



TESTING THE FLUCTUATION HYPOTHESIS IN THE USE OF ENGLISH DEFINITE ARTICLE BY URDU SPEAKERS

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Abstract

The present study examines the acquisition of English articles by Urdu L1 speakers in Pakistan, focusing on the use of definite articles. As seen in Hawkins and Towell (1994), the existing studies highlights the challenges that L2 learners face in case they do not have an equivalent article system in their L1, Master (1995) emphasizes the role of explicit instruction in facilitating article acquisition, and Ionin (2009) examines the role of the quality of input in L2 article learning, concluding that the amount and type of English exposure have a significant effect on how well learners master articles. However, it is found out that acquiring articles can be very difficult for L2 learners when their L1 is does not have an equivalent structure like the article-less languages of Urdu, Japanese and Korean.

The current research explores whether the problem of article learning is similar in different age groups of participants i.e. adolescents (9-19 years old) and adults (20 years old or higher). For this purpose, 100 participants were taken. Following the Fluctuation Hypothesis (FH) by Ionin (2004), as a theoretical framework, the study identified the degree to which learners vary in their patterns of use of articles and how various input patterns influence proficiency. In addition, the research also examined the effect of level and grades of education at which start learning English, no of years of learning English and the effect of Mother tongue on the accuracy of the learners in the articles. The Data were collected by using elicitation test and a judgment task based on Ionin's (2004) methodology to assess learners' accuracy in using definite articles. The findings focus on how the age, educational level, and knowledge of languages interact and influence the acquisition of articles within L2 English regarding the stages when learners develop proficiency overcoming interference, overgeneralization and overuse. The findings not only enrich our understanding of the L2 article use, but also give practitioners, including L2 English teachers and learners, empirically based advisory on instructions design improvements and learning maximization.

Key Words: *Second Language Acquisition, Fluctuation Hypothesis, Definite Article, Article Acquisition, Urdu ESL Speakers*

Introduction

This comprehensive chapter reveals the fundamental framework of research that focuses on the way Pakistani Urdu-speaking learners acquire English articles in second language acquisition environment. It scrutinizes the research context by describing the used hypothesis and analytical approach, critically analyzing the first and second language acquisition theories in details using systematic comparative analysis. The recent theories concerning language acquisition are reviewed critically, with an aim of establishing a firm theoretical foundation for this investigation. In addition, the main aspects of second language learning, crucial for understanding the entire acquisition process, are outlined; and the most important factors determining acquisition

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patterns among the L2 students, such as age, level of education, exposure, and instructional methods popular in the Pakistani educational setting are described.

It explores the pattern of acquisition of English articles amongst Pakistani learners whose mother tongue is Urdu (L1) when they learn English as a second language (L2). Specifically, the acquisition process is reviewed in this research through the use of the Fluctuation Hypothesis (FH), initially developed and empirically tested by Ionin (2004). The main purpose of this paper is to examine the way in which the first language transfer phenomena interfere with and may hinder the successful acquisition of the English article system.

Based on the theoretical foundations of the Fluctuation Hypothesis, definiteness and specificity work collusively as two of the basic semantic features inherent within the Universal Grammar (UG). This hypothesis in particular sheds light on the repeated difficulties experienced by learners whose native language does not have an article system [-article] L1 when learning to achieve a target language with articles system [+article] L2. These learners are usually observed to have significant changes in their article use patterns. That fluctuation is only expressed mainly when learners try to pick out suitable articles in the environment of complicated relations between definiteness and specificity features.

The main aim of this study is to study second language acquisition by focusing on how Urdu ESL learners use English articles. For many years, influential thinkers like Skinner (1957) have researched the process of SLA. As mentioned before, Skinner (1957) believed that language learning is mainly a matter of forming habits through imitation. Even so, Skinner's view on learning fails to include the mental processes involved in learning.

Before the 20th century, little was known about the process of acquiring language. Yet, in the 1950s, both B.F Skinner (United States) and Ivan Pavlov (Russia) laid the groundwork for behaviorist theory which looked at language learning through psychological aspects and saw first and second language acquisition as forming habits. The idea of language learning as habit formation arose from the main principles of stimulus and response. It is argued in this theory that learning a second language is based on people imitating the way native speakers say and use the language. This theory suggests that motivation for learning language comes from reinforcing good outputs and correcting errors to ensure that similar errors do not happen again while Skinner preferred behaviorism, Krashen chose the cognitivist theory. Based on his Comprehensible Input hypothesis (1982), Krashen argues that acquiring a language happens without even noticing.

Appropriate ways of teaching throughout the second language acquisition process help students learn more effectively. Krashen, on the other hand, argued that languages are still learned by people, regardless of what takes place in school. Ekiert (2004) argued that children do not go through articles one by one and that their L1 is a bigger influence on article acquisition than whether the instruction is formal or informal.

The English article system stands as a difficult system to learn because experts have not yet developed specific tools or practical instruments to teach articles effectively. Every new language structure proves challenging for [-article] L1 learners because those structures employ rules and conventions which are unfamiliar due to the absence of such elements in their native language. Understanding articles in an unfamiliar L2 environment proves difficult for both [+article] L1 background learners and [-article] L1 background learners despite the complexity of this acquisition task. EFL learners make the definite 'the' and indefinite 'a/an' article errors most frequently but make less frequent mistakes with the 'zero' article in different settings. Research by

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Master (1997) and Parrish (1987) demonstrates that learners learn the zero article first because they initially understand situations that need no article before mastering indefinite and definite articles through committed study. The distinction between 'zero article' and 'article absence' as described by Master (1997) helps learners understand zero article usage independently without requiring memorized rules or specific usage principles. His results show learners who struggled with article use had a score of 95% accuracy in zero article usage across testing contexts. The occurrence of zero articles grows less common with increasing language proficiency yet learners continue to overuse zero articles more frequently than they would definite and indefinite articles in regular conversation.

When it comes to First language (L1) acquisition, occurs automatically through the natural process by which humans learn their mother tongue starting from birth and extending into early childhood development. At birth, infants develop the ability to listen to the different sounds and words in their environment as they progress to imitate these language elements during their cognitive progress. The acquisition of English articles proves challenging for the second-language English learners because these articles contain a high level of complexity compared to other languages which rely only on definiteness and indefiniteness signaling while also requiring specific semantic conditions and numerous exceptions to their usage. Second language learners from [-article] language backgrounds experience the most difficulty with employing correct uses of 'a' and 'an' between various communication contexts. The acquisition of a second language becomes harder because L1 interference creates permanent difficulties that students encounter during their language learning process. Second language learners often experience this difficulty in the acquisition process because they unconsciously utilize native language principles in their learning while applying full native language patterns to English scenarios as observed by linguistics researchers.

