**A feature-based contrastive approach to the L2 acquisition of specificity**

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This study examined the acquisition of the Russian indefinite determiners (*kakoj-to* ‘which-to’ and *kakoj-nibud*’ ‘which-nibud’) encoding scopal specificity by English and Korean native speakers within the feature-based contrastive framework (Lardiere 2008, 2009). The specificity markers *kakoj-to* and *kakoj-nibud’* are reflections of different values of three major nominal features *definiteness*, *scopal specificity*, and *referentiality*. The learning task for each functional item differs with respect to mapping and re-configuration of the feature combinations. Our experimental data suggest that the morpheme *kakoj-to* was acquired early since English (*some*) and Korean (*eotteon* ‘some’) have the corresponding morphemes with the same featural representation as the Russian *kakoj-to*. The morpheme *kakoj-nibud*’ presented a greater difficulty since its featural make-up is not overtly realized in English or Korean, that is, learners had to re-assemble the target feature set. Such developmental patterns provide evidence that feature re-assembly poses a challenge in second language acquisition. On the basis of the findings, pedagogical implications are discussed.

INTRODUCTION

Over the last 20 years, the focus of generative syntactic theory has shifted from the Principles and Parameters model to a more minimalist approach to the grammar (Chomsky 1998, 2001). In this view of the grammar, formal features are encoded in the functional lexicon. Given that the syntactic operations in core syntax are universal, the parametric signature of a language is a set of functional features, including formal syntactic, phonological and semantic features, realized on the functional and lexical items of that language. Languages may differ in the subset of features they choose to realize (out of the set of all possible features), as well as in the lexical items where they choose to encode these features. Within this minimalist approach, second language (L2) learnability has been operationalized as 1) feature selection, learners’ task to successfully select the features that are not realized in their L1, and 2) feature realization (or mapping), learners’ task to acquire the features that are expressed in one way in their L1 but in another in the L2). Learnability issues in feature selection have been examined through the *Interpretability Hypothesis* (Tsimpli & Dimitrakopoulou 2007), which claims that interpretable features are acquirable while uninterpretable features are not. Learning problems in feature realization have been investigated through the *Missing Surface Inflection Hypothesis* (Prévost & White 2000) according to which all aspects of syntax are acquirable but L2 learners occasionally fail to retrieve the correct morphological and/or phonological forms due to communicative pressures.

However, empirical studies examining the aforementioned issues have produced inconsistent results, suggesting that the L2 learning challenge must be more complicated than the research questions investigated so far. To resolve the issue, Lardiere (2008, 2009) proposes that L2 acquisition involves not only the selection of formal feature values; it crucially involves acquiring which features (in which combinations) are encoded on which grammatical morphemes and words in the language. This view of the acquisition process involves (re)assembly of functional features onto new morphophonological expressions. A number of recent studies have explored this approach (Cho and Slabakova 2014; Gil & Marsden 2013; Hwang & Lardiere 2013; Spinner 2013; Yuan & Zhao2011). The present study continues to examine L2 learnability from this perspective through an investigation of the acquisition of specificity markers *kakoj-to* (which-to) and *kakoj-nibud’* (which-nibud’) in L2 Russian by L1-English and L1-Korean speakers. The empirical study reported in this paper investigates how these speakers (re)assemble the appropriate values of three semantic features (definiteness, referentiality, and specificity) that are bundled onto the specificity markers *kakoj-to* and *kakoj-nibud’* in Russian.

THEORETICAL BACKGROUND

**A feature-based approach to L2 acquisition: The Feature Reassembly Hypothesis**

Within the Minimalist framework (Borer 1984; Chomsky 1998, 2001), parametric variation is localized primarily within the functional categories (e.g., Determiner (D), Tense (T), Complementizer (C)) consisting of formal features (e.g. [±past], [±wh]) that cause various surface differences among languages. Within this framework, acquiring an L2 involves resetting parameters, that is, learning the functional elements and the formal features associated with them. Framed within this Minimalist Program and the Full Transfer/Full Access Hypothesis (Schwartz & Sprouse 1996), Lardiere (2008, 2009) proposes the Feature Reassembly Hypothesis which views L2 acquisition as involving the assembly or reassembly of the formal feature sets of functional categories from the way they are in the L1 into new formal configurations and mapping them onto new morphological reflections in the L2.

