the Third Question:

"Does the level of linguistic vocabulary development differ according to birth order among kindergarten children?"

To determine the statistical significance of differences between mean scores, a one-way ANOVA was conducted, as shown in Table (7).

Table (7): One-way ANOVA of the Effect of Birth Order on the Level of Linguistic Vocabulary Development among Kindergarten Children

Group	Source	Sum of Squares (SS)	df	Mean Square (MS)	F-value	Sig.
Group 1	Between Groups	0.364	3	0.121	0.853	Not Significant
	Within Groups	19.322	136	0.142		
	Total	19.686	139			
Group 2	Between Groups	0.568	3	0.189	0.166	Not Significant
	Within Groups	155.225	136	1.141		
	Total	155.793	139			
Group 3	Between Groups	0.435	3	0.145	0.111	Not Significant

Group	Source	Sum of Squares (SS)	df	Mean Square (MS)	F-value	Sig.
	Within Groups	178.215	136	1.310		
	Total	178.650	139			
Group 4	Between Groups	0.236	3	0.079	0.140	Not Significant
	Within Groups	76.300	136	0.561		
	Total	76.536	139			
Group 5	Between Groups	2.732	3	0.911	1.349	Not Significant
	Within Groups	91.811	136	0.675		
	Total	94.543	139			
Total Score	Between Groups	6.270	3	2.090	0.078	Not Significant
	Within Groups	3621.866	136	26.631		
	Total	3628.136	139			

These results may be attributed to the nature of contemporary life that children experience today, where multiple diverse sources contribute to their linguistic development, including home, kindergarten, older peers, and media. Modern media, particularly children's programs, has become one of the most influential factors due to its rich audiovisual stimuli that strongly engage young viewers. Importantly, these developmental experiences are generally equally accessible to all children regardless of birth order. The current findings align with Pine's (1995) study which found no statistically significant birth order effects on language development, though they contrast with Takane, Derevensky, and Goods' (1996) research that identified superior pronoun usage among second-born children while showing no overall language development differences.

This suggests that while traditional birth order theories might predict variations, modern environments with ubiquitous educational resources may neutralize such effects, creating more uniform language acquisition opportunities across family positions. The widespread availability of stimulating linguistic input through various channels appears to equalize vocabulary development among children of different birth orders in contemporary settings.

Recommendations:

Based on the study's findings, the researchers recommend the following:

1. **Develop Training Programs:** Design specialized programs to enhance children's linguistic vocabulary development.
2. **Utilize the Vocabulary Scale:** Implement the developed vocabulary assessment tool to evaluate language proficiency in kindergarten children.

3. **Enhance Linguistic Opportunities:** Provide structured language interaction opportunities for children, guided by psychological and research-based principles.
4. **Expand Descriptive Studies:** Conduct further research to explore the relationship between vocabulary development and social variables (e.g., family socioeconomic status) and individual factors (e.g., intelligence).
5. **Promote Experimental Research:** Investigate the effectiveness of targeted training programs in boosting linguistic vocabulary among kindergarteners.

These recommendations aim to strengthen early language acquisition through evidence-based interventions and further academic inquiry.

Suggestions for Future Research:

1. **Language Proficiency and Intelligence:** Conduct a study examining the relationship between linguistic vocabulary development and intelligence levels in kindergarten children.
2. **Enhancing Language Acquisition:** Investigate effective methods for improving and expanding linguistic vocabulary among kindergarten-aged children.
3. **Language Skills and Self-Confidence:** Explore the connection between vocabulary development and self-confidence in early childhood.

These proposed studies aim to deepen our understanding of cognitive, pedagogical, and psychological factors influencing language acquisition in young learners.