Literature Review

Research in language acquisition took a significant turn when Tania Ionin and her research team (Ionin et al. 2004; Ionin et al. 2008) explored how learners from different language backgrounds struggle with English. Their observations revealed an interesting pattern - learners switch back and forth between correct and incorrect article usage depending on meaning contexts, leading to what became known as the Fluctuation Hypothesis (Ionin et. al., 2004). This theory builds on the idea that learners can access Universal Grammar (UG) features while learning a new language. It emerged as an alternative to Hawkins and Chan's 1997 theory, initially called the Failed Functional Features Hypothesis and later renamed as the Representational Deficit Hypothesis (RDH). The RDH suggests that our first language shapes how we learn a second language (Hawkins and Liszka, 2003), arguing that features missing in our first language become difficult to grasp in the new language. Yet, researchers like Goad and White (2006) questioned this view, challenging both the RDH and the claimed influence of first language. White et. al., (2003) describe the learning phase where speakers haven't mastered the new language as interlanguage. This connects with Universal Grammar's observation that learners make specific mistakes as they progress toward fluency, influenced by this interlanguage phase. The Fluctuation Hypothesis (FH) captures this learning journey, noting how learners move between different language patterns until enough exposure helps them master the correct usage.

As Ionin et al. (2004) explain:

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- L2 learners have full UG access to the two settings of the Article Choice Parameter.
- L2 learners fluctuate between the two settings of the Article Choice Parameter until the input leads them to set this parameter to the appropriate value" (p.16).

When researchers explore how English works, they often find themselves studying articles - those small but crucial words that shape meaning. Through years of classroom observation and research, scholars noticed how the article 'the' helps speakers point to exact things they mean, while 'a' and 'an' work differently, marking things that aren't so specific. Names like "London" or concepts like "happiness" don't need these markers as they carry their own weight of meaning. This understanding didn't come easily; it emerged through careful study of how language actually works in daily use.

Back in the 1970s and 1980s, the researchers watching both children and adults learn languages noticed something fascinating. People seemed to follow certain patterns when picking up grammar rules (VanPatten & Williams, 2007, p. 29). They saw learning wasn't random but moved through clear stages, from basic communication toward native-like speech (Towell & Hawkins, 1994, p. 10; Mitchell & Myles, 2004, pp. 15–16). These observations changed how we think about language learning, showing it's more structured than previously thought.

Towell and Hawkins (1994) dug deeper into how people learn. They found learners often try different versions of the same structure where native speakers would use just one (p. 13). Interestingly, they noticed people naturally reach back to their first language when trying to make sense of new grammar patterns (p. 7). This influence shows up everywhere - in pronunciation, word choice, sentence structure, even in how people organize their thoughts (Mitchell & Myles, 2004, pp. 19–20). Their research revealed that this isn't just interference; it's a natural part of how we process new language information.

Language learners show remarkable creativity in building their understanding. Studies watching children learn their first language reveal how they construct their own rules based on limited exposure (Crain & Lillo-Martin, 1999, p. 29). Sometimes this leads to innovative forms - saying "goes" instead of "went," or "foots" rather than "feet." These patterns extend to article usage, where learners develop their own systematic approaches to using 'the,' 'a,' and 'an.'

Definiteness and specificity are significant elements of English grammar, and they are essential to the meaning at the sentence level. These concepts are indicated by the use of articles and the extent to which things are specific is greatly determined by contextual knowledge. Within the English language, it uses definite and indefinite articles to indicate the presence of a definite and indefinite noun phrase (NP), we use the definite article, the (a when followed by a vowel sound an), and indefinite article a. The significance of article usage by L2 learners stems from their under use of definiteness and specificity, both considered as semantic universals, as well as from the role that definiteness and specificity; play together in determining modes of expression in English. Second language acquisition research has shown that bringing in English articles is more difficult for learners whose first language lacks article systems (Sarko, 2009; Hawkins et al., 2006; Mayo, 2009; Ionin et al., 2004; Schönenberger, 2014; Ionin et al., 2009).

One of these constructs will indicate the property of definiteness, which determines whether a noun or NP refers to a specific entity (i.e. a particular person or object). Specificity (Park & Ellis, 2023) is the level of detail of that entity. The definite article 'the' limits the entities being referred to as known by both communicating parties mutually recognized or previously mentioned in a discourse. Consider these examples:

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- The smartphone is lying on the desk.
- The backpack is exceptionally durable.

These instances of 'the' describe where the noun 'smartphone' is located; in these cases it is a particular desk (a). In the same way, in example (b) we see a specific backpack, with specific durability features.

Indefinite articles [a] and [an], in contrast, describe the non-specific objects, persons or entities that are not previously mentioned in the discourse context as well as about which no proper information is provided by the speaker. Regarding this aspect of non-specificity, both the speaker and hearer don't share any specific knowledge about the entity being referred to. For instance, if we alter the above-mentioned examples through the application of indefinite articles, they would be recounted as:

- A smartphone is lying on a desk.
- A backpack is exceptionally durable.

In all these examples, the use of indefinite articles does not provide us with any specific information about which smartphone and backpack, the speaker is talking about. Such sentences impart ambiguity for the hearer as well and the intention of the speaker also remains veiled.

Previous work (Pervaiz and Bukhari, 2016) indicates that Urdu ESL learners face enormous difficulties in learning the English article system. This is difficult because Urdu has no article system equivalent to English, and this is fundamentally new concept to Urdu speakers. Urdu has no traditional articles, but introduces definite meaning in discourse through determiners such as 'Aik' for one and 'Wo/Wohi' for that.

Lack of a formal system of articles in Urdu creates specific systematic issues when trying to express definiteness and specificity and therefore, the speakers of the language are forced to use other language resources. The presence of linguistic determinants that normally replace the categorical marking of English articles can be in the use of a contextual cue, the placement of determined images, or the use of particular lexical items.