To take an example, this model proposes that the feature [+past] in English is bundled together with [±plural] into the past tense morpheme *–ed*. The features [past] and [number] are argued to be universal; however, languages differ as to how these features are assembled together into one or more morphemes. That is, not all languages have the feature set of [+past, ±plural] bundled together into one morpheme. In contrast to English, Russian [+past] is reflected in the morpheme *–l*. However, unlike the English past tense morpheme that appears by itself (since it is underspecified for plurality and gender), the Russian past tense morpheme necessarily appears with four different morphemes that reflect plurality and gender: *Ø, – a, –o, –i* (masculine, feminine, neuter, plural with no gender marking, respectively)

An English speaker learning past tense marking in L2 Russian has to perceive similarities between the functional meaning (i.e., past tense) of the target functional elements *–l, –la, lo,* and *–li* (*on kuri-l* ‘he smoked’, *ona kuri-l-a* ‘she smoked’, etc.)and the L1 functional element –*ed*.[[1]](#footnote-1) This similarity leads to initial mapping of the complete feature set of the L1 item onto the target item. That is, this learner might use any one of the four morpheme combinations (i.e., *l+Ø, l+a, l+o, l+i*) to indicate past tense regardless of plurality (e.g., *he* vs. *they*) or gender (*he* vs. *she*). The next step is to notice the differences between the L1 and target past tense morphemes. The learner will need to discern that past tense is realized into distinct morphemes in Russian (-*l*-) in relation to number and gender features (*Ø*, – *a, –o, –i*).[[2]](#footnote-2)

As this extended example illustrates, the complexity in L2 acquisition involves reassembling features for each target functional item by disassembling, deleting features from the L1 feature set and/or adding new features, then reassembling again on (possibly) new carrier morphemes. In this article, we examine the L2 acquisition of the Russian specificity markers that involves various combinations of three semantic features: definiteness, scopal specificity and refentiality.[[3]](#footnote-3) Since the first and the most crucial step in the feature reassembly process is to determine the similarities and differences between the L1 and the target morphemes, we next provide a descriptive overview of the specificity markers in the target language, Russian, in comparison to morphemes that signify specificity in the learners’ L1s, English and Korean.

**A contrastive analysis of specificity marking in Russian, English and Korean**

Two prominent types of specificity have been discussed in the literature: referential specificity (with values referential or non-referential) and scopal specificity (with values wide or narrow). A noun phrase (NP), regardless of its definiteness interpretation, can be ambiguous between a referential and non-referential reading. Consider examples from Lyons (1999:170).

1. I haven’t started the class yet; I’m missing a student – Mary’s always late.
2. I haven’t started the class yet; I’m missing a student – there should be fifteen, and I only count fourteen.

In (1), the speaker has a particular individual in mind and *a student* refers to a specific student, i.e., Mary. In (2), on the other hand, the identity of the student is of no importance. It describes but does not refer to a particular student. Fodor and Sag (1982) characterize this distinction as the *speaker’s intent to refer*, which is often expressed lexically by the demonstrative *this* in spoken English, as illustrated in (3) (Macclaran 1982: 85), see also Ionin (2006).

1. There is this man who lives upstairs from me who is driving me mad because he jumps rope at 2a.m. every night.

In this example, *this* can be replaced by the indefinite article *a* or the modifier *a certain.* Unlike the indefinite article *a*, however,which is underspecified for specificity, *this* encodes referential specificity. The referential *this* “draws attention to the fact that the speaker has a particular referent in mind, about which further information may be given” (Macclaran, 1982: 90). Ionin (2006, 2010) calls this pragmatic component *noteworthiness* and uses the term ‘referential *this*’ (or *this*ref) for the referential indefinite to distinguish it from the deictic demonstrative *this*. See examples from Macclaran (1982: 88).

