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The Impact of L1 Transfer on Learning English Adjective Order by Saudi EFL Learners

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***Abstract*—This study examined the impact of first language (L1) on adjective ordering among Saudi English as a Foreign Language (EFL) learners. The main hypothesis posited that the presence of a common adjective ordering convention in both Arabic and English would influence the proficiency and accuracy of Saudi EFL learners in generating this specific ordering in English. To test this hypothesis, 36 Saudi EFL learners representing high and low levels of proficiency were selected. They were instructed to arrange a set of adjectives in three combinations: non-absolute + absolute (NA), absolute + absolute (AA), and non-absolute + non-absolute (NN). Statistical analyses revealed that the performance of the NA combination, which exists in both languages, was superior to the NN and AA combinations for all participants. Additionally, a significant interaction was observed between the participants' proficiency levels and the adjective combinations, with the high-proficiency group outperforming the low-proficiency group in all combinations. These findings suggest that L1 influence may have a role in learning English adjective ordering and emphasize the importance of considering L1 transfer in EFL instruction.**

***Index Terms*—L1 transfer, English adjective ordering, absolute adjectives, non-absolute adjectives**

I. Introduction

The acquisition of accurate grammatical rules holds immense significance within the realm of language acquisition, as it plays a pivotal role in enabling learners to engage in effective communication with others. In English language, speakers employ diverse varieties of modifiers to effectively describe nouns, verbs, and sentences, with adjectives being notably prevalent in this context (Baker, 2003). It is worth highlighting that due to the extensive vocabulary present in English, speakers possess the ability to choose from a wide array of adjectives to modify a given noun, exemplified by phrases such as "a red apple" or "a tasty apple". However, an important aspect that should be taken into account is that English adheres to a specific order when employing multiple adjectives preceding a noun (Flanagan, 2014). Numerous studies have observed a consistent pattern of preference among native English speakers with respect to the arrangement of adjectives. For instance, a significant majority of native speakers would instinctively opt to say "a long thin pencil" rather than "a thin long pencil" (Stringer, 2013). While the latter phrase, "a thin long pencil," does not violate any grammatical rules, it fails to resonate naturally with a vast majority of native speakers (Cinque, 2010).

Despite the limited focus on adjective ordering as a subdomain of English grammar, it is vital for EFL instructors to possess a deep comprehension of the challenges encountered by EFL students in this area. Fries (1945) emphasized the importance of creating instructional materials based on a scientific analysis of the target language, as well as the learner's native language. Consequently, acknowledging the profound impact of the learners' L1 background becomes essential when curating an EFL curriculum that is tailor-made to meet their developmental needs. This study specifically delves into the experiences of Saudi EFL learners, whose L1 is Arabic, scrutinizing the potential impact of L1 transfer on their learning of English adjective order.

II. Literature Review

This literature review delves into the intricate topic of adjective ordering in English and Arabic while specifically focusing on the L1 transfer and Universal Grammar (UG) on second language (L2) learners. To commence, the section covers the classification of adjectives into absolute and non-absolute groups, accentuating the gradability of non-absolute adjectives. In addition, a comparison between the syntactic patterns of adjectives in English and Arabic is presented, particularly highlighting the post-nominal placement of adjectives in Arabic and the conditional utilization of prenominal adjectives. Moreover, the review investigates the preferences in adjective ordering within both languages, placing a concerted emphasis on the influence of absoluteness on the positioning of adjectives.

A. Ordering of Adjectives in English

Adjectives can be categorized into two main groups: absolute and non-absolute. The term "absolute" denotes an adjective that lacks the qualities of comparison or gradation. In contrast, "non-absolute" refers to adjectives that possess comparative and gradable attributes. To illustrate, adjectives pertaining to size, such as "large" or "tiny," demonstrate gradability. It is feasible to make a comparison between objects in terms of their size, asserting that one object is larger or smaller than another.

Conversely, adjectives describing material composition are inherently ungradable, as an object is either constructed from a particular material or it is not (Kennedy, 2007; Kennedy & McNally, 2005).

In the English language, it is customary to encounter dual adjective phrases composed of combinations of adjectives. These combinations can be categorized into three primary types: NA, AA, and NN (Scontras, 2022). Notably, when employing a combination of an absolute adjective and a non-absolute adjective to modify a noun, it is generally observed that the non-absolute adjective assumes a closer proximity to the noun. For instance, the phrase "a large metal desk" is more commonly employed than "a metal large desk." Similarly, when two absolute adjectives or two non-absolute adjectives co-occur, English speakers consistently adhere to a preferred ordering of adjectives (Carter, 1991). For example, phrases like "a strong wooden chair" and "a short beautiful girl" are more commonly used than "a wooden strong chair" and "a beautiful short girl" by most native speakers. It has also been suggested that individuals have an innate sense of the correct adjective order from early childhood (Bever, 1970).