A key element in this substitution strategy is the demonstrative 'wo/wohi' that acts out various semantic functions: in addition to its demonstrative properties, 'wo/wohi' is used as a substitute means to fill the gap of a definite article. In parallel, 'aik' serves as a numeral, and, in particular contexts of syntax, as a substitute of the English indefinite article. However, these analogical types of connections are not perfect, and this makes understanding of acquisition of argument-determiner relations to present some barriers.

The situation is also complicated by the fact that Urdu regularly omits definiteness marking where English would demand the use of the definite article. In the specimen (Kitaab mez par hai), we see that the definiteness of the term 'kitaab' (book) is defined only by putting it in an ultimate context and English would normally require saying either "The book is on the table" or "A book is on the table." Word order in Urdu also plays a significant role in marking definiteness. Objects placed at the beginning of sentences often carry definite meaning, while those appearing later may be interpreted as indefinite.

Articles, elements of the determiner phrase (DP) help to explain the meaning of nouns in sentences, by indicating what type of reference is applied. These articles are: definite 'the', indefinite forms 'a/an' and zero 'Ø'. The complexity in applying articles to second language learners is highlighted when the zero and null article are distinguished (Master, 2003, pp. 3–5). Master

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(2003, p. 9) reports that the zero articles are also found with indefinite uncountable nouns. (see the examples below)

Functions of the zero article (Master, 2003, p. 4):

- I enjoy drinking milk. (Indefinite uncountable noun)
- Apples were going into the children mouths. (Plural countable noun)
- Underground cave dwellers are often blind. (Non-specific generic noun)

Berry (2012) proposes that the English article system consists of two types of references: definite versus indefinite, and specific versus generic. Specific and Generic reference is discussed by him in the context of articles and within a discourse context, articles can point towards a specific referent of a noun, and in such case generic reference is used as in examples below.

- I had a sandwich for lunch. (Specific reference)
- A lion is a majestic beast. (Generic reference)

Definite article 'the' is used when speaker and hearer have common knowledge about a noun phrase or a unique, specific referent which the noun phrase refers to. Greenbaum and Quirk (1990, pp. 77–78) dub this use of 'the' as 'situational reference' where the noun is a signifier that is physically present and clear to both speaker and writer and to hearer and reader. Applying the definite article 'the' for situational reference:

- Give us the coffee, please.

In this example, 'the coffee' refers to an immediate reference, the coffee is visible and identifiable to the speaker and the listener within the unique discourse context.

The definite article can also be used in generic references. Used with plural nouns to mean many nations or regions of which people have membership or with adjectives to indicate types or aspects in general. The following example illustrate the application of the definite article in generic contexts:

- Chinese cuisine has become more and more popular in the Western nations.
- Those with substantial wealth often don't care about the spread of poverty.

Greenbaum (1990) and Berry (2012) argue that the definite article 'the' performs several grammatical functions other than its use as a situational (or generic) reference. It can be an anaphoric reference, in other words, back to an earlier noun phrase within the same sentence. It may also reflect cataphoric references, that is, forward references to a noun phrase which is explained later in the discourse context. The author name this usage "grammatical determination."

In addition, the definite article is used in the premodification of noun phrases. As premodification, Berry (2012: 378) proposes that it can be the source of definiteness because these adjectives or ordinal numbers or superlatives or other determiners such as 'fastest', 'magnificent', 'first', etc. mark the uniqueness of the poorly modified noun phrase. This is exemplified in the following instances:

- The other cars fell behind the fastest car. (Superlative premodifier)
- She wore the beautiful gown to the ball. (Adjective premodifier)

Zero or no article may be used in addition to definite and indefinite articles. Parrott (2000p. According to 47,) the zero article is usually used with both plural countable and uncountable nouns when referring to such general things or ideas, plus different names of meals. The zero article is also used to indicate time, generic reference, and when referring to diseases included in the

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standard medical terminologies. The prior research account describes changes that have been made to theories to close former gaps and explain new approaches for understanding a foreign language.

Research Methodology and Theoretical Frameworks

In this study a mixed method approach was used, combining the qualitative and quantitative data analysis. It provided the opportunity to explore the research problem multifaceted. The findings were of course analyzed using tools like frequency analysis, standard deviation, percentage breakdowns, tables and graphical representations. For data collection two distinct techniques were utilized: the forced choice elicitation task (FCT) and the acceptability judgment task (AJT). The data collected through AJT and FCT were also analyzed quantitatively using Independent Sample t-test and Multiple Linear Regression to examine group differences and relationships among variables. The reason why these methods are used is because they are means of overcoming the limitation of relying on a single task. Multiple methods are employed for enhanced reliability and depth of the findings which provide a better understanding of problem statement. The experimental tasks which were employed in the current study are described in detail: acceptability judgment task (AJT) and written forced choice elicitation task (FCT). It details the content of each test (number of items), sequence of statements of the AJT, modifications made to FCT dialogues, scope of carrying out these tests, and so on.

The acceptability judgment task (AJT) that was created consisting of 40 sentences, all of these items were used as test items. These sentences were grouped into pairs: Of the 40 sentences, 20 were grammatical, and 20 were ungrammatical sentences. The article usage was tested on four different contexts for the test sentences. Each context consisted of 5 grammatical sentences ($5 \times 4 = 20$) and 5 ungrammatical sentences ($5 \times 4 = 20$). The items in each pair were grammatical and ungrammatical sentences differing only in article use. The contexts for article use were adopted from Kwame (2020) and are as follows:

Forced-choice elicitation task (FCT), which is written, is a commonly used way to measure second language (L2) learners' article acquisition. The FCT consisted of 28 short dialogues divided into four contexts ($7 \times 4 = 28$), for this study. The dialogues in this task were adapted (with minor changes) from research by Ionin, Ko, and Wexler (2004) on article acquisition. The FCT required participants to fill in the blanks in dialogues by choosing the appropriate article: a, an, or a zero article. Participants left the blank empty for zero articles. The usefulness of this task was to test how well participants could use articles in different contexts.

The research population encompasses Pakistani Urdu ESL learners at two distinct academic levels: high school and undergraduate programs. This study focuses on ESL learners from Pakistani Urdu backgrounds to evaluate English article usage proficiency across education levels between secondary education groups and university-level students. This comparison establishes differentiated acquisition patterns in addition to proficiency levels which will become evident through subsequent sectional explanations.

The primary study involved 100 individuals split into 2 equal groups from four major government educational institutions in Sargodha, Punjab, Pakistan. The sample included 50 high school pupils (14–16 years old, mean age 15, 10th grade, and studied English 7–10 years) and 50 university undergraduates (21–23 years old, mean age 22, 8th semester, learned English 15–16 years). Task completion required 40–45 minutes and data collection extended across three days.

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Table 1: Background Information of the Participants of Group-I and Group-II

Academic Level	Age	Gender	No of Years Learning English
10 th Grade (Group-I)	14-16 years	Females = 33 Males = 17	7-10 years
16 years of study (Group-II)	21-23 years	Females = 25 Males = 25	15-16 years

The data collection instrument used printed questionnaires, participants utilized pens and physical copies to complete the activities. Each participant received questionnaires with assigned sequential identification numbers to facilitate analytical processing, with records organized chronologically. Furthermore, the pseudo-randomization procedure was implemented to distribute various sentence categories uniformly throughout the questionnaire. Given the paper-based assessment method, participants were instructed against making corrections or erasures after initial completion. For zero article instances in the forced-choice elicitation test, participants were directed to leave blanks empty where zero article insertion seemed contextually appropriate based on dialogue context.

The questionnaire included 40 acceptance evaluation statements. The assessment tool built on Kwame's (2020) research design implemented selected changes that excluded superfluous statements since they did not align with the current research objectives. This section contained 40 examination questions that displayed identical sentences before and after modifications to article usage rules in random order to obtain honest judgments about sentence acceptability.

The questionnaire's next component featured a forced-choice examination containing 28 conversational dialogues (adapted from Ionin, Ko and Wexler's 2004 research), each presenting blank spaces for appropriate article insertion based on contextual requirements. Every dialogue provided four article options: 'a', 'an', 'the', and zero article. All participants received instructions to select suitable articles for each dialogue blank according to contextual demands.

The analysis required the use of SPSS, JMP and Microsoft Office Excel for data organization and analytical purposes. Acceptability judgments and forced-choice tests were evaluated through descriptive analysis in the four contextual groups by comparing frequency distributions, calculating standard deviations and contrasting percentage values. The analysis included a comparison between educational groups of participants. The study used tables, tabulations with frequencies, histogram visualizations and bar graphs for data presentation.

The results of the study are reported through two tasks: the Acceptability Judgement Task (AJT) and the Forced-Choice Elicitation Test (FCT). It analyses AJT findings across four contexts and highlights tendencies in FCT. The relationship between variables is examined using Independent Sample t-test and Multiple Linear Regression to establish predictability of learners' mastery of English articles. Findings are presented with tables, graphs, and charts for clarity.

Acceptability Judgement Task

The study investigates the acquisition of L2 learners in terms of accuracy with respect to academic qualification and age. Two groups were formed consisting of participants' (teenagers and adults) enrolled at different academic levels. Overall comparison of results for both groups in AJT, of each context are described below.

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Table 2: Mean values and Standard Deviation scores of the AJT for Group-I of all respondents (In four context)

Context	Ungrammatical		Grammatical		I Don't Know	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Definite vs Indefinite	23	3	19	4	8	3
Indefinite vs Definite	22	5	24	4	4	3
Definite vs Zero	22	3	20	3	8	2
Indefinite vs Zero	26	4	20	4	5	3

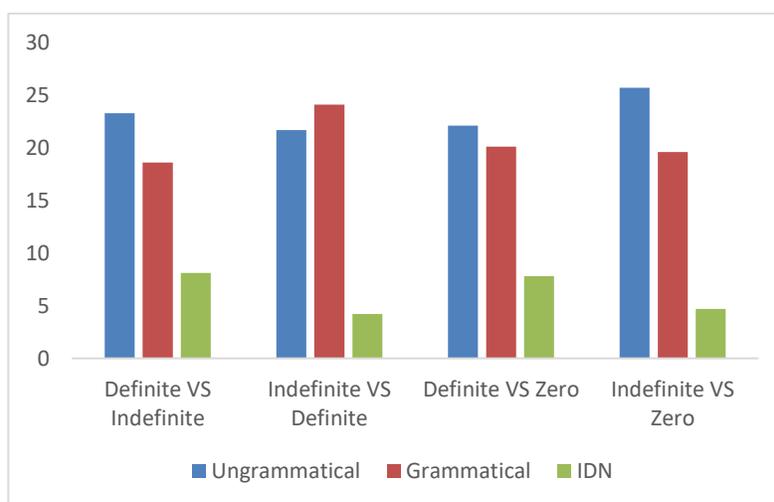


Figure 1: Graph for overall results of Group-I (High School Students) in AJT

Table 3: Mean values and Standard Deviation scores of the AJT for Group-II of all respondents (In four Contexts)

Context	Ungrammatical		Grammatical		I Don't Know	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Definite vs Indefinite	19	10	29	10	1	1
Indefinite vs Definite	11	6	37	6	2	1
Definite vs Zero	16	8	32	7	3	2
Indefinite vs Zero	15	9	33	9	1	1

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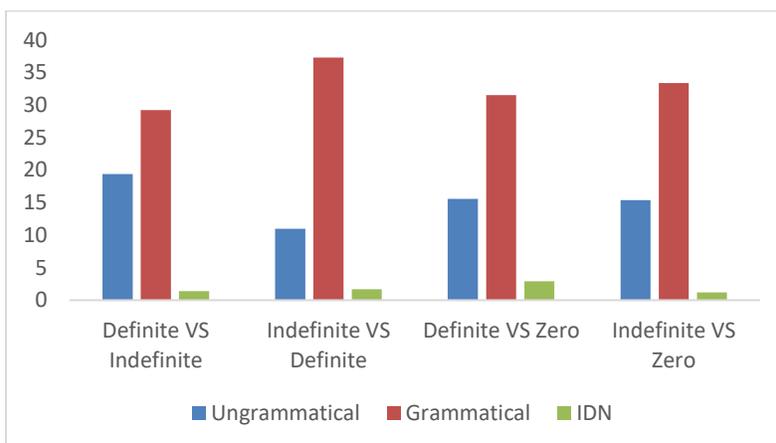


Figure 2: Graph for overall results of Group-II (High School Students) in AJT

Both Table 2 and 3 depict the overall results of the participants of both groups, as it is quite evident that the mean and standard deviation values of the group-I in all context of AJT for grammatical and ungrammatical sentences seem to be fluctuating in comparison with the mean and standard deviation values of the group-II.

Definite vs Indefinite Context

By comparing the results, the present study concludes that in the definite article context, participants of group-II showed less fluctuation and more accuracy towards the grammatical and ungrammatical forms whereas the group-I showed more fluctuation for both grammatical and ungrammatical forms of the same sentence which elaborates that participants of group-I have limited knowledge in judging the correct version of any article in a sentence and hence, they seem to be oscillating between the correct and incorrect usage of articles (see mean scores in Table: 4).

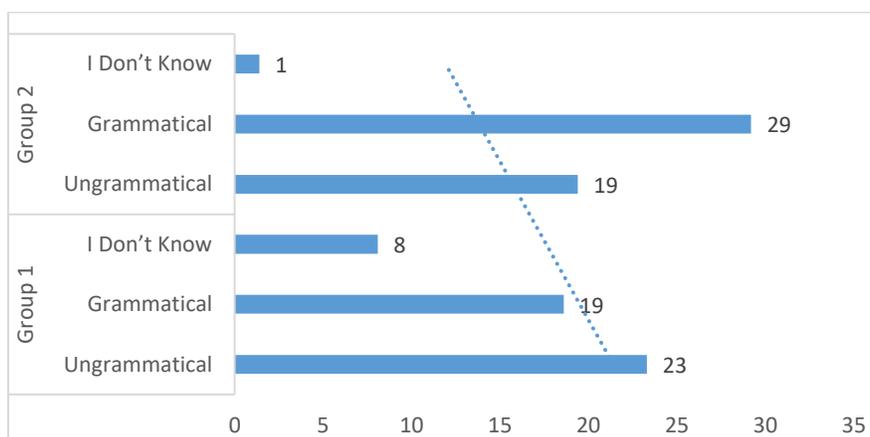


Figure 3: Graph for overall results of AJT in (definite vs indefinite) context

Indefinite vs Definite Context

In the indefinite context, group-I showed fluctuation while group-II showed stability. The correct judgement of group-I ranged between 15–30%, whereas group-II ranged between 25–50%. Group-II performed better with fewer “I don’t know” responses (0–4), reflecting better judgement abilities, while group-I responses ranged from 1–9, indicating lack of proper knowledge of indefinite articles.

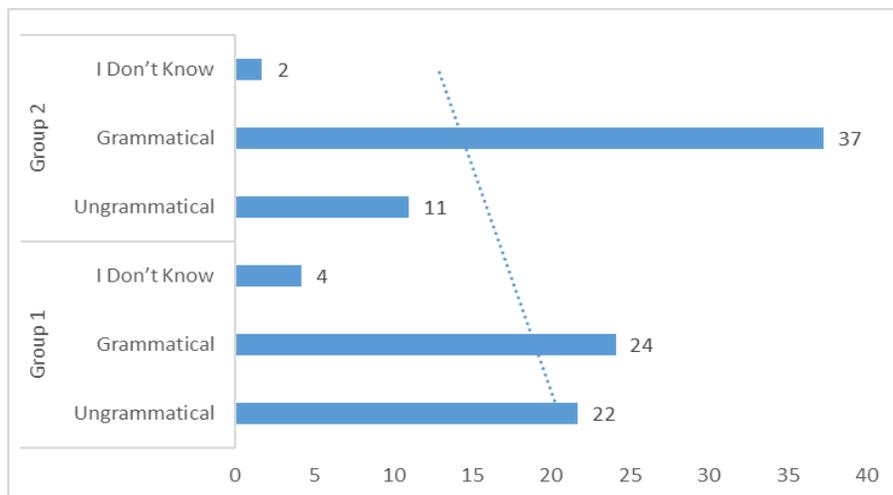


Figure 4: Graph for overall results of AJT in (indefinite vs definite) context

Definite vs Zero Context

In the zero-article context, group-I learners showed less fluctuation (30–40%) and higher correct judgements (50–55%), with mean scores of 22 (ungrammatical) and 20 (grammatical). This reflects that beginner learners more easily distinguish zero article from definite/indefinite contexts, as [-article] language learners tend to acquire the zero article earlier. Group-II showed similar performance to other contexts but with slightly higher correct judgements, with mean scores of 32 (grammatical) and 16 (ungrammatical) lying between 65–70%.

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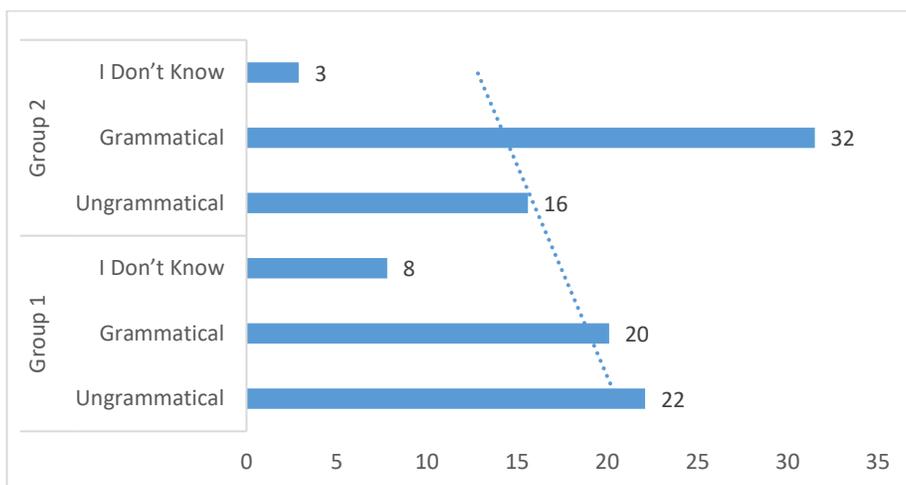


Figure 5: Graph for overall results of AJT in (definite vs zero) context

Indefinite vs Zero Context

The overall results of indefinite versus the zero article setting remained congruent with the overall results definite versus zero situation as the extent of correct judgements for the high school students ranged from 50-55% and 65-70% for the university students. Thus, the learners with high academic proficiencies performed better than the ones with lower academic level and age as their number of years learning English were less than that of university students.

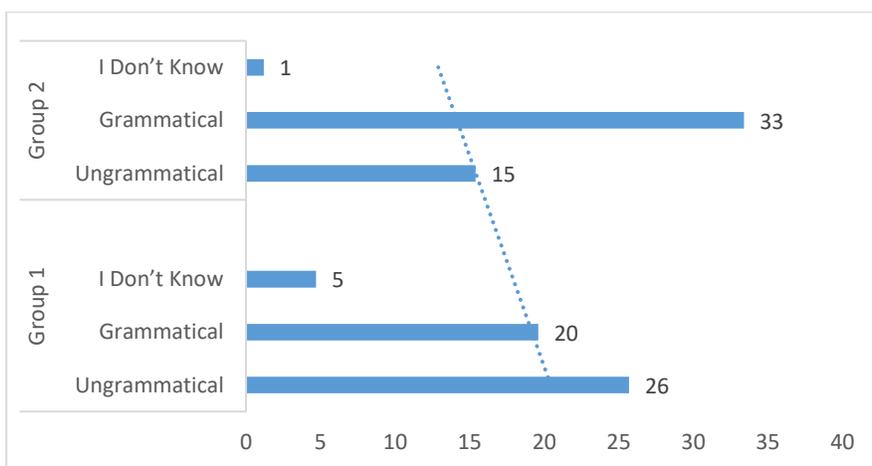


Figure 6: Graph for overall results of AJT in (indefinite vs zero) context

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The Outputs of Forced-Choice Elicitation Test

In the Forced-Choice Test (FCT), participants filled blanks in dialogues with appropriate articles, leaving zero-article cases empty. Both groups recorded some zero-article cases. Findings across four contexts of definiteness and specificity are detailed through graphs and tables, with mean scores, standard deviation, frequencies, and percentages providing an overview of results.

For [+definite, +specific] and [+definite, -specific], higher mean scores mean lower deviation from the correct answers (19.00–35.00). For [-definite, +specific] and [-definite, -specific], higher mean scores mean greater deviation from the right answers (20.00–27.00). Higher standard deviation means a high ratio of incorrect answers, while lower standard deviation means greater ratio of correct answers.

Table 4: Overall results of Group-I for Forced-Choice Elicitation test

Context	Mean Scores	Sum Statistics	Standard deviation
[+definite],[+specific]	20	139	4.3
[+definite], [-specific]	19	130	3.0
[-definite], [+specific]	20	139	2.6
[-definite], [-specific]	21	147	3.5

Participants of group-I produced good outputs in the indefinite contexts than the definite contexts, but their performance remained equal for specific and non-specific contexts, showing that specificity didn't affect their performance in the use of English articles.

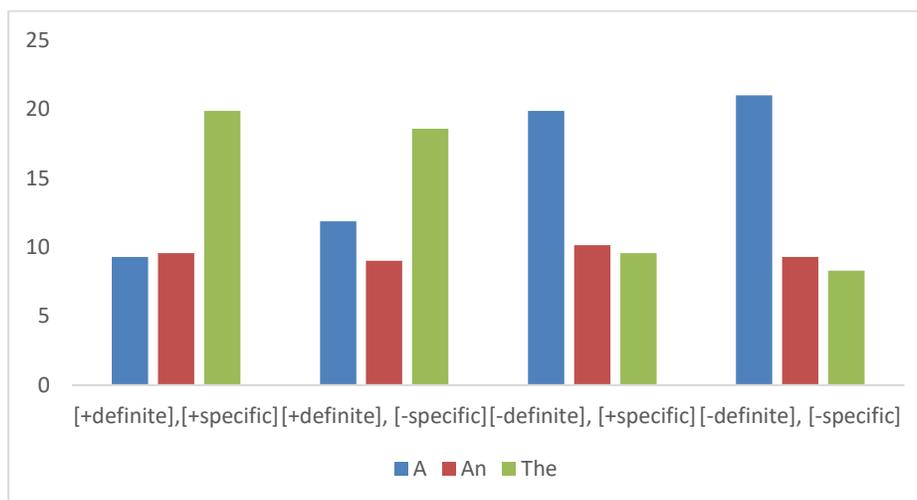


Figure 7: Graph for overall results of Group-I (High School Students) in FCT

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Table 5: Overall results of Group-II for Forced-Choice Elicitation test

Context	Mean Scores	Sum Statistics	Standard deviation
[+definite], [+specific]	29	204	10.0
[+definite], [-specific]	34	241	5.7
[-definite], [+specific]	27	192	12.6
[-definite], [-specific]	25	177	12.5

The results of group-II were promising in all four contexts with lower fluctuation and higher stability in definite and indefinite contexts. Their scores traced a peak in the definite contexts, highlighting better skills, higher expertise, and better comprehension of the definite article 'the'.

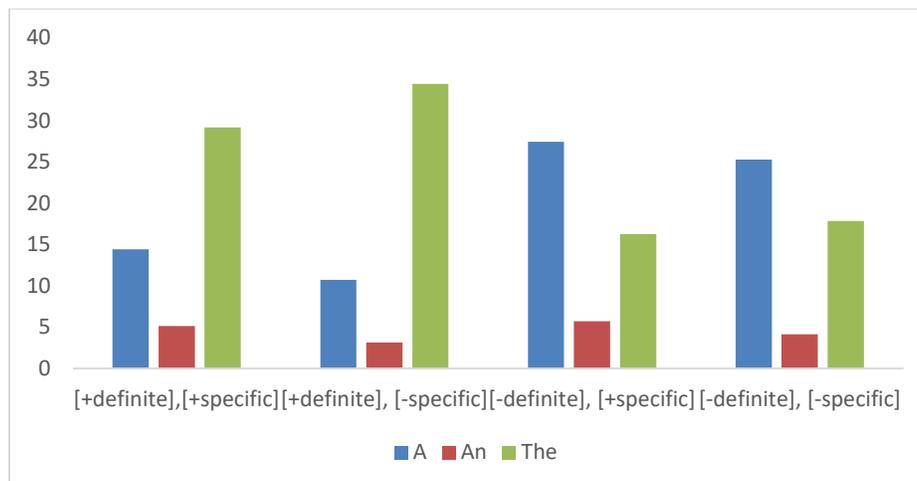


Figure 8: Graph for overall results of Group-II (University Students) in FCT

[+definite, +specific] context

The graph explains that more than half of the respondents of group-I were accurate in [+definite, +specific] contexts, while almost half chose inappropriate articles due to inadequate comprehension. In contrast, respondents of group-II made correct choices and a very small percentage chose inappropriate articles, showing more inclination towards the appropriate application of English articles.

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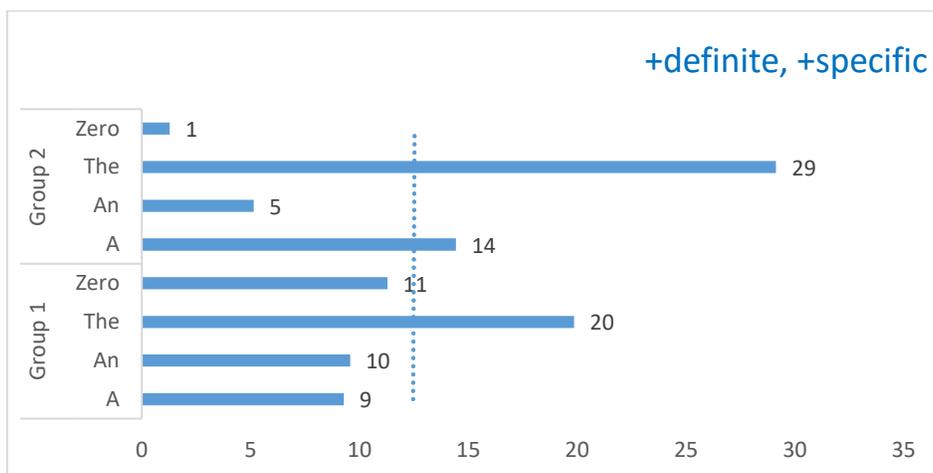


Figure 9: Overall results of FCT in [+definite, +specific] context

[+definite, -specific] context

The graph explains that more than half of the respondents of group-I were accurate in the [-definite, -specific] contexts while about half chose inappropriate articles due to their inadequate comprehension. On the other hand, the majority of the respondents of group-II were accurate in the [-definite, -specific] contexts and only a small number chose inappropriate articles, but in comparison to group-I, group-II showed more inclination towards the appropriate application of English articles based on their advanced proficiency levels.

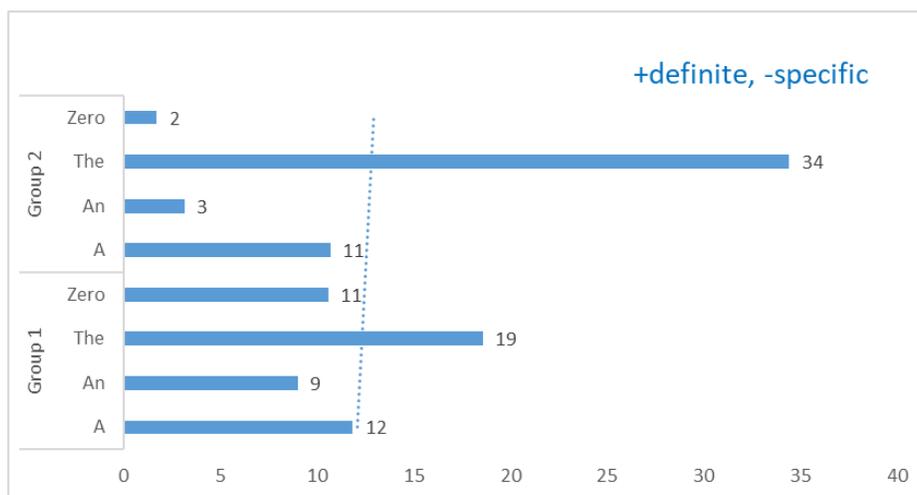


Figure 10: Overall results of FCT in [+definite, -specific] context

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[-definite, +specific] context

The graph explains that more than half of the respondents of group-I were accurate in the [-definite, +specific] contexts, while a considerable number chose inappropriate articles due to the concept of specificity and inadequate comprehension. In contrast, more than half of group-II were accurate in the same contexts and only a smaller proportion chose inappropriate articles, but in comparison to group-I, group-II demonstrated a clearer tendency towards the appropriate application of English articles based on their advanced proficiency levels.

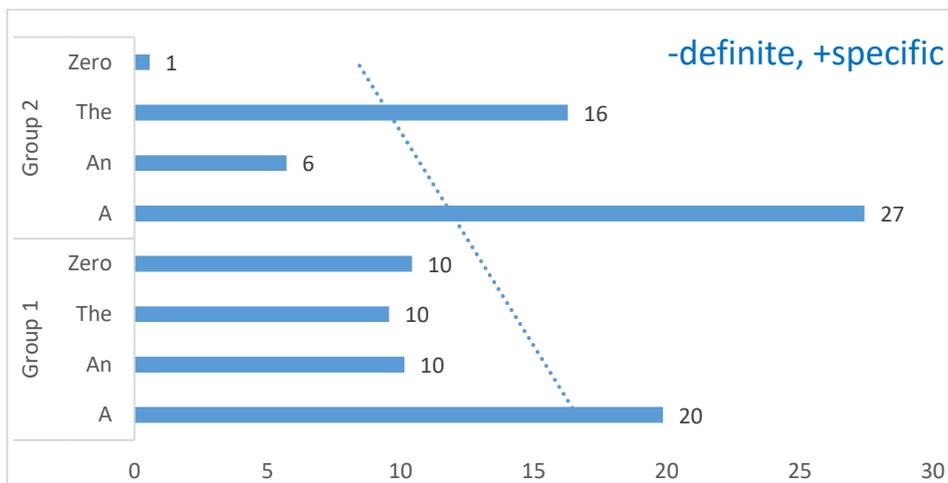


Figure 11: Overall results of FCT in [-definite, +specific] context

[-definite, -specific] context

The graph explains that more than half of group-I were accurate in the [-definite, -specific] contexts while about half chose inappropriate articles. The majority of group-II were accurate in the same contexts and only a small number chose inappropriate articles, but in comparison to group-I, group-II showed more inclination towards the appropriate application of English articles.

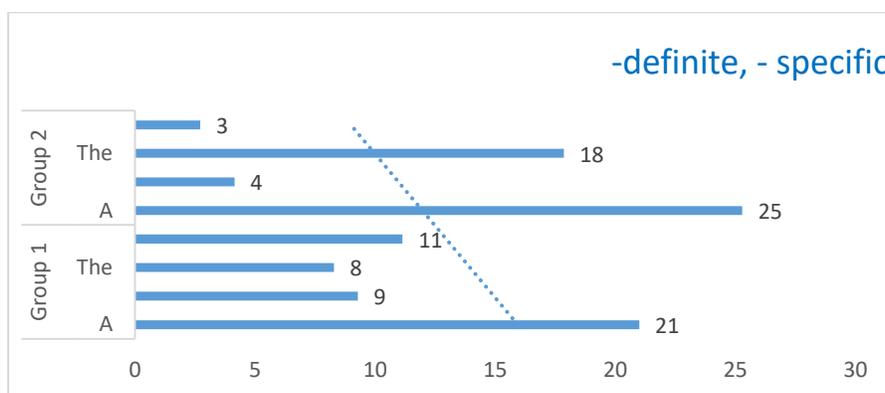


Figure 12: Overall results of FCT in [-definite, -specific] context

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Independent Samples t-test

Independent Samples t-test is used to answer the question about the existence of statistically significant difference between two independent groups of people in the accuracy of using articles (adolescents and adults). This test involves comparing the mean values and standard deviation scores of each of the two groups to determine whether the difference between the performances of the two groups is most likely to be by chance or a true effect. The results of the t-tests in this study would imply that adults did significantly better than the adolescents in the use of English articles correctly, and this implied that age played a significant role influencing the accuracy of using articles. The test was conducted once the assumption of equal variances was checked by Levene Test.

Table 6: Comparison of Mean and Standard Deviation of all participants

Group Statistics				
	Age	N	Mean	Standard Deviation
Percentage of correct judgement	Group 1	50	41.4200	6.64275
	Group 2	50	65.9200	12.32691

In comparison, adults (Group 2) showed a significantly higher accuracy in using the articles with an average of 65.92 %, whereas in the adolescents (Group 1), their performance was lower with an average of 41.42 %. The standard deviation of the adults is 13.06 %, indicating that there is a slight difference in the spread of results compared to the adolescents whose standard deviation is 10.37 %.

Table 7: T-test for equality of Means (overall)

		Independent Samples Test					
		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	P-value	t statistic	Degree of freedom	P-value	Mean Difference
Percentage of correct judgement	Equal variances assumed	10.641	.002	-12.372	98	.000	-24.50000

The value of significance is less than 0.05 i.e. 0.002. This shows that there is no equality in the variances of the two groups.

The p-value is 0.000 implying that the difference between groups is extremely significant. These results indicate that there is a true difference in the measure of Accuracy between adolescents and adults and this is not happened by chance.

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This result indicates a mean difference of -24.50%. In other words, on average, adolescents got 24.5% fewer correct article usages in comparison with adults. As a result, the above findings show that age plays a critical role in determining the level of using articles the right way in English. Article usage is considerably better in adults than in adolescents.

Multiple Linear Regression

The research used multiple linear regression to determine the extent to which Level of Education, Grade at which the English learning started, and Mother Tongue predict the accuracy of using English articles. The results reveal that Level of Education is a positive predictive variable that is statistically significant, while Grade at which English learning began is statistically insignificant and Mother Tongue has no statistically significant effect. Together, these variables explain a great percentage of the variance in accuracy.

Table 8: Multiple Linear Regression Model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.789	0.623	0.611	9.83092

The Model Summary table shows that multiple linear regression with Level of Education, Grade at which English learning began, and Mother Tongue provides a decent portion of the variation in Accuracy. The R value (0.789) indicates a strong positive correlation, and the R Square (0.623) shows that the three factors explain 62.3 per cent of the variations in Accuracy. The adjusted R square (0.611) indicates that the model fits well, and the standard error of the estimate is 9.83.

Table 9: ANOVA test (both groups)

ANOVA

Model	F statistic	P value
1	52.893	0.000

Based on data, the F-statistic is 52.893 with a p-value of way less than 0.001. The low p-value indicates that the entire model is statistically significant, which essentially means that one of the three predictors: Level of Education, Grade at which English learning started, or Mother Tongue is having a significant impact on predicting Accuracy.

Table 10: Coefficients of Variables

Coefficients

Model		t-statistics	p-value
1	(Constant)	-.596	.552
	Level of Education	12.499	.000
	Grade at which started learning English	1.608	.111
	Mother Tongue	-.929	.355

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The table of coefficients demonstrates that Level of Education has a strong positive correlation with Accuracy with B value 4.252 and p-value 0.000 which reveals statistical significance. Level of Education has the most optimal standardized Beta level (0.813) indicating it is the most significant predictor. In contrast, Grade at which English learning was initiated (B = 2.389; p = 0.111) and Mother Tongue (B = -1.237; p = 0.355) do not have significant access to Accuracy. The overall regression model is statistically significant showing that Level of Education, Grade at which English was learned and Mother Tongue collectively predict Accuracy. Only Level of Education is significantly important with a strong effect (p < 0.001). The model explains about 62% of the variance in Accuracy, concluding that the level of educational attainment is the main determinant of the English proficiency of the learner.

Conclusion

Lack of article system (L1) is a major challenge for L2 learners, leading to reluctance, over-use, under-use, fluctuation, and errors in academic writing. Pakistani students were punished by getting bad marks instead of constructive remarks. Articles as free morpheme with frequent use are difficult to learn in second language. The study analyzed grammatical and ungrammatical use of articles and factors like age, academic background, and educational level.

Group-II (undergraduates) outperformed Group-I (high school) in Forced Choice Elicitation Task. Group-I showed similar scores on specific and non-specific contexts, with better score in definite context compared to indefinite. Group-I participants showed weaker performance in definite contexts, while Group-II learners demonstrated stability, higher accuracy, and better results in zero article contexts. In Acceptability Judgment Task, Group-I showed fluctuation and nearly equal scores for grammatical and ungrammatical sentences, while Group-II performed better with appropriate application of the article “the”.

Independent samples t-test showed significant effect of age. Regression analysis indicated that age, educational level, and years of English exposure contribute to prediction of performance. The study was limited due to participants and shortage of time, but described the influence of age and educational attainment. Findings confirmed role of instruction, academic background, and revealed variation.

The research contributes to knowledge on article acquisition among Urdu-speaking ESL learners, highlighting acquisition order (zero article, a/an, then the). It indicates relationship between syntax, semantics, and phonology, and has implications for teaching practices, curriculum, policy, and future research on second language acquisition of English articles.

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