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TEACHING STRATEGIES OF GRAMMATICAL GENDER IN L2 HINDI/URDU

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The aim of this paper is to explore teaching and learning strategies for grammatical gender in the L2 Hindi/Urdu classroom and to determine if heritage learners have the advantage of an implicit knowledge of grammatical gender over non-native learners. In Hindi/Urdu, unlike other languages, there are no articles coupled with nouns reflecting their gender and the specific markers for masculine –aa and feminine –ii are not always consistent. This study employed the psycholinguistic approach known as 'chunking,' coupling nouns with adjectives ending in –aa for masculine and –ii for feminine. The paper presents a pilot study that used two groups. Each group had ten participants, five heritage and five non-native learners. One group received a list of nouns with explicit masculine and feminine labels. Another group received the same nouns coupled with marked adjectives. After a week, both groups were given a grammaticality judgment task. The results show that the group that received the nouns coupled with adjectives performed better than the other group and that there was no significant difference between the scores of the heritage and non-native participants.

INTRODUCTION AND OVERVIEW

Language is a dynamic verbal behavior of human beings. Based on verbal behavior patterns, speech communities create certain sets of rules called grammar. Verbal behavior cannot be explained solely through grammar. The social nature of language also determines language use, and while grammar plays a significant role in meaning making, some grammatical rules are more important than others. For example, in English, word order is important because 'the man killed the tiger' has a different meaning from 'the tiger killed the man.' Likewise, case markers in Hindi/Urdu are important as their use can also change the meaning of a sentence. For example, *Mohan mujhekhaanaa do*, (Mohan, give me food), has a different meaning from *Mohan-kokhaanaado*, (give food to Mohan). Here (*-ko*) is a necessary indirect object (accusative case) marker that indicates the goal (recipient) of the action. Some grammatical rules gain or lose importance based upon their level of structure. In Hindi/Urdu, gender at the lexical level is not critical in meaning making. It is possible to know that *samaacaar* means 'news,' but not know whether it is a masculine or feminine noun. When *samaacaar* is used in a phrase like *aajkaa/*kiisamaacaar* (today's news), then it is important to know whether *samaacaar* is masculine or feminine in order for it to be preceded by the correct possessive case marker, *kaa* for masculine and *kii* for feminine. Grammar gains even more importance at the sentence level when the verb has

to agree with the gender, number and person features of the subject/object. For example, in *Sita-ne aajkaa/*kiisamaacaarpaR^{h}-aa/*ii* (Sita read today's news), inappropriate gender marking causes ungrammaticality of the sentence. A native speaker will still understand the meaning because the sentence would be ungrammatical, but acceptable. This shows that grammatical gender does not contribute significantly to the process of meaning making.

Native speakers decide the grammaticality/ungrammaticality and acceptability/unacceptability of phrases or clauses based on their implicit knowledge of the language. This knowledge develops gradually based on language input, maturation and the interface between semantics and the outside world (discourse). The advantages of implicit knowledge are not available for second (foreign) language learners. They begin to learn lexical items and their meaning without paying close attention to inherent features like gender. It is later when they realize that the assignment of gender is critical for the grammaticality of a phrase or clause. At this point, learners go back and try to learn the gender of lexical items. This shows a gap in the process of learning and raises questions about the process of second language acquisition and the appropriateness of language teaching strategies for grammatical gender in L2 Hindi/Urdu.

The aim of this paper is to bridge this gap in second language acquisition and to explore an appropriate teaching strategy that best suits the learning of grammatical gender in an L2 Hindi/Urdu classroom of heritage and non-native learners. The term 'heritage' refers to learners who were raised in a family that speaks the target language and who have had exposure to the culture prior to the classroom. This study also attempts to determine if heritage learners have the advantage of an implicit knowledge of grammatical gender over non-native learners. The paper first presents a brief introduction to grammatical gender in section 2. Section 3 presents a background on grammatical gender. In section 4, the paper describes the theoretical background and teaching strategies of the pilot study that is presented in section 5. This is followed by the discussion in section 6, and conclusion and limitations of the study in section 7.

Grammatical Gender in Hindi/Urdu

Nouns are gender marked in many languages. However they follow different assumptions and have different markers for masculine, feminine, and neuter. Natural gender refers to the classification of animate nouns based on their sex. Animate nouns of the male sex are assigned a masculine gender, and animate nouns of the female sex are assigned a feminine gender. Spanish is one of the languages that respects natural gender. Generally, masculine nouns end in *–o* and feminine nouns end in *–a*. Similarly, French also respects natural gender and nouns ending in *–e/ -sion/ -tion/ -ure*are feminine and nouns ending in *–eau* and others are masculine. In Spanish and French, these rules are mostly consistent with few exceptions. German marks masculine with *-er*, feminine with *-e/ -heit/ -keit/-tat/-ung/-ik/-schaft*, and neuter with *-chen/-lein*. However, these rules are not very consistent and show many

exceptions: *das messer* (knife) is neuter, *die gabel* (fork) is feminine, and *des löffel* (spoon) is masculine. These markers overpower natural gender. For example, *mädchen*(girl)has *–chen* marker and is of a neuter gender.

In Hindi/Urdu, all nouns are classified as either masculine or feminine. Like Spanish and French, and unlike German, Hindi/Urdu respects natural gender. For example, *pitaa* (father), *bhaai* (brother), *bail* (ox) are masculine in gender. *Maataa*(mother), *bahin* (sister), *gaay* (cow) are feminine in gender. The basis of gender assignment for inanimate nouns is not known (if not randomly assigned). For example, *caawal* (rice), *angoor* (grapes), *acaar* (pickle) are masculine, while *daal* (lentils), *bandook* (gun), *adaalat* (court) are feminine. The gender of inanimate nouns plays an equally significant role as that of natural gender in Hindi/Urdu. It is clear that nouns in Hindi/Urdu, like in Spanish and French, are not always morphologically marked. Nouns that do not show any gender-specific morphological markers can also be classified as either masculine or feminine, showing that grammatical gender is a lexical feature and inherently assigned to nouns.

Hindi/Urdu textbooks in the L2 classroom attempt to present a general rule for grammatical gender based on morphological forms. If a noun ends in an *–aa* sound, then it is masculine, and if a noun ends in an *–ii/-iya* sound, then it is feminine. A widely used Hindi textbook *Complete Hindi* by Snell and Weightman (2010) presents two types each for both masculine and feminine nouns. Type I nouns follow the above stated rules while Type II are any nouns that do not follow the above rules. These rules may work at the beginning level of Hindi/Urdu learning and teaching, but they do not tell the whole story of grammatical gender. There are two major limitations of these rules: (a) There are nouns that end in *–aa*, but are feminine, such as *hawaa* (air), *maataa* (mother); and there are nouns that end in *–ii* or *–iya*, but are masculine, such as *haathii* (elephant), *saathii* (friend), *paanii* (water). (b) There are many nouns that end neither in *–aa* nor in *–ii* sounds and they still need to be classified as either masculine or feminine such as *kalam* (pen), *kitaab* (book), and *seb* (apple). These are also called irregular nouns. These limitations cause serious problems for L2 Hindi/Urdu learners. This study focuses on these irregular nouns and explores teaching and learning strategies that fit well in the Hindi/Urdu curriculum.

In the process of gender acquisition, native speakers learn the gender features of an animate or inanimate noun during their language development and build an implicit knowledge. They do not have any explicit grammatical explanation for the gender assignment of nouns. In general, they use a ‘sounds good’ or ‘sounds odd’ approach. In second language acquisition, lack of the natural development of language and implicit knowledge causes challenges in learning and teaching. It is also critical to examine how heritage speakers learn grammatical gender and compare this process to that of non-native speakers.

LITERATURE REVIEW

Gender is an inherent feature of nouns and is closely related to the morpho-syntactic features of number and case. I surmise that L2 learners struggle with gender-related errors because it is not being learned or taught properly, not because they are lazy or unwilling to learn. In this section, the paper takes an account of various approaches already used to present grammatical gender to L2 language learners.

Neumann (1967) as cited in Rogers (1984) suggests 'paired-association learning.' Neumann cautions that this method causes an excessive load on memory. However, recent studies show that the L2 data, presented in determiner-noun or adjective-noun pairs, facilitate L2 learning of grammatical gender to a great extent. Sisson (2006) suggests that L2 learners, like native speakers, are very sensitive to morphological and phonological cues in deciding gender. She also cautions that the attainment of sensitivity requires practice. Blom et al. (2008) find that L1 and L2 children attain grammar based learning, so they are more sensitive to morphological cues of grammatical gender. L2 adults attain lexical based learning, which means that they learn nouns first and then later they consider grammatical gender or other inherent features. Frenck-Mestre, Foucart, Carrasco, and Herschensohn (2009), based on ERPs (Event Related Potentials) collected from two experiments, concluded that native speakers and L1 Spanish learners of L2 French performed better when they were provided with phonetic cues to noun-adjective agreement in French. Grüter, Lew-Williams, and Fernald (2011) present three different experiments. The first experiment shows that advanced learners perform like native speakers of Spanish in an offline task in which they are asked to choose one out of three nouns according to the determiners or adjectives that are gender marked. In the second experiment, based on a production task, the findings show that advanced L2 Spanish learners struggle with the lexical features of gender, but not the morpho-syntactic features. They report that in the production task, L2 learners show agreement between determiners and adjectives, but their nouns mismatch with the gender-marked determiners and adjectives. In the third experiment, advanced learners performed like native speakers and used determiners to predict the gender of the given nouns. Arnon and Ramscar (2012) performed two experiments using an artificial language, in which they collected data from two groups. To the first group, they presented gender-marked articles first, and then nouns. To the second group, they presented nouns first and then gendered-marked articles. The results showed that the accuracy level of sequence-first learners was five times greater than that of the noun-first group. Based on the results from these two experiments, they concluded that native speakers treat article-noun as a single unit, but L2 learners do not consider it as a single unit. They learn nouns first and then look for articles. This noun-first process of learning by L2 learners causes what they call 'blocking.' Another, more recent study on the acquisition of grammatical gender shows similar findings. Holger (2013), based on the data collected from production and comprehension tasks of

twenty native German speakers and twenty L2 German learners of L1 English, concluded that L2 learners perform better in article-noun and adjective-noun agreement. This raises questions about the forms in which nouns should be presented.

It is also important to note that L2 learners do not benefit from explicit rules about grammatical gender created by native speakers. Corder (1973) claims that L2 learners are not able to exploit the explicit description of grammatical rules to learn grammatical gender and concludes that the explicit knowledge of grammatical rules is neither necessary nor sufficient. The findings of Tucker, Lambert, and Rigault (1977) further strengthen the claims of Corder (1973). Tucker et al. (1977) collected explicit rules from native speakers for gender assignment, but found that they did not help L2 learners. Bohme (1982) believes that there is a strong relationship between grammatical gender and natural gender and argues that a semantically-based system benefits L2 learners in the early stages of learning grammatical gender. The problem with this approach is that in Hindi/Urdu, there is no known semantic base to assign grammatical gender to all nouns. Another limitation of this approach is reflected in German, where 'girl' is semantically female, but grammatically of neuter gender.

The agreement system is another approach to teaching grammatical gender. Rogers (1984) shows that L2 learners, who master the morphological complexities of gender in German continue to show errors in the gender assignment of nouns. He concludes that learning the morpho-syntactic properties of a language does not guarantee the learning of grammatical gender. Rogers also concludes that the gender system is closely linked with the development of other systems like syntax and semantics. Sabourin, Stowe, and de Haan (2006) collected data from L1 English, German, French, Italian and Spanish speakers and L2 Dutch learners and concluded that there is evidence of effect from L1. They also observed similarities among all the participants in their familiarity with nouns and default gender strategy. Frenck-Mestre et al. (2009) also argued that the acquisition of grammatical gender can be biased by the learners' L1 knowledge, but if L2 data are presented with overt phonetic cues corresponding to a certain gender, L2 learners exploit these cues easily and learn better. It is possible that gender can be assigned based on simply learning or memorizing what gender goes with what item, and then through practice and experience it can be learned by the L2 learners. In contrast, when gender agreement is inherently linked with linguistic features, then an L2 learner must follow similar strategies to the L1. As the above discussions do not present any clear pattern of teaching and learning grammatical gender, we can conclude the following as points of departure: (a) Gender acquisition is a developmental process, (b) to learn grammatical gender, the strategies should be similar to the process of language acquisition of native speakers, (c) article-noun or adjective-noun pairs facilitate learning grammatical gender, (d) explicit grammar instruction does not seem very helpful, and (e) there can be L1 effect or familiarity effect on learning grammatical gender in L2.

Teaching Strategies of Grammatical Gender

Due to the limitations of teaching and learning strategies of grammatical gender and the conclusion that gender is an inherent feature of a noun, and that its acquisition is a developmental process which resembles the strategies used to learn the L1, this study explores psycholinguistic approaches for learning and teaching grammatical gender. In order to build a successful instructional model, it seems crucial to understand how native speakers produce grammatical gender.

On the basis of an assumption that there is an arbitrary relationship between a noun and its grammatical gender, current psycholinguistic models of language production claim that for a native speaker, knowledge of gender is stored as an inherent property of a noun. If this is true then the question arises about how it is stored. Jescheniak and Levelt (1994: 826) provide a model showing that all nouns are linked to one abstract node for each grammatical gender. The model has three main layers. The first layer shows the concepts that any lexical item signifies. The second layer is called the lemma. At this level, lexical items receive their syntactic categories such as noun, verb, and adjective. The third level is called the word form, where the lemmas are broken into sounds and native speakers can link phonological cues to a specific gender. Nouns of the same gender are connected to one gender node. Other models in language production do not share the same processing assumption. Another well-known model is Dell's interactive activation model (Dell, 1986, 1990). This model skips the word form level and allows the phonological form to be accessed directly from the lemma level. The lemma activates the phonological form; based on the gender-specific phonological cues, the lemma decides the grammatical gender.