REFERENCES

1. Abu Jadu, S. M. (2004). Developmental psychology: Childhood and adolescence. Dar Al-Maseera.
2. Al-Dabaa, T. Y. (2001). Learning linguistic and religious concepts in children. Dar Al-Fikr Al-Arabi.
3. Al-Darwish, S. (2013). Kindergarten children and language learning: Missing pillars for language acquisition. International Journal of Higher Education, 2(1), 1-12. https://doi.org/10.5539/ijhe.v2n1p1
4. Al-Hawarna, M. N. (2012). A study of some variables related to linguistic growth in kindergarten children. Damascus University Journal, 28(1), 223-262.
5. Al-Jamal, R. A. (2011). Kindergarten management in the age of globalization. New University House.
6. Al-Ma'touq, A. M. (1996). Linguistic repertoire: Its importance, sources, and development methods. World of Knowledge.
7. Al-Rimawi, M. A. (2003). Child psychology. Dar Al-Shorouk.
8. Al-Zaabi, L. T. (2007). Preschool children's language: Its formation and influencing factors [Unpublished master's thesis]. Hashemite University.
9. Barhouma, I., & Al-Bashir, A. (2007). The social environment in preschool children's language in Amman. Damascus University Journal, 23(2), 157-190.
10. Dubois, D., Eitel, H., & Felnei, M. (2000). Effects of family environment and parent-child relationships on school adjustment during the transition to early adolescence. Journal of Marriage and Family, 62(2), 405-414. https://doi.org/10.1111/j.1741-3737.2000.00405.x
11. Hawashin, M., & Hawashin, Z. (2003). Characteristics and needs of early childhood. Dar Al-Fikr.
12. Hormuz, S. H. (1989). Child language psychology. Dar Al-Shuoon Al-Thaqafiya.
13. Karam Al-Din, L. (2004). Language in preschool children. Dar Al-Fikr Al-Arabi.
14. Nielsen, D., Friesen, D., & Fink, J. (2012). The effectiveness of a model of language-focused classroom instruction on the vocabulary and narrative development of kindergarten children. Journal of Education, 192(2-3), 63-76.
15. Abd Aliwie AN. A Pragmatic Analysis of Wish Strategies Used by Iraqi EFL Learners. Salud, Ciencia y Tecnología - Serie de Conferencias [Internet]. 2024 Aug. 12 [cited 2024 Sep. 6];3:.1151. Available from: https://conferencias.ageditor.ar/index.php/sctconf/article/view/1151
16. Aliwie, A.N.A., 2024. A Pragmatic Study of Irony in Dickens' 'A Tale of Two Cities'. Forum for Linguistic Studies. 6(6): 147–161. DOI: https://doi.org/10.30564/fls.v6i6.7056
17. Abd Aliwie, A.N., 2025. A Pragmatic Analysis of Persuasive Arguments in the 2011–2020 US Presidential Campaign Speeches. Forum for Linguistic Studies. 7(1): 480–494. DOI: https://doi.org/10.30564/fls.v7i1.7243
18. Aliwie, A. N. A. (2025). Conversational silence in Harold Pinter's The Birthday Party: A pragmatic perspective. International Journal of Arabic-English Studies (IJAES), 25(2), 115–144. https://doi.org/10.33806/ijaes.v25i2.860
19. Pine, J. (1995). Variation in vocabulary development as a function of birth order. Child Development, 66(1), 272-281. https://doi.org/10.1111/j.1467-8624.1995.tb00863.x
20. Qasim, A. M. (2002). Language and communication in children. Alexandria Book Center.
21. Shash, S. M. (2006). Psychology of language. Zahra Al-Sharq Library.
22. Shin, M. (2006). Early language and literacy experiences in the home: A case study of two Korean-American and two European-American five-year-old children [Unpublished doctoral dissertation]. Pennsylvania State University.
23. Takane, Y., Goods, E., & Derevensky, J. (1996). Birth order effects on early language development: Do secondborn children learn from overheard speech? Child Development, 67(2), 621-634. https://doi.org/10.1111/j.1467-8624.1996.tb01755.x
24. Vidaurre, L. (2007). Decreasing school failure through parental involvement in literacy intervention for disadvantaged Hispanic kindergarten entrants [Unpublished doctoral dissertation]. Biola University.