1. John has a / this weird purple phone.
2. John has a / #this phone, so you can reach me there.

In (4), the referential *this* can be used since the speaker intends to refer to a phone which has some unique noteworthy property (i.e., being purple). In (5), the speaker does not intend to refer to a particular phone with a unique property; thus, use of the referential *this* is infelicitous.[[4]](#footnote-4)

Unlike referentiality, scope ambiguity arises only in contexts involving logical operators such as intensional verbs (e.g., *want, intend, look for*, etc.), negation, questions, modals, conditionals, or future tense. These elements set up non-veridical contexts where a proposition is non-factual, hypothetical, or potential. See examples from Geist (2008: 152).

1. a. John wants to marry a student. She is rich.

b. ∃x (student (x) & John wants to marry x)

1. a. John wants to marry a student. He couldn’t find one.

b. John wants to marry & ∃x (student (x))

If the NP *a student* takes wide scope, that is, the [±specific] value of the NP is fixed outside the intensional verb *want* (*a student* < *want*), as illustrated in the simplified formula in (6b), the NP is interpreted as specific, as in (6a). There exists a student who John wants to marry. If the NP takes narrow scope (*want* < *a student*), that is, the [±specific] value is fixed in the domain of the verb, as shown in (7b), the noun phrase gets a non-specific reading as in (7a). The speaker of (7) is referring to John’s desire to marry a type of individual (a student), whose identity is not known. Just as referential ambiguity, scope ambiguity can only be resolved by context.

To distinguish the two types of ambiguity related to specificity, we will use the terms *specific* [+specific] and *non-specific* [−specific] for the readings in non-veridical contexts (or opaque contexts), as in (6-7), and *referential* [+referential] and *non-referential* [–referential] for the interpretations in transparent contexts, as in (1-5). As shown in Ioup (1977), the two values of scopal specificity (i.e., wide/specific and narrow/non-specific) and the two values of referentiality (i.e., referential and non-referential) can vary independently. That is, noun phrases with a wide-scope reading can be either referential or non-referential, and non-referential noun phrases can take either wide or narrow scope, but narrow scope noun phrases are always non-referential, as illustrated in Figure 1 (adapted from Lyons 1999: 174).

|  |  |
| --- | --- |
| Scopal Specificity | Referential Specificity |
| wide scope [+specific] | Referential [+referential] |
| narrow scope [–specific] | non-referential [–referential] |

*Figure 1: Semantic compatibility between scopal specificity and referential specificity*

Some languages, such as Russian, distinguish these two types of specificity by overtly marking one type but not the other (Lyons, 1999). Some languages do not have overt (morphophonological) encoding for specificity at all. Thus, languages differ in the way they treat these two kinds of specificity and which type of specificity (scopal or referential) they mark overtly.

As discussed in Dahl (1970) and Ioup (1977), Russian marks scopal specificity through indefinite determiners consisting of an interrogative (the equivalents of *who, what, which*) with a suffix –*to* or –*nibud’.* These two morphemes only appear with indefinite noun phrases; thus, they necessarily carry the [–definite] feature. The indefinite determiner *kakoj-to* ‘which-to’ takes wide scope, and is thus interpreted as specific, as in (8); the indefinite determiner *kakoj-nibud’ ‘*which-nibud’’ takes narrow scope, and is thus non-specific, as in (13). Both determiners are non-referential (that is, the speaker has no intention to refer to the entity), as illustrated in (8-13).

1. Ivan xočet ženit’sja na **kakoj-to /# kakoj-nibud’** studentke. Ja ne znaju na kakoj. Ivan want marry on which-to student I not know on which (one)

‘Ivan wants to marry a student. I don’t know who.’ [−def, −ref, +spec]

1. Ivan xočet ženit’sja na #**kakoj-to /#kakoj-nibud’** studentke. Ee zovut Maša.

Ivan want marry on which-to’ student her (they) called Masha.

‘Ivan wants to marry a student. Her name is Masha.’ [−def, +ref, +spec]

1. Igor xočet ženit’sja na #**kakoj-to/kakoj-nibud’** studentke. On poka nikogo ne našel.

Ivan want marry on which-to’ student He yet not found.