Both models presented above are similar in that they exploit phonological information for grammatical gender. This similarity poses problems for Hindi/Urdu. This study considers morphological cues as the data collected and analyzed are in written form. In Hindi/Urdu, the grammatical gender and the morphological form of a noun are not related. As shown in section 2, there are nouns that end in *–aa,* but are not masculine and nouns that end in *–ii,* but are not feminine; and nouns that do not end either in *–aa* or *–ii,* but are classified as either masculine or feminine (irregular nouns). In order to have concordance with the two models of language production suggested above, the teaching strategy needs certain additional tools that can assign other morphological cues to nouns in Hindi/Urdu.

In order to construct morphological cues for nouns not ending in either *–aa* or *–ii*, it is necessary to attach some other lexical items that have morphological cues. In this regard, constructivist and chunking approaches for teaching and learning grammatical gender seem to fit well. For example, we can attach adjectives that end in –aa such as *acchaa* (good), *buraa* (bad), *nayaa* (new), *puraanaa* (old) to all masculine nouns, as the adjectives that end in *–aa* change form based on the grammatical gender of the noun they qualify. If the same adjectives precede feminine nouns, then the morphological marker changes to *acchii* (good), *burii* (bad), *nayii* (new), *puraanii* (old). The idea of

coupling nouns with marked adjectives ending in *–aa* or *–ii* will allow learners to use the general rule that an adjective ending in *–aa* precedes and therefore shows a masculine noun and that an adjective ending in *–ii* indicates a feminine noun. This idea also agrees with the 'noticing hypothesis' (Schmidt, 1990), which proposes that in order to learn the grammatical feature of a language, learners must notice the relevant features in the input to translate them to intake.

Constructivist approaches believe that exposure to the target language through communication in a social environment instigates the learning process. Constructivists also hold that language learning is a lifetime analysis of language input and grammar is not enough to explain the comprehensibility between a speaker and listener. One of the basic approaches of constructing such knowledge is 'chunking.' Constructions based on chunking may be of different levels such as morphological, lexical, and syntactical. Chunking can also construct semantic and discourse associations. Ellis (2001) argues that the high frequency of exposure to constructions based on chunking can facilitate first and second language learning. He also points out the importance of the following constructions used with chunking that have been discussed by many scholars in second language acquisition research such as holophrases (Corder, 1973), prefabricated routines and patterns (Hakuta, 1974), formulaic speech (Wong-Fillmore, 1976), memorized sentences and lexicalized stems (Pawley & Syder, 1983); formulas (Ellis, 1994), discourse management (Dörnyei & Kormos, 1998; Tannen, 1987), register (Biber & Finegan, 1994), style (Brewster, 1999), and lexical patterns and collocational knowledge (Hoey, 1991; Carter, 1998; Lewis, 1993; Schmitt, 2000). In the late 19th century, James (1890) claimed that "objects once experienced together tend to become associated in the imagination, so that when any one of them is thought of, the others are likely to be thought of also, in the same order of sequence or coexistence as before" (p. 516). Native speakers learn to chunk letters, sounds, morphemes, words, phrases, and clauses. Ellis, Lee and Reber (1999) argue that L1 and L2 speakers process these regularities easily and faster. These patterns of sequential learning can also be explained in terms of psychological theories of chunking. Miller (1956) first proposed the term 'chunking,' based on short-term memory research. Miller argues that short-term memory is constant at 7±2 chunks, but can be increased further by 'chunking.' Miller (1958) also claimed that recalling grammatical items is easier than random items because grammatical items form chunks and reduce the units.

Based on recent literature and the success of 'paired-association learning,' I believe that the idea of chunking nouns with adjectives bootstraps L2 Hindi/Urdu learners. It exploits the language production models suggested by Jescheniak and Levelt (1994) and Dell (1986, 1990) and helps learners to notice and consequently learn grammatical gender. It is important to note that all adjectives do not end in *–aa* or *–ii* markers, such as *sundar* (beautiful), and *hoshiyaar* (intelligent), and therefore cannot be used to supply the morphological cues for the gender of nouns. Hence the proposed strategy cautions to be careful in the selection of adjectives to be used in chunking.

Keeping this precaution in mind, I hypothesize that L2 learners of Hindi/Urdu will learn grammatical gender faster and more easily if they are provided a chunk consisting of [adjective-noun] (see Figure 1) rather than just a list of nouns labeled masculine or feminine. In Figure 1, I propose that at the point when learners reach the lemma and categorize the lemma as a noun, if an adjective that provides a morphological cue for the gender is attached, learners would notice that morphological cue and learn the grammatical gender of the noun. I also hypothesize that a heritage speaker will have the advantage of an implicit knowledge of grammatical gender as they are exposed to the target language at an early age. In order to check the validity of these hypotheses, I have conducted a pilot study that is explained in detail in the next section.

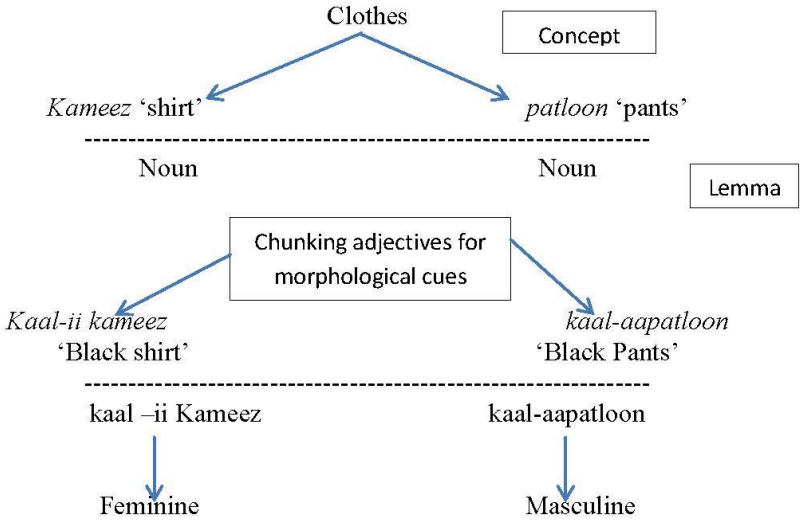

Figure 1.Model for Morphological Clues

PILOT STUDY

This study involved twenty first-year L2 Hindi/Urdu learners at a university situated in the American Midwest. Learners were divided into two groups of ten. Out of ten, five were non-native learners and five were heritage learners of the target language. The average age of the participants was 21. Participants were primarily L1 English speakers. Participants also reported having had exposure to a range of different languages such as Spanish, Japanese, Arabic, Gujarati, Konkani, and Tamil. The data analysis did not take into account any knowledge of other languages reported by the participants, as

the influence of other languages on L2 Hindi/Urdu is not the scope of this study.

Material Used

Twenty Hindi/Urdu inanimate (irregular) nouns, not ending in either *–aa* or *–ii,* were used in this study. Out of the twenty, twelve nouns were familiar and eight were unfamiliar, given the proficiency level of the participants. One group received a list of these nouns with their corresponding gender label m/f (m for masculine and f for feminine) and their equivalent English meaning (see Appendix I). Another group received these same nouns chunked with adjectives declined with the gender of the paired nouns, ending in *–aa* for masculine and *–ii* for feminine (see Appendix II). The study also prepared twenty simple sentences that showed noun and adjective conjugations for a grammaticality judgment task (see Appendix III). Out of the twenty sentences, sixteen were based on the presented list of nouns and the remaining four were distractors. Out of the twenty sentences, ten were grammatical and ten were ungrammatical. These sentences were formed carefully and did not overlap with any adjective and noun pair previously provided to the group of participants.

Procedure

The researcher provided a list of labeled nouns to one group and a list of chunked [adjective-noun] phrases to another group of participants. They were asked to memorize them and one week later all of the students participated in a grammaticality judgment task based on the list. The task was timed. Participants had seven minutes to read the twenty sentences and write G/UG (G for grammatical and UG for ungrammatical), in front of each sentence. The participants were given a short amount of time in order to determine whether or not they had built implicit knowledge of grammatical gender from the given list of nouns, during the previous week. During the week from when the participants received the list and the test day, in order to help them learn the meaning of these Hindi/Urdu nouns, the instructor used the nouns in class activities such as readings of passages and recall of the Hindi words from pictures. The nouns also appeared in homework assignments involving translation and fill in the blank exercises, but there was no explicit attempt in instruction to help them learn grammatical gender.

Data Analysis

The data was quantified in twenty points. One point was given for a correct answer and zero for an incorrect answer. Further, the data were analyzed in two ways. First, the average score of each of the two groups was calculated separately (see Figure 2).The average score of the noun group was 14.50 and the average score of adjective-noun group was 15.70. Next, the average score of the heritage vs. the non-native learners was also calculated (see Figure 3). In the noun only group, the average score of the non-native learners was 13.40 and the heritage learners was 15.60. In the adjective-noun

group, the average score of the non-native learners was 15.40 and the heritage learners was 16.00.

Results

Comparing the average scores in Figure 2, it is obvious that the adjective-noun group shows an increased accuracy in recognizing grammatical gender over the noun-only group. Within each group, the heritage learners scored higher than the non-native learners. If we consider the average scores of the non-native learners only in both groups, the average score difference is two points (15.40 vs. 13.40). It can be interpreted that the adjective-noun group helped the non-native learners to learn grammatical gender. If we consider the average scores of the heritage learners only in both groups, the average score difference is 00.40 (16.00 – 15.60). This shows that the heritage learners did not benefit significantly from the chunking strategy. Based on the above results, we can conclude that the heritage learners have implicit knowledge of grammatical gender; however the proposed teaching strategy did not help them as much as it helped the non-native learners.

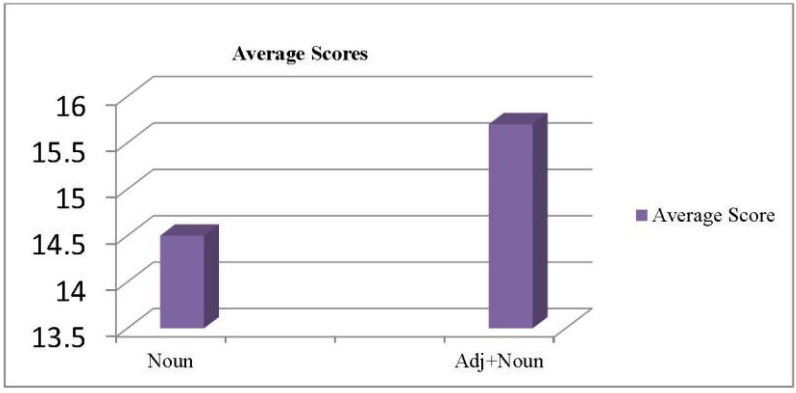

Figure 2: Average Scores of Noun Group and Adjective-Noun Group

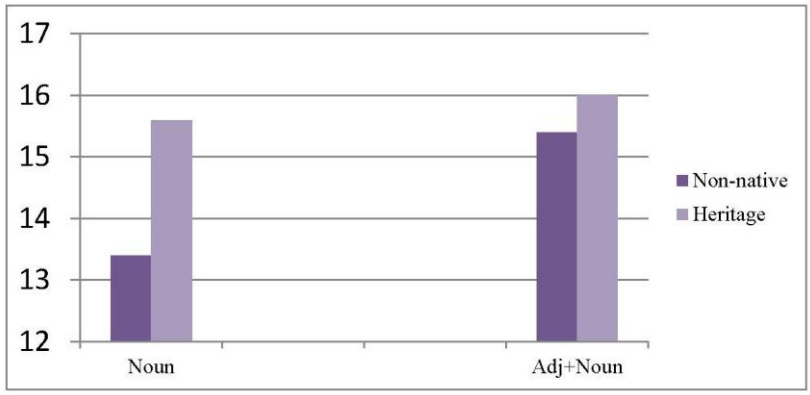

Figure 3: Average Scores of the Heritage and Non-Native Learners in Each Group

DISCUSSION

Hindi/Urdu is typologically diverse from other languages that have been studied for teaching/learning of grammatical gender (Arnon, and Ramscar, 2012; Blom et al., 2008; Bohme, 1982; Corder, 1973; Frenck-Mestre et al., 2009; Grüter et al., 2011; Holger, 2013; Neumann, 1967; Rogers, 1984; Sabourin et al., 2006; Sisson, 2006; Tucker et al., 1977). Unlike French, Spanish, and German, Hindi/Urdu does not have articles that attach with nouns and thereby provide clues about grammatical gender. Nouns in Hindi/Urdu do not follow a grammatical gender-specific morphological pattern. As we have seen in section two, not all masculine nouns end in *–aa* and not all feminine nouns end in *–ii* sound. In Hindi/Urdu, adjectives are grammatical items that when attached to nouns, adjust irregular nouns to fit the morphological cues. Neumann (1967) as cited in Rogers (1984) claims that 'paired association learning' causes excessive memory load, but the results of this pilot study show that this extra memory load facilitates learning and is therefore worth taking on the extra memory load. Corder (1973) claims that the explicit description of a grammatical rule is neither necessary nor sufficient. In this study, the attempt has been made to adjust the adjective to fit the general rule of grammatical gender in Hindi/Urdu, that nouns ending in *–aa* are masculine and *–ii* are feminine. The results show that this strategy worked. We can conclude that if the pedagogical approach of grammatical gender makes an attempt to couple irregular nouns with adjectives that show explicit morphological cues, it can be well exploited. Bohme (1982) argues that a semantic based system helps learners to decide the grammatical gender. The strategy suggested by Bohme (1982) does not work in general because it is impossible to explain the semantic features of all the nouns in the target language. Another limitation of such a strategy is that the semantic features that can be helpful to assign gender are not known (if not randomly assigned).

The strongest support of this comes from native speakers. Native speakers of Hindi/Urdu also struggle in deciding grammatical gender. Rogers (1984) argues that learning the grammatical complexities of the target language helps, but does not warrant the acquisition of the grammatical gender. This seems reasonable as it causes an extra computational load and requires tracking back the gender of the arguments of the sentences. For example, in Hindi/Urdu, the verb agrees with the number, gender and person features of the subject/object. If the learners are taught the agreement pattern of Hindi/Urdu, each time they reach a verb at the end of sentence (SOV), they will need to go back to the subject/object to consider and decide its grammatical gender. To minimize these complexities, the adjective-noun pair strategy seems quite easy and reasonable because it always comes together as a patterned phrase and it is less complex than learning a whole sentence.

Considering the idea of chunking (Miller, 1956) and findings from recent literature on grammatical gender (Arnon, and Ramscar, 2012; Blom et al., 2008; Bohme, 1982; Frenck-Mestre et al., 2009; Grüter et al., 2011; Holger, 2013; Sisson, 2006) 'paired-association learning' helps to adjust the adjective-noun pairs to fit well in the production models of Jescheniax and Levelt (1977) and Dell (1986, 1999). The results show that the adjective-noun group performed better. The adjustment also helped learners to notice morphological cues for gender. The findings of the study also support the 'noticing hypothesis,' (Schmidt, 1990) which states that in order to learn grammatical features of a language, learners must notice the relevant features in their input to translate them in intake. The strategy that this study proposes helps learners to notice morphological cues to decide and learn grammatical gender. The strategy enforces learning adjective-noun as a chunk, rather than as two separate items. If learners first learn adjective-noun as one item, then later the morphological cues from the adjective will help them to decide the grammatical gender of the noun in isolation. The result also shows that there is little difference in the average scores of the heritage and the non-native learners. The difference does not seem statistically significant. This study needs more participants to claim anything concrete in this regard. However, analysis of the results clearly shows the average scores of the heritage learners and the non-native learners are higher in the adjective-noun group. This shows that the proposed strategy does not only help to bootstrap non-native learners, but also heritage learners.

CONCLUSION

Based on the results of this study and the discussion, we can conclude that the idea of chunking irregular inanimate nouns with gender marked adjectives helps learners notice morphological cues that facilitate the learning of the grammatical gender of nouns, without involving any grammatical complexities and inducing excessive memory load. This supports my argument that effective teaching strategies can be developed to teach grammatical gender in particular or other grammatical items when the language production model or

other strategies of acquisition of the L1are taken into consideration. This not only facilitates learning, but also encourages the development of an implicit knowledge like that of a native speaker. Overall, the study concludes that the teaching strategy for inherent features, such as grammatical gender, should consider psycholinguistic approaches like chunking. This can help to bootstrap learners in noticing the relevant grammatical features of the target language. However, this teaching strategy requires the careful selection of adjectives that are to be paired with nouns, since not all adjectives end in *–aa*, and adjectives that do not end in *–aa* do not change to *–ii* for feminine.

The obvious limitation of this pilot study is the low number of participants. This study did not address the L1 effect or the transfer of gender features from the knowledge of any other languages that the participants had had contact with. The instructor did not make any explicit or implicit attempt to teach grammatical gender in class between the day participants received the list and the test day, but it is unknown whether or not participants made any attempt to notice the grammatical gender of the nouns they learned. This study also looked for previous work on the grammatical gender of L2 Hindi/Urdu, but could not find any. However, the study acknowledges that there might be other effective teaching strategies for grammatical gender in L2 Hindi/Urdu.

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Appendix-I

List of Nouns with English Meaning

Hindi	**English**
caawal(M)	Rice
daal(f)	Lentils
cammac(M)	Spoon
bandook(f)	Rifle/Gun
naatak(M)	Drama
dhool (f)	Dust
angoor(M)	Grape
adaalat(f)	Court
akhbaar(M)	Newspaper
dookaan(f)	Shop
caankoo(M)	Knife
gaajar(f)	Carrot
acaar(M)	Pickle

Appendix- II

List of Noun phrases with English Meaning

Hindi Phrases	**English**
nayaa caawal(M)	New rice
puraanee daal(f)	Old lentils
badaa cammac(M)	A big spoon
meree bandook(f)	My rifle/gun
acchaa natak(M)	A good drama
gandee dhool(f)	Dirty dust
meethaa angoor(M)	A sweet grape
hamaaree adaalat(f)	Our court
aaj kaa akhbaar(M)	Today's newspaper
puraani dookaan(f)	An old shop
badaa caankoo(M)	A big knife
taazi gaajar(f)	A fresh carrot
khatta acaar(M)	Sour pickle

tamtam (f)	A one horse Carriage	tumhaaree tamtam(f)	Yours one horse carriage
sthaan(M)	Place	badaa sthaan(M)	A big place
jaanc(f)	Test/ examination	Hindi kee jaanc(f)	Hindi's test/ examination
matar(M)	Pea	meethaa matar(M)	Sweet pea
hawaa(f)	Air	taazee hawaa(f)	Fresh air
paind(M)	Tree	lambaa paind(M)	A tall tree
sharaab(f)	Alcohol	puraanee sharaab(f)	Old alcohol

Appendix- III

Grammaticality Judgment Task

Sentences		**G/UG**
yah nayaa caawal hai.	[This is new rice.]	UG (M)
wah kaun hai?	[Who is he?]	Dis
yah badaa natak hai.	[This drama is long.]	G (M)
yahaan taazaa hawaa hai.	[Air is fresh here.]	UG
yah angoor khatee hai.	[This grape is sour.]	UG (M)
wah ek badee dookaan hai.	[That is a big shop.]	G

yah acchaa caankoo hai. [This is a nice knife.]	G (M)
meree maa kaa naam SIta hai. [My mother's name is Sita.]	Dis G
tumhaaree akhbaar kahaan hai? [Where is your newspaper?]	UG (M)
yah gaajar meethee hai. [This carrot is sweet.]	G
yah nayaa daal hai. [This is new lentils.]	UG
yah jahareelee sharaab hai. [This is poisonous alcohol.]	G
wah ek puraanee paind hai. [That is an old tree.]	UG (M)
raaj meraa bhaai hai. [Raj is my brother.]	Dis
yah puraanaa acaar hai. [This is old pickle.]	G (M)
yah meraa tamtam hai. [This is my one horse carriage.]	UG
yah ek badaa cammac hai. [This is a big spoon.]	G (M)
tumhaaree kyaa naam hai? [What is your name?]	Dis UG
wah badaa bandook hai. [That is a big rifle.]	UG
aaj tumhaaree wayaakaraN kee jaanc hai. [Today is your grammar's test.]	G

Appendix-I

List of Nouns with English Meaning

Hindi	**English**
चावल (M)	Rice
दाल (f)	Lentils
चम्मच (M)	Spoon
बंदूक (f)	Rifle/Gun
नाटक (M)	Drama
धूल (f)	Dust
अंगूर (M)	Grape
अदालत (f)	Court
अख़बार(M)	Newspaper
दूकान (f)	Shop
चाँकू (M)	Knife
गाजर (f)	Carrot
अचार (M)	Pickle
टमटम (f)	A one horse Carriage

Appendix- II

List of Noun phrases with English Meaning

Hindi Phrases	**English**
नया चावल (M)	New rice
पुरानी दाल (f)	Old lentils
बड़ा चम्मच (M)	A big spoon
मेरी बंदूक (f)	My rifle/gun
अच्छा नाटक (M)	A good drama
गंदी धूल (f)	Dirty dust
मीठा अंगूर (M)	A sweet grape
हमारी अदालत (f)	Our court
आज का अख़बार (M)	Today's newspaper
पुरानी दूकान (f)	An old shop
बड़ा चाँकू(M)	A big knife
ताजी गाजर (f)	A fresh carrot
खट्टा अचार (M)	Sour pickle
तुम्हारी टमटम (f)	Yours one horse

			carriage
स्थान (M)	Place	बड़ा स्थान (M)	A big place
जाँच (f)	Test/ examination	हिन्दी की जाँच (f)	Hindi's test/ examination
मटर (M)	Pea	मीठा मटर (M)	Sweet pea
हवा (f)	Air	ताजी हवा (f)	Fresh air
पेंड़ (M)	Tree	लंबा पेंड़ (M)	A tall tree
शराब (f)	Alcohol	पुरानी शराब (f)	Old alcohol

Appendix- III

Grammaticality Judgment Task

Sentences	**G/UG**
यह नया चम्मच है। [This is new rice.]	UG (M)
वह कौन है? [Who is he?]	Dis
यह बड़ा नाटक है। [This drama is long.]	G (M)
यहाँ ताजा हवा है। [Air is fresh here.]	UG
यह अंगूर खट्टी है। [This grape is sour.]	UG (M)
वह एक बड़ी दूकान है। [That is a big shop.]	G
यह अच्छा चाँकू है। [This is a nice knife.]	G (M)

मेरी माँ का नाम सीता है। [My mother's name is Sita.]	Dis G
तुम्हारी अख़वार कहाँ है? [Where is your newspaper?]	UG (M)
यह गाजर मीठी है। [This carrot is sweet.]	G
यह नया दाल है। [This is new lentils.]	UG
यह जहरीली शराब है। [This is poisonous alcohol.]	G
वह एक पुरानी पेंड़ है। [That is an old tree.]	UG (M)
राज मेरा भाई है। [Raj is my brother.]	Dis
यह पुराना अचार है। [This is old pickle.]	G (M)
यह मेरा टमटम है। [This is my one horse carriage.]	UG
यह एक बड़ा चम्मच है। [This is a big spoon.]	G (M)
तुम्हारी क्या नाम है। [What is your name?]	Dis UG
वह बड़ा बंदूक है। [That is a big rifle.]	UG
आज तुम्हारी व्याकरण की जाँच है। [Today is your grammar's test.]	G