B. Ordering of Adjectives in Arabic

In contrast to the syntactic patterns observed in English, where adjectives are typically placed before the noun they modify, Arabic exhibits a default syntactic pattern whereby adjectives are attached to nouns post-nominally. This means that in Arabic, adjectives are predominantly positioned after the noun they modify (Belazi et al., 1994). However, it is important to note that pre-nominal adjectives do exist in Arabic grammar as well. In specific contexts, there are instances where pre-nominal adjectives can be used, influenced by factors such as emphasis, rhetorical impact, or poetic expression (Fehri, 1999; Kachakeche & Scontras, 2020). These pre-nominal adjectives, however, possess distinct syntactic properties and carry their own interpretations. Overall, post-nominal adjectives in Arabic occur more frequently in comparison to pre-nominal adjectives. Furthermore, these post-nominal adjectives exhibit agreement with the noun in terms of definiteness, case, number, and gender (Fehri, 1999). This frequency and agreement between the noun and the post-nominal adjectives emphasize the significant distinction in adjective placement between English and Arabic. Therefore, when investigating how Arabic learners of English acquire adjective ordering, it is crucial to consider the impact of their L1.

Considerable scholarly attention has been devoted to investigating the intricate nature of adjective ordering in Arabic. Various researchers, such as Abdo Alnuzaili (2017), Al Mahmoud (2014), Altakhaineh (2017), and Kachakeche and Scontras (2020), have contributed to this line of research. However, while substantial research has been conducted on the overall adjectival system and adjective constructions in Arabic, the specific inquiry into the ordering of multiple adjectives within a single phrase remains relatively unexplored. Sproat and Shih (1991) posit that adjectives in Arabic can assume a flexible ordering when combined, implying that they do not adhere to a fixed sequence. Conversely, Shlonsky (2004) casts doubt on this notion, asserting that the literature on Arabic fails to offer definitive evidence supporting unrestricted adjective ordering. Fehri (1999), on the other hand, proposes that post-nominal adjectives in Arabic adopt a reversed order compared to pre-nominal languages, resulting in a mirror image pattern.

Adjective ordering preferences among native Arabic speakers, similar to their English counterparts, are influenced by absoluteness. According to their research by Sproat and Shih (1991) and Kachakeche and Scontras (2020), adjective ordering is closely tied to absoluteness, and adjectives that express absolute properties, such as shape, color, and nationality, tend to occur closer to the noun. On the other hand, adjectives that convey relative properties, such as size and quality, are positioned farther away. These researchers maintain that both English and Arabic exhibit a hierarchical organization of adjectives based on increasing absoluteness, leading to similar preferences. Consequently, the transfer of adjective ordering preferences from English to Arabic would likely result in analogous patterns.

C. Universal Hierarchy Hypothesis

The efficacy of current teaching materials for adjective ordering has been called into question by Stringer (2013), who argued that these materials do not adequately address the specific needs of L2 learners based on their L1 background. As a result, Stringer suggested that performance in adjective ordering may vary among L2 learners depending on their L1. Stringer (2013) conducted studies involving EFL students from Arabic, Chinese, and Korean backgrounds. He examined NN and NA adjective combinations. The results revealed that the three groups demonstrated strong proficiency in the NA adjective ordering, whereas performance in the NN adjective ordering was comparatively lower. Interestingly, although Arabic and Korean lack a direct prenominal adjective structure, the participants from these language backgrounds still achieved commendable scores in the NA combination, suggesting a solid understanding of this specific combination in English.

Accordingly, Stringer (2013) put forth the hypothesis that the Universal Hierarchy may have an impact in acquiring adjective ordering in English among L2 learners. Recent research in the field of adjective ordering has revealed that while there is variation in the specific hierarchies of adjective ordering across different languages, there are certain common rules that govern these hierarchies. The NA combination, known as "Size > Shape," has been seen to be widespread in several languages, including English, Italian, Thai, Celtic, and Chinese (Sproat & Shih, 1991; Stringer, 2013). Stringer posited that the presence of this shared characteristic implies that the NA order might potentially be a constituent of UG, a linguistic framework that aids in the acquisition of information pertaining to the NA combination. This observation further elucidates the exceptional proficiency shown by Arabic and Korean speakers in the NA combination, since Arabic and Korean do not include direct pre-nominal adjectives. Nevertheless, the examination of NN and AA combinations has not been sufficiently explored in other languages, and there is a lack of definitive evidence supporting the existence of universal principles dictating the order of adjectives within these combinations.

D. L1 Transfer and UG

In previous decades, scholars have posited that the transfer of knowledge from one's L1 may play a role in the learning of an L2 across several domains, including syntax and morphology (Montrul, 2000). Therefore, it is anticipated that there may be proof of how the L1 affects how EFL learners with a specific L1 background acquire ordering of adjectives in English. Motivated by encouraging results from research into L1 influence in other areas, the researcher set out to examine the impact of the L1 on English ordering of adjectives among Saudi EFL learners.

Therefore, it is anticipated that there will be evidence of the impact of the L1 on the L2 learning of English adjective ordering among EFL learners with a specific L1 background. The researcher was inspired to explore the potential effect of the L1 on English adjective ordering among Saudi EFL learners, based on the positive outcomes shown in previous studies investigating L1 influence in other domains.

Besides the influence of L1 transfer, UG is an additional component that might potentially affect L2 acquisition. The term UG encompasses the inherent linguistic principles that form the foundation of language structure and are absorbed by language learners without conscious awareness. White (2012) states that there is an ongoing debate over the acquisition of universal principles of UG by both L1 and L2 learners. One possible benefit of using UG is the cultivation of a robust and implicit understanding of language among learners. In the context of adjective ordering, it is anticipated that learners would find it comparatively easier to internalize adjective orders that adhere to the universal standards outlined in the Universal Hierarchy.

Nevertheless, there has been a scarcity of study investigating the extent to which the Universal Hierarchy impacts the ordering of NN and AA, and NA pairings in adjectives. Although the universality of noun-adjective order has been established, it has not been said that the ordering of adjectives in NN, AA, and NA combinations is similarly subject to universal principles. Importantly, none of the aforementioned studies have adopted experimental approaches to examine this phenomenon, highlighting a gap in the existing research. Additionally, prior research on the order preferences within Arabic adjectives has not fully elucidated the reasons behind this phenomenon. Consequently, a comprehensive inquiry utilizing experimental approaches is imperative to clarify the intricacies of Arabic adjective ordering, explore the underlying factors influencing these preferences, and examine the potential influence of L1 transfer on the learning of English adjective ordering among Saudi EFL students.

III. Aim of the Study

The study seeks to provide detailed insights into the relationship between language proficiency and native-like adjective ordering production among Saudi EFL learners. Specifically, this study aims to investigate whether high-proficiency language learners demonstrate superior performance in producing adjective ordering preferred by native speakers compared to low-proficiency language learners. Another aim is to explore whether Saudi EFL high-proficiency learners are anticipated to exhibit fewer grammatical errors in adjective ordering and generate adjective combinations that resemble those of native speakers to a greater extent than their low-proficiency counterparts.

IV. Questions of the Study

Drawing upon the understanding of the rules governing adjective ordering in both English and Arabic, as well as the interest in the learning of English adjective ordering by Saudi EFL students, the study addresses two research questions as follows:

1- To what extent does L1 transfer impact the learning of English adjective ordering among Saudi EFL students?
2- Do Saudi EFL high-proficiency students exhibit distinct performance in producing English adjective ordering preferred by native speakers compared to low-proficiency students?

V. Procedure

The methodology section aims to provide comprehensive insights into the intricate relationship between language proficiency and the production of native-like adjective ordering among Saudi EFL learners. Additionally, it examines whether learners with high proficiency exhibit fewer grammatical errors and generate adjective combinations resembling those of native speakers more closely than their low-proficiency counterparts. Building upon the research methodology employed by Scontras et al. (2017), the researcher implemented a methodology to measure English adjective ordering preferences within the Saudi Arabic-speaking context, employing the concept of the absoluteness of adjectives. This section offers detailed information about the participants and meticulously outlines the procedures undertaken in this study.

A. Participants

The study involved the participation of 36 male Saudi students, ranging in age from 19 to 22 years. The average age of the participants was determined to be 20.74 years, with a standard deviation of 1.78. All the participants commenced their journey of English language learning during their years of primary education. For the purposes of this study, the participants were selected in a random manner to include level-six male students from College of Languages and Translation at Imam Muhammad Ibn Saud Islamic University (IMSIU).

All participants were identified as native Arabic speakers, actively pursuing English as their principal field of study at the university level. The group chosen for this study exhibits homogeneity in terms of their linguistic backgrounds and socioeconomic status. The selection process involved random sampling, with a specific focus on the inclusion of level-six students. The rationale behind this selection was based on the assumption that such students possess a proficient grasp of the English language and have received ample exposure to the syntactics associated with the phenomena under study, namely adjective ordering. Additionally, it is noteworthy that the chosen participants have undergone comprehensive grammar training, encompassing Grammar 1, Grammar 2, as well as writing and academic writing courses. The enrollment of these students occurred during the second semester of the academic year 1443-1444 H. The participants were required to indicate their L1, that is the language predominantly utilized within their households. Accordingly, they were categorically identified as native Arabic speakers who reported Arabic as their L1.

B. Phrases of Adjective Ordering

A compilation of 30 phrases was generated based on Stringer's (2013) study, encompassing three separate groups of adjective arrangements. Each combination consisted of 10 phrases, namely: (1) NN, which denotes the arrangement of non-absolute adjectives with other non-absolute adjectives (e.g., a new expensive pen), (2) AA, representing the arrangement of absolute adjectives with other absolute adjectives (e.g., a square silver shape), and (3) NA, indicating the combination of non-absolute adjectives with absolute adjectives (e.g., a small gold statue). The researcher did not include the AN combination, since the overwhelming preference for non-absolute order in English renders the reversed order uncommon.

In each arrangement, a predetermined order was designated as the anticipated order. The participants were awarded a point if they selected the anticipated order, while no points were awarded for selecting the contrary order. In the NA combination, the anticipated sequence consistently exhibited NA as opposed to AN. The anticipated sequence for the NN and AA classifications was established by referencing Stringer's study conducted in 2013.

C. Testing Procedure

This study aims to investigate whether Saudi EFL high-proficiency learners demonstrate superior performance in producing adjective ordering preferred by native speakers compared to their low-proficiency counterparts. Additionally, the study explores whether Saudi EFL high-proficiency learners exhibit fewer grammatical errors in adjective ordering and generate adjective combinations resembling those of native speakers more closely than their low-proficiency counterparts. To address these two aims, two tests were administered to the participants: a cloze test and an adjective ordering test. The cloze test entailed selecting the most appropriate alternative for each of the 30 omitted words from a given set of options. Additionally, the adjective ordering test encompassed a selection task in which the participants indicated their preferred sequence for 30 double-adjective phrases presented via PowerPoint. The two tests serve as objective measures to assess the participants' proficiency in English adjective ordering.

VI. Instruments of the Study

A. The Cloze Test

The participants were initially instructed to do a cloze test. This particular test has been widely used in L2 acquisition research to assess the general proficiency of English as a second language (ESL) learners since the 1970s (Ajideh & Mozaffarzadeh, 2012). The selected test used in the study was the same as the one employed by Ionin and Montrul (2010) who demonstrated the reliability of this test, with a Cronbach's alpha coefficient of .817. The researcher used a cloze test format, whereby a total of 30 words were deliberately omitted from the paragraph. The participants were required to choose one alternative from a set of three provided choices for each blank, based on their perception of the best match. The cumulative score for this test was 30, with each participant receiving one point for correctly answering a single blank.

The aim of conducting the close test was to organize the 36 participants into two distinct groups, namely the high-proficiency group and the low-proficiency group. Upon analyzing the test results, it became apparent that the participants displayed a comparatively high level of overall proficiency, as evidenced by a mean score of 20.85 and a standard deviation of 1.41. While the highest score acquired was 27 out of 30, none of the participants managed to attain the maximum score of 30, nor did any individual receive a score below 17. In order to delve deeper into the varying levels of proficiency, it was deemed appropriate to categorize the participants into two distinct groups, as exemplified in Table 1, with the low-proficiency group achieving scores ranging from 15 to 20, and the high-proficiency group attaining scores ranging from 21 to 27, based upon the results derived from the cloze test.

Table 1
The Close Test Results of the Participants' Proficiency

	No.	Min. score	Max. score	Mean	SD
Proficiency Mark	36	17	27	20.85	1.41

B. The Adjective Ordering Test

Following the completion of the close test, the participants were instructed to do the adjective ordering test using an automated PowerPoint presentation shown on the classroom projector. All participants were instructed to provide their

responses to the stimuli. A selection of 30 double-adjective phrases were carefully curated as target stimuli and afterwards shown on the screen. There was a series of slides whereby each slide had two sentences positioned at the center. These phrases shared the same adjectives but were arranged in different sequences. The participants were given a time limit of 10 seconds in order to minimize the influence of contextual thinking and the application of learned rules when selecting the item with their preferred adjective order. They were instructed to indicate their preference by writing either "A" or "B" on a response sheet, with "A" representing the top item and "B" representing the bottom item. The participants were awarded one point for correctly selecting the anticipated order within each combination, whereas zero points were given for selecting the opposite order. Each combination had a maximum score of 10, resulting in a total score of 30 for the test of ordering adjectives.

In order to prevent the participants from becoming aware of the underlying objective of the study, which is to assess their intuitive understanding of adjective ordering in English, the researcher included a total of 30 additional stimuli into the task as distractors. There were a total of 30 examples provided, with 10 focusing on the order of adverbs in a sentence (e.g., walking quickly in the street or quickly walking in the street), another 10 discussing the order of verb phrases (e.g., turn off the light or turn the light off), and the remaining 10 exploring sentence-level orders (e.g., He sent a gift to his fiancée or He sent his fiancée a gift). Furthermore, subsequent to providing explicit instructions on the objective of sorting adjectives, a set of 10 items was administered to each participant for the purpose of practice.

VII. Results of the Study

The study results provided answers to the two research questions as presented in the following section.

A. Research Question 1: To What Extent does L1 Transfer Impact the Learning of English Adjective Ordering Among Saudi EFL Students?

This section provided the answer to research question 1 through presenting the detailed findings pertaining to the overall adjective ordering stimuli as experienced by both the high-proficiency and low-proficiency participants based on examining the average scores for the NA, NN, and AA combinations. The results show to what extent L1 transfer impacts the learning of English adjective ordering among Saudi EFL students as displayed and organized in Tables 2, 3, and 4, which effectively exhibit the hierarchical ranking of the items based on their respective mean scores.

Table 2
Mean Scores of NN Adjective Combinations

Phrase	Mean	Adjective combination
A lovely red rose	0.767	NN
a spotless white shirt	0.741	NN
a huge noisy classroom	0.662	NN
a smooth plump hand	0.662	NN
an excellent stylish dress	0.662	NN
a small outdated house	0.601	NN
a tiny dirty box	0.601	NN

Table 3
Mean Scores of NA Adjective Combinations

Phrase	Mean	Adjective combination
An electronic official document	0.921	NA
a solid metallic container	0.921	NA
A carved natural object	0.873	NA
a smooth synthetic material	0.873	NA
a shiny artificial object	0.873	NA
a cracked wooden table	0.846	NA
a pointed plastic weapon	0.820	NA
a plain natural fabric	0.794	NA
a clear liquid substance	0.741	NA
a Chinese woven textile	0.688	NA

Table 4
Mean Scores of AA Adjective Combinations

Phrase	Mean	Adjective combination
a cheap rectangular radio	0.794	AA
An Indian metal tiger	0.767	AA
a suitable solvent ointment	0.715	AA
a safe stone building	0.688	AA
An interesting paper book	0.688	AA
a rude Turkish driver	0.688	AA
a tasty grilled steak	0.615	AA
a new silk blouse	0.611	AA
An attractive open museum	0.544	AA
a fascinating vegetarian meal	0.406	AA

In light of the results in Table 2, 3, and 4, it is evident that the performance of the NA combination surpassed that of the NN and AA combinations among the study participants. However, it is worth noting that a select few phrases demonstrated exceptional performance, as indicated by their significantly high mean scores. In this specific combination, it was found that two phrases incorporating color adjectives, specifically "a lovely red rose" and "a spotless white shirt," exhibited superior performance compared to other items. This observation is consistent with the results obtained in a previous study conducted by Stringer (2013). In that study, color adjectives were classified as absolute adjectives and positioned in the NA order. As a result, it was hypothesized that these adjectives would receive higher ratings compared to items in the NN combination.

In relation to the impact of phrase frequency, as shown in Table 3, the phrase "a smart old man " exhibited a surprise pattern. Specifically, the constituent "old man" was seen to occur more often than the constituent "smart man". The participants, however, had the lowest performance on this particular issue, with a mean score of 0.357. Furthermore, the participants demonstrated exceptional performance in various tasks, such as identifying items "a huge noisy classroom", "a smooth plump hand", "a cracked wooden table", "an Indian metal tiger", and "a cheap rectangular radio". It is worth noting that these items deviated from the expected pattern of "less frequent + more frequent + noun".

In response to the research question 1 exploring the impact of L1 transfer on the learning of English adjective ordering among Saudi EFL students, the results of this study align with previous research, indicating that the performance of the NA combination exceeded that of the NN and AA combinations (Kennedy, 2007; Huang, 2017). These findings suggest that the participants possess a certain degree of sensitivity to the syntactic structures of their native language, influencing their production of English adjective order (Montrul & Ionin, 2010). However, it is worth noting that the exceptional performance of specific phrases incorporating color adjectives, such as "big blue house," supports previous findings on the saliency of color terms in adjective order (Stringer, 2013). On the other hand, unexpected patterns of phrase frequency emerged, potentially reflecting the participants' struggles in acquiring the specific ordering rules of English adjectives (Amer, 2013; Carter, 1991). These results emphasize the complex and nuanced nature of L1 transfer and its impact on the learning of adjective ordering in English among Saudi EFL learners. Further research is warranted to explore additional factors that may contribute to these findings and to develop instructional strategies that address the challenges faced by learners in this context.

B. Research Question 2: Do High-Proficiency Students Exhibit Distinct Performance in Producing English Adjective Ordering Preferred by Native Speakers Compared to Low-Proficiency Students?

To address research question 2 comparing the high-proficiency and low-proficiency participants' performance on the adjective ordering test, it was found that the 36 participants completed the adjective ordering test. Independent samples t-tests were used to compare the -proficiency and low-proficiency participants' performance in producing English adjective ordering preferred by native speakers with regard to each combination (i.e., AA, NN, and NA) as shown in Table 5.

TABLE 5
T-TEST RESULTS OF THE HIGH-PROFICIENCY GROUP VS THE LOW-PROFICIENCY GROUP REGARDING THE AA, NN, AND NA ADJECTIVE COMBINATIONS

Adjective combination	Experimental group pre-test		Control group pre-test		DF	t-value	Significance at 0.01 level
	M	SD	M	SD			
AA	7.93	1.41	6.37	1.27	34	3.90	Significant
NN	7.16	1.35	5.98	1.65	34	3.38	Significant
NA	8.94	.70	7.13	.95	34	4.84	Significant
Total	8.16	1.72	6.67	1.70	34	4.04	Significant

The results of the t-test indicate significant differences in the performance of the high-proficiency group compared to the low-proficiency group across all three adjective combinations. For the AA combination, the high-proficiency group ($M = 7.93$, $SD = 1.41$) outperformed the low-proficiency group ($M = 6.37$, $SD = 1.27$) with a t-value of 3.90 ($p<0.01$). Similarly, for the NN combination, the high-proficiency group ($M = 7.16$, $SD = 1.35$) showed better performance than the low-proficiency group ($M = 5.98$, $SD = 1.65$) with a t-value of 3.38 ($p<0.01$). Furthermore, in the NA combination, the high-proficiency group ($M = 8.94$, $SD = 0.70$) demonstrated significantly higher performance compared to the low-proficiency group ($M = 7.13$, $SD = 0.95$) with a t-value of 4.84 ($p<0.01$). These findings indicate that the high-proficiency group outperformed the low-proficiency group in all three adjective combinations, suggesting a positive impact of language proficiency on the production of native-like adjective ordering.

In light of the results obtained from comparing the performance of high-proficiency and low-proficiency students in producing English adjective ordering preferred by native speakers, this study provides compelling evidence to answer research question 2 by affirming that high-proficiency students exhibit a distinct advantage in their capability to accurately generate native-like adjective ordering patterns. Analysis of the significant differences between the high-proficiency and low-proficiency groups across all three adjective combinations yielded consistent findings. Specifically, the high-proficiency group outperformed the low-proficiency group in the AA, NN, and NA combinations, as indicated by the t-test results. These robust findings are consistent with prior studies (e.g., Alotaibi & Alotaibi, 2017; Wulff, 2003), further reinforcing the understanding that language proficiency plays a pivotal role in the acquisition and production of target language structures. It is plausible to interpret these results as indicative of the positive influence of high language

proficiency on attaining native-like proficiency in English adjective ordering. Therefore, the present study substantiates the notion that higher proficiency levels significantly enhance the ability to produce adjective ordering patterns that closely resemble those of native speakers.

VIII. Discussion of the Results

Numerous studies have uncovered the challenges that individuals who are not native speakers of the English language encounter when attempting to grasp the correct ordering of adjectives, particularly when multiple adjectives are used to modify a noun (e.g., Al-khresheh & Alruwaili, 2023; Rosato, 2018; Sproat & Shih, 1991) This issue arises due to L1 interference, a phenomenon that has been subject to criticism by a number of scholars. The aim of this study was to examine how interference from one's L1 affects the positioning and ordering of adjectives in English among Saudi EFL speakers. To accomplish this goal, a quantitative approach was adopted, utilizing a combination of an adjective ordering test and a rigorous error analysis to gather and analyze the data. This section places specific emphasis on the in-depth interpretation of the study's findings, as well as the conclusions they have for the instruction of EFL adjective ordering among Saudi EFL speakers and for further exploratory linguistic investigations into the ordering of adjectives.

The present study sought to examine the impact of L1 transfer on the intuitive comprehension of adjective ordering in English among Saudi EFL learners. Specifically, the first research question aimed to determine the extent to which L1 transfer influences the intuitive understanding of adjective ordering among these participants. Through a comparative analysis of performance on an adjective ordering test, this study examined two groups of Saudi speakers categorized as high proficiency and low proficiency. The study also compared performance across three types of adjective combinations: NN, AA, and NA. The results suggest significant differences in the performance of Saudi speakers on the NA combination compared to the NN and AA combinations. Additionally, both high and low proficiency Saudi speaker groups exhibited similar performance on the NA combination, indicating a strong grasp of this particular combination. These findings strongly indicate the potential influence of L1 transfer in the learning of adjective ordering within the L2 context for Saudi English learners.

These findings suggest that Saudi EFL learners have difficulties in gaining the knowledge of NN and AA adjective ordering in English. The participants possess a high level of proficiency in generating NA ordering without having received any formal instruction on the specific rules governing the ordering of adjectives in English These findings contribute to the existing body of research on L1 transfer and its impact on the learning of adjective ordering in an L2 context. When instructing Saudi speakers in English adjective orderings, it is important for EFL instructors to take into consideration their existing knowledge and identify areas that need further development. Previous studies have also highlighted the influence of L1 transfer on learners' intuition and understanding of adjective ordering patterns (Abdo Alnuzaili, 2017; Alotaibi & Alotaibi, 2017; Fehri, 1999; Kachakeche & Scontras, 2020). The present study adds to this body of knowledge by demonstrating that L1 transfer potentially plays a pivotal role in Saudi EFL learners' learning of adjective ordering in English.

According to Lado (1957), native English speakers perceive correct grammar more as a feeling of correctness rather than following strict rules. When speaking and writing, English speakers tend to naturally use patterns that are preferred by native speakers without consciously recognizing these patterns. By the same token, this observation typically applies to the ordering of adjectives. However, the observed patterns of adjective ordering among English speakers are not as rigid as initially anticipated. In this study, both high and low proficiency student groups did not achieve a perfect score on every combination of adjective ordering. This finding underscores the insufficiency of exclusively depending on rigid syntactic rules as a means to elucidate the arrangement of adjectives in the English language. In her groundbreaking work, Annear (1964) was the initial scholar to challenge the notion of employing these rules, positing that their application, rooted in categorizing adjectives based on class (such as size or color), lacks generalizability to explain other linguistic phenomena beyond adjective ordering.

The ordering of adjectives can also be influenced by the focus of communication. In certain cases, the usual order of adjectives may be inverted when a specific adjective is given prominence. For instance, in a study conducted by Danks and Schwenk (1972), participants were asked to describe a car as both big and red. The findings of the study demonstrated that when the emphasis was placed on the color red, 57% of the participants expressed a preference for the inverted order, saying "a red big car." In the current study, the adjective ordering for the phrase "Indian metal tiger" generated the most controversy. Among the participants, both high-proficiency (29 out of 38) and low-proficiency (25 out of 34) students favored this order. It is worth noting that "Indian metal" is designated as the "correct" order based on the prevailing rule in many EFL textbooks. This rule, which prescribes that the adjective denoting origin should be placed further away from the noun than the adjective indicating material (Origin > Material), serves as the guiding principle. Nevertheless, it is noteworthy that a significant percentage of high-proficiency students (21 out of 38) and low-proficiency students (19 out of 34) preferred the opposite order – "a metal Indian tiger." One possible explanation, as reported by some high-proficiency students, is that they were referring to a metal tiger that was Indian in origin, and thus their emphasis was on the material aspect.

Furthermore, Byrne's (1979) research findings also give credence to the flexible preference for adjective orders among the high-proficiency group. He posited that this phenomenon is highly possible due to the inherent variability in individual "linguistic competence," which could result in different preferences for adjective ordering. The concept of "linguistic

competence" encompasses various factors, such as multilingual fluency and exposure to specific adjective + noun combinations. For instance, the phrase "old man" is more frequently encountered than the phrase "smart man," leading individuals to more likely say "an old smart man" rather than a "smart old man" based on their exposure and social-psychological influences (Fyshe et al., 2019).

While the study results indicate that the high proficiency participants display consistent and robust preferences, there is the possibility for them to accept less common patterns in specific contexts without deeming them "grammatically incorrect." Therefore, it is essential for EFL instructors to go beyond introducing the established "patterns" of English adjective ordering and also provide alternative strategies to effectively handle the presence of multiple pre-nominal adjectives. Ultimately, an L2 serves as a tool for effective communication for EFL learners, and instruction should consider the broader communicative purposes (Al-Hassaani & Ja'ashan, 2017; Amer, 2013).

IX. Conclusions

The subfield of adjective ordering within English grammar has received relatively limited attention in academic research. The investigation of effective methodologies for teaching adjective ordering remains a sparsely explored domain. Despite the wide availability of ESL grammar learning and instructional materials, there is a striking similarity in the approaches utilized to elucidate adjective ordering rules. These resources commonly present a simplified or advanced hierarchical structure for learners to commit to memory and subsequently apply in spoken and written contexts. In light of this, Stringer (2013) advocated for ESL educators to consider alternative, more efficacious strategies for facilitating the learning of English adjective ordering knowledge among learners. Instead of relying solely on rote memorization of rules, Stringer emphasized the value of immersing EFL learners in environments rich with extensive exposure to native speaker-preferred adjective orderings. By nurturing an intuitive understanding of adjective ordering in English through increased input, learners may enhance their linguistic proficiency in this aspect.

Based on the results of this study, it is evident that the Saudi EFL learners exhibit a commendably high level of proficiency. It should be noted, however, that for the purpose of the study, the participants were categorized into groups based on their proficiency levels, namely high and low. Despite this categorization, it is imperative to recognize that even the participants placed into the low proficiency group displayed a proficiency level ranging from high-intermediate to advanced. Consequently, it becomes apparent that the conclusion cannot be extended to encompass all proficiency levels exhibited by Saudi EFL learners. It remains uncertain as to whether the influence of their L1 impacts beginners and intermediate level Saudi learners, and if so, to what extent it differs from the L1 influence observed among the advanced Saudi EFL learners. Consequently, it is paramount that future research encompasses a wide spectrum of English proficiency levels among Saudi participants to ascertain the manner in which their proficiency impacts their intuition pertaining to the ordering of English adjectives.

To conduct such investigations, it is imperative to recruit a diverse range of Saudi participants representing different proficiency levels. This is crucial as it not only enables a comprehensive analysis of the impact of proficiency on the learners' intuition of English adjective ordering but also facilitates a comparison of the potential influence of L1 transfer across these various proficiency levels. By adopting this approach, researchers will be able to disentangle the intricate relationship between language proficiency and the potential effects of L1 transfer on the learning of ordering of adjectives in Saudi EFL learners. It is noteworthy that previous studies have demonstrated the significance of evaluating a wide proficiency range in similar studies (e.g., Bialystok, 2001; Flanagan, 2014; Kachakeche & Scontras, 2020). Hence, incorporating a diverse range of language proficiency levels will enrich the understanding of the complex interplay between language proficiency and the learning of English adjective ordering among Saudi EFL learners.

References

[1] Abdo Alnuzaili, E. S. (2017). *Arabic and English Adjectival Systems in Translation Agreement Intricacies last after arbitration* (4th ed.). Cairo: Dar Elhekma Alarabia.

[2] Ajideh, P. & Mozaffarzadeh, S. (2012). C-test vs. multiple-choice cloze test as tests of reading comprehension in Iranian EFL context: learners' perspective. *English Language Teaching*, *5*(11), 143-150.

[3] Al Mahmoud, M. S. (2014). Prenominal and postnominal adjectives in Arabic: A proposed analysis. *SAGE Open*, *4*, 1–8. 10.1177/2158244014537650

[4] Al-Hassaani, A. & Ja'ashan, M. (2017). A case study of English and Arabic adjectives in attributive position at Aden University. *International Journal of English Language Teaching*, *4*(1), 9-19. doi:10.5430/ijelt.v4n1p9

[5] Al-khresheh, M. & Alruwaili, S. (2023). Nominal-phrase premodifications by non-native English speakers: The case of attributive adjective word order of Saudi EFL students at tertiary level. *Forum for Linguistic Studies*. *5*. 10.59400/fls.v5i2.1602.

[6] Alotaibi, M. & Alotaibi, A. (2017). On the Acquisition of the Prenominal Adjective Order by Kuwaiti EFL Learners. *Advances in Language and Literary Studies*, *8*(1), 1-8. doi: https://doi.org/10.7575/aiac.alls.v.8n.1p.1

[7] Altakhaineh, A. (2017). Identifying Adj + N compounds in Modern Standard Arabic. *Sprachtypologie und Universalienforschung*, *70*, 545-578. 10.1515/stuf-2017-0024.

[8] Amer, W. M. (2013). An investigation into the differences between English and Arabic position and order of adjectives: A contrastive study with pedagogical implications. *Red Sea University Journal*, *1*(2), 21-48.

[9] Annear, S. S. (1964). *The ordering of pre-nominal modifiers in English. Project on linguistic Analysis*, Report No. 8, Ohio State University Research Foundation.

[10] Baker, M. C. (2003). *Lexical categories: Verbs, nouns and adjectives*. Cambridge: Cambridge University Press.
[11] Belazi, H., Rubin, E., & Toribio, A. J. (1994). Code switching and X-bar theory: the functional head constraint. *Linguist Inq*, *25*, 221–238.
[12] Bever, T. G. (1970). The Cognitive Basis for Linguistic Structures, in J.R. Hayes (ed.), *Cognition and the Development of Language* (278-362). New York: John Wiley & Sons, Inc.
[13] Bialystok, E. (2001). *Bilingualism in development: Language, literacy, and cognition*. Cambridge University Press. https://doi.org/10.1017/CBO9780511605963
[14] Byrne, B. (1979). Rules of prenominal adjective order and the interpretation of "incompatible" adjective pairs. *Journal of Verbal Learning & Verbal Behavior*, *18*(1), 73–78. https://doi.org/10.1016/S0022-5371(79)90574-7
[15] Carter, J. (1991). Dissecting the Adjective Ordering Constraint in English, University of Massachusetts. *Occasional Papers in Linguistics*, *15*(3), 45-90. scholarworks.umass.edu/umop/vol15/iss1/3
[16] Cinque, G. (2010). *The syntax of adjectives: A comparative study*. Cambridge, MA: MIT Press.
[17] Danks, J. H., & Schwenk, M. A. (1972). Prenominal adjective order and communication context. *Journal of Verbal Learning and Verbal Behavior*, *11*, 183-187.
[18] Fehri, A. F. (1999). Arabic modifying adjectives and DP structures. *Studia Linguistica*, *53*, 105-154. https://doi.org/10.1111/1467-9582.00042.
[19] Flanagan, P. J. (2014). *A Cross-linguistic investigation of the order of attributive adjectives*. Ph.D. Thesis. Edge Hill University.
[20] Fries, C. C. (1945). *Teaching and learning English as a foreign language.* Ann Arbor, MI: University of Michigan Press.
[21] Fyshe, A., Sudre, G., Wehbe, L., Rafidi, N., & Mitchell, T. M. (2019). The lexical semantics of adjective–noun phrases in the human brain. *Hum. Brain Mapp*, *40*, 4457–4469. doi: 10.1002/hbm.24714
[22] Huang, R. (2017). *Does L1 transfer influence Chinese speakers' intuition of adjective ordering in English?* Master's thesis, University of Illinois at Urbana-Champaign.
[23] Kachakeche, Z., & Scontras, G. (2020). Adjective ordering in Arabic: Post-nominal structure and subjectivity-based preferences. *Proceedings of the Linguistic Society of America*, *5*, 419. 10.3765/plsa.v5i1.4726.
[24] Kennedy, C. (2007). Vagueness and grammar: The semantics of relative and absolute gradable adjectives. *Linguistics and Philosophy*, *30*, 1-45.
[25] Kennedy, C., & L. McNally. (2005). Scale structure, degree modification, and the semantics of gradable adjectives. *Language*, *81*, 345-381.
[26] Lado, R. (1957). *Linguistics across cultures: Applied linguistics for language teachers.* Ann Arbor, MI: University of Michigan Press.
[27] Montrul, S. & Ionin, T. (2010). Transfer effects in the interpretation of definite articles by Spanish heritage speakers. *Bilingualism: Language and Cognition*, *13*(14), 449-473.
[28] Montrul, S. (2000). Transitivity alternations in second language acquisition: Toward a modular view of transfer. *Studies in Second Language Acquisition*, *22*, 229-274.
[29] Rosato, E. (2018). *Adjective Order in English: A Semantic Account with Cross-linguistic Applications* [Master's thesis]. Carnegie Mellon University.
[30] Scontras, G. (2022). Adjective Ordering across Languages. *The Annual Review of Linguistics*, *9*(3), 57–76. https://doi.org/10.1146/annurev-linguistics-030521-041835
[31] Scontras, G., Degen, J., & Goodman, N. (2017). Subjectivity predicts adjective ordering preferences. *Open Mind: Discoveries in Cognitive Science*, *1*(1), 53–65. https://doi.org/10.1162/OPMI_a_00005.
[32] Shlonsky, U. (2004). The form of Semitic noun phrases. *Lingua*, *114*, 1465-1526.
[33] Sproat, R., & Shih, C. (1991). The Cross-Linguistic Distribution of Adjective Ordering Restrictions. In C. Georgopolous, & R. Ishihara (Eds.), *Interdisciplinary Approaches to Language: Essays in Honor of S.-Y. Kuroda* (pp. 565-593). Springer. https://doi.org/10.1007/978-94-011-3818-5_30
[34] Stringer, D. (2013). Modifying the teaching of modifiers: A lesson from Universal Grammar. In Whong M., Gil K.-H., Marsden H. (Eds), *Universal Grammar and the second language classroom* (pp. 77–100). Dordrecht: Springer.
[35] White, L. (2012). Universal Grammar, cross-linguistic variation and second language acquisition. *Language Teaching*, *45*(3), 309-328.
[36] Wulff, S. (2003). A multifactorial corpus analysis of adjective order in English. *International Journal of Corpus Linguistics*, *8*, 245-282. 10.1075/ijcl.8.2.04wul.

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