‘Ivan wants to marry a student. He hasn’t found one yet.’ [−def, −ref, −spec]

The examples above demonstrate that *kakoj-to* is a realization of the feature bundle [−definite, −referential, +specific]. This is why *kakoj-to* is felicitous in (8) but infelicitous in the [–definite, +referential, +specific] context, as in (9) and [–definite, –referential, −specific] context, as in (10). The morpheme *kakoj-nibud’* is an expression of the feature combination [−definite, −referential, −specific] which is illustrated in (10). In contexts with [−definite, −referential, +specific] or [−definite, +referential, −specific] interpretations, *kakoj-nibud’* is infelicitous, as in (8) and (9), respectively.

English and Korean also have morphemes that express specificity: English *some* and Korean *eotteon* ‘some’. These morphemes express the exact same feature combination [−definite, −referential, +specific] that Russian *kakoj-to* encodes. Consider English examples in (11a-c) and Korean examples in (12a-c).

1. John wants to marry some girl….a. #She is rich. [−def, +ref, +spec]

b. But I don’t know who. [−def, −ref, +spec]

c. #He hasn’t found one. [−def, −ref, −spec]

1. John-un **eotteon** yeoja hago gyeolhonhago sipeohanda.

John-TOP some girl with marry want.

‘John wants to marry some girl.’

1. #Kunjeo-nun buja-da.

She-TOP rich-is.

‘She is rich’ [−def, +ref, +spec]

1. Nukwu-inji moreunda.

Who-whether not know

‘I don’t know who.’ [−def, −ref, +spec]

1. # Ajik mot-chajatda

yet not-found

‘He hasn’t found one yet.’ [−def, −ref, −spec]

As shown in (11a), the second sentence (*she is rich*) is not a felicitous continuation of the first sentence since *some* indicates that the speaker has no intent to refer to the girl. . Using *some* in narrow scope contexts, as in (11c), is also infelicitous. The corresponding morpheme in Korean *eotteon* ‘some’ is felicitous in context with a [−definite, −referential, +specific] reading, as in (12b) but it is infelicitous in contexts with the interpretation of [−definite, +referential, +specific], as in (12a), and in [−definite, −referential, −specific] contexts, as in (12c). Since *some* and *eotteon* reflect the exact same feature combination as *kakoj-to*, we expect that English speakers will map *kakoj-to* onto *some* and Korean speakers will map *kakoj-to* onto *eotteon*.

With respect to the non-specificity marker *kakoj-nibud*’ with the features [−definite, −referential, −specific], neither English nor Korean has a morpheme that encodes the exact same feature combination. One might argue that English *any* (also Korean *amwu* ‘any’) expresses [−definite, −referential, −specific] just as Russian *kakoj-nibud’* does, as in (13-14).

1. Ivan xočet ženitsja na **kakoj-nibud’** studentke. On poka nikogo ne našel.

Ivan want marry on which-nibud’ student He yet not found.

‘Ivan wants to marry **any** student. He hasn’t found one yet.’ [−def, −ref, −spec]

1. Ivan un **amwu** haksaeng-hago gyeolhon-hagosipeohanda. Ajik mot chatatda.

Ivan-TOP any student-with marry want Yet not found

‘Ivan wants to marry any student. He hasn’t found one yet.’ [−def, −ref, −spec]

In these particular examples in (13-14), English *any* (in the translations) and Korean *amwu* ‘any’ seem to correspond to Russian *kakoj-nibud’.* However, English *any* and Russian *kakoj-nibud’* differ from each other in their semantics and syntactic behaviors. First of all, Russian *kakoj-nibud’* is a dedicated marker that encodes non-specificity. English *any*, on the other hand, as analyzed in Dayal (2004), is a free choice universal quantifier whose fundamental function is to mark universality. Its indefinite specific or non-specific interpretation arises from syntactic and pragmatic environments. Moreover, Russian has a free choice universal quantifier *ljuboj* which fully corresponds to English *any* and Korean *amwu* ‘any’.[[5]](#footnote-5)

In order for sentences containing *kakoj-nibud’* to be grammatical, the indefinite pronoun needs to be licensed by intensional operators such as *xočet* ‘want’, as in (15), a universal quantifier such as *každyj* ‘every’ in (16), quantificational adverbs such as *často* ‘often’ in (17), or a conditional *if*-clause as in (18) (Yanovich 2005: 7).

1. Petja **xočet** vstretit’ **kogo-nibud’** iz svoix odnoklassnic.

Petja wants meet who-nibud’ from own classmate-pl.fem

‘Petja wants to meet one of his female classmates.’

1. Ka**ždyj** mal’čik vstretil **kogo-nibud’** iz svoix odnoklassnic.

Every boy met who-nibud’ from own classmate-pl.fem

‘Every boy met one of his female classmates.’

1. Petja **často** vstrečal **kogo-nibud’** iz svoix odnoklasnic.

Petja often met who-nibud’ from own classmate-pl.fem

‘Petja often met one of his female classmates.’

1. Ka**ždyj** mal’čik budet rad, **esli** vstretit **kogo-nibud’** iz svoix odnoklassnic.

Every boy will be glad, if meet who-nibud’ from own classmate-pl.fem

‘Every boy will be glad if he meets one of his female classmates.’

Given these semantic and syntactic similarities and differences among Russian, English and Korean specificity markers with respect to the feature combinations each marker encodes, we next identify learning tasks and formulate predictions.

LEARNING TASKS AND PREDICTIONS

Under the Feature Reassembly model, the L2 learning task involves two separate stages: mapping and feature reassembly. Some linguistic properties can present more difficulty in mapping while others cause more challenge in feature reassembly (Gil & Marsden 2013). The lexical item examined in our study, at least for L2 learners in the instructional setting, should not pose any difficulty as *kakoj-to* fully corresponds to English *some* and Korean *eotteon* in meaning and grammatical function. A partial correspondence in meaning should lead learners to map *kakoj-nibud’* onto English *any* and Korean *amwu*. In addition, this mapping task may be facilitated by explicit instruction.[[6]](#footnote-6) Thus, we predict that mapping would not create any learning challenge. The next step, however, , can complicate the learning process. The feature bundle on *kakoj-nibud*’ [−definite, −referential, −specific] is not overtly represented either in English or in Korean. In addition, *kakoj-nibud*’ has to be licensed by intensional verbs, questions or negation Feature combinations encoded by specificity markers in Russian, English, and Korean are summarized in Table 1 below.

*Table 1: Feature combinations of specificity markers in Russian, English, and Korean*

|  |  |
| --- | --- |
| Specificity markers | Feature combinations |
| Russian *kakoj-to* | [−definite, −referential, +specific] |
| Russian *kakoj-nibud’* | [−definite, −referential, −specific] |
| English *some/sm* | [−definite, −referential, +specific] |
| English *any* | [−definite, ±referential, ±specific] |
| Korean *eotteon* | [−definite, −referential, +specific] |
| Korean *amwu* | [−definite, ±referential, ±specific] |

As the shaded cells in Table 1 show, Russian *kakoj-to*, English *some*, and Korean *eotteon* reflect the same feature values, that is, L1-English and L1-Korean learners need to map the morphemes without re-assembling features. As for *kakoj-nibud*’, neither English nor Korean has a morpheme exactly corresponding in features. This situation implies that both English-native and Korean-native learners will necessarily have to assemble the formal feature sets of the target functional morphemes *kakoj-nibud*’. Within the feature reassembly approach, the first step in L2 acquisition is mapping based on similarities between the functional meanings of the target morphemes and those of the L1 morphemes. After the initial mapping, learners have to adjust the L1 feature set to the target feature set by rearranging formal features as well as adapting syntactic and/or pragmatic conditioning factors associated with the target functional items.

Based on the similarities of the functional meanings of *kakoj-to* and *kakoj-nibud*’ and explicit classroom instruction, we expect that English speakers will map *kakoj-to* onto *some* and *kakoj-nibud*’ onto *any;* Korean speakers will map *kakoj-to* and *kakoj-nibud*’ onto *eotteon* and *amwu*, respectively. They will be helped in this mapping by potential explicit instruction. Many Russian language teachers and textbooks in the US and Korea indicate *some* and *any* as English equivalents for *kakoj-to* and *kakoj-nibud’* and *eotteon* and *amwu* as Korean equivalents for these morphemes.[[7]](#footnote-7) As we showed in the previous section, this is only partially true. Since *kakoj-to*, *some*, and *eotteon* encode the same features, the learning task for this functional item is simple mapping without additional re-assembly of features. As for *kakoj-nibud’,* neither English nor Korean has a dedicated overt morpholexical item that encodes the same features. Thus, we predict that English and Korean speakers will initially map *kakoj-nibud*’ onto a free choice quantifier *any* in English and *amwu* ‘any’ in Korean. This mapping may also be prompted by overt instruction on textbooks and teachers. Learners’ next task, then, will be to delete the values [+referential] and [+specific] from the L1 feature set. Hence, we expect learners to have more difficulties with *kakoj-nibud’* (i.e., acquired later) than with *kakoj-to*.

METHODS

**Participants**

The participants in this study included a control group of native speakers of Russian (n=56), English-native learners of Russian (n=49), and Korean-native learners of Russian (n=53). The monolingual Russian speaker controls were recruited and tested in Russia. L1-English learners were tested in the US and Moscow, while L1-Korean learners were tested in Seoul and Moscow. The participants were asked to provide minimal demographic information such as age group, gender, native language, and length of Russian study. See Table 2 for the details of the participants’ characteristics.

*Table 2: Demographic characteristics*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Gender | Age group | Years of studying  Russian | Proficiency level |
| Native speakers  (n = 56) | 27 male  29 female | I (n = 18)  II (n = 34)  III (n = 4) | N/A | N/A |
| L1-English  (n = 49) | 20 male  29 female | I (n = 29)  II (n = 17)  III (n = 3) | Range 1-30  (*M* = 4.9) | Beginner (n = 10)  Intermediate (n = 24)  Advanced (n = 15) |
| L1-Korean  (n = 53) | 21 male  32 female | I (n = 33)  II (n = 20) | Range 1.5-19  (*M* = 4.05) | Beginner (n = 19)  Intermediate (n = 15)  Advanced (n = 19) |

Note: Age group I =18-30, Age group II = 31-50, Age group III = over 50

**Instruments and procedures**

In order to test the predictions formulated above, three offline tests were employed in this study: a proficiency task, a felicity judgment task and a grammaticality judgment task. At the beginning of each testing session, participants were given detailed instructions in their native language. It took on average an hour to finish the tasks and participants were compensated for their time and effort.

The Russian proficiency task was adapted from the standardized Russian language test (also known as TRKI – *tipovoj test po russkomu jazyku kak inostrannomu* or TORFL-Test of Russian as a Foreign Language) for the level 3 (high advanced level) developed by the Ministry of Education of the Russian Federation. In this experiment, only the subtest for grammar and vocabulary was used. Forty items out of the 100 comprising this test were chosen, based on the level of difficulty. According to the TRKI’s scoring criteria, those participants who answer correctly more than 65% of the test items are considered to be at the advanced level of proficiency in Russian. Three levels of proficiency (beginner, intermediate and advanced) were determined based on the proficiency test scores. Those who were correct on more than 65% of the test items (65% of 40 items = 24) were placed in the advanced group. Learners who showed less than 40% of accuracy (40% of 40 = 16) were placed in the beginner group. Those who scored between 16 and 24 were placed in the intermediate group. Korean and English groups were matched for proficiency and additional *t*-tests were used to ensure two L1 groups of the same proficiency level were fully comparable.[[8]](#footnote-8)

The felicity judgment task (FJT, k = 64) was designed to test for semantic knowledge of specificity and tested four properties. One (the acquisition of specificity markers) is reported on in this article and the other three properties are not reported on here. All the test items for the four different experimental conditions were combined in one felicity judgment task. By doing so, test items for one property served as filler items for the other properties, in addition to extra filler items. There were four test items in each condition; each test item consists of a short story followed by two target sentences. Participants were asked to read short passages in their L1 (i.e., Russian, English or Korean) and rate the target sentences (all in Russian) as a felicitous or infelicitous description of the stories on a 5-point scale (1 = infelicitous, 5 = felicitous). Below are sample test items for contexts where *kakoj-to* should be accepted in (19) and for contexts where *kakoj-nibud*’ should be rated high in (20).

1. *Contexts with a specific interpretation (n = 4), possible ratings and expected answer*

My brother wants to borrow money from me. He says that he saw a nice car at a dealership last week. He already has a car and I don’t think his wife will be happy if he buys another car.

a. Moj brat xočet kupit’ kakuju-to mašinu. [+specific]

my brother want buy which-to-ACC car-ACC

1 2 3 4 5 I don’t know

b. Moj brat xočet kupit’ kakuju-nibud’ mašinu. [−specific]

my brother want buy which-nibud’-ACC car-ACC

1 2 3 4 5 I don’t know

Both: ‘My brother wants to buy a car.’

1. *Contexts with a non-specific interpretation* *(n = 4), possible ratings and expected answer*

Ivan just cannot find a date. I tried to set him up with all of my single female friends, but somehow he can’t make it to the second date. Ivan even tried online dating, but with no success. He told me that he was desperate.

a. Ivan xočet vstretit’sja s kakoj-to devuškoj. [+specific]

Ivan want meet with which-to-INSTR girl-INSTR

1 2 3 4 5 I don’t know

1. Ivan xočet vstretit’sja s kakoj-nibud’ devuškoj. [−specific]

Ivan want meet with which-nibud’-INSTR girl-INSTR

1 2 3 4 5 I don’t know

Both: ‘Ivan wants to meet a girl.’

In context (19) where the referent *mašinu* ‘car-ACC’ is specific, (19a) should be accepted, while (19b) should be rejected. Context (20), on the other hand, establishes a non-specific referent *devuškoj* ‘girl-INSTR’; thus, the sentence containing the referent marked with specificity through the specific determiner *kakoj-nibud’*, as in (20b), should be preferred over (20a) where the referent appears with the specific determiner *kakoj-to*.

We will also examine some sentences from the Grammaticality Judgment Task that are relevant to the learners’ initial mapping of morphemes. The objective of the grammaticality judgment task (GJT, n = 73) was to examine learners’ initial mapping patterns, that is, if learners initially map *kakoj-nibud’* onto *any* or *amwu,* in which case learners should be able to discriminate between grammatical and ungrammatical sentences. The GJT contained four grammatical and four ungrammatical sentences. Indefinite determiner *kakoj*-*nibud*’ is ungrammatical in simple declarative sentences without a licenser such as an intensional verb (*want, search for*), quantifiers (*every*), or quantificational adverbs (*often*). In this task, learners were asked to rate the grammaticality of the sentences on a 5-point scale (1 as completely ungrammatical and 5 as perfectly grammatical) As in the FJT, there was an option for ‘I don’t know’ in the GJT. Below are sample GJT test items.

1. Ty s kakoj-nibud’ devuškoj vstrečaeš’sja?

you with which-nibud’ girl meet?

‘Are you seeing/dating a girl / any girl?’

1. \*Paša vstrečaetsja s kakoj-nibud’ devuškoj.

Pasha meet with which-nibud’ girl

‘Pasha is seeing a girl / \*any girl.’

In sentences such as (21), *kakoj-nibud*’is licenced by a question operator. The equivalent English sentence is more natural with the indefinite article, but indefinite *any* is also appropriate*.* On the other hand, sentences as in (22) lacked a licensor for *kakoj-nibud*’, which resulted in ungrammaticality. The choice of *any* in the translation was impossible. We intended these sentences to shed light on the initial mapping between *kakoj-nibud*’ and *any*/*eotteon*. The expectation was that if learners had already accomplished this mapping, they would be able to distinguish between the grammatical (21) and the ungrammatical (22).

**Data analyses**

Within the Feature Reassembly framework, we hypothesized that learners from two different L1 background, Korean and English, will show similar acquisitional patterns, that is they will acquire *kakoj-to* earlier than *kakoj-nibud’*. The experimental design has one between-subjects factor (Group), with seven levels (Russian native speaker controls, L1-English beginner / intermediate /advanced, L1-Korean beginner /intermediate /advanced). The within-subjects variable is Condition, with four levels: 1) *kakoj-to* (acceptable) in [+specific] context, 2) *kakoj-nibud’* (unacceptable) in [+specific] context, 3) *kakoj-nibud’* (acceptable) in [−specific], and 4) *kakoj-to* (unacceptable) in [−specific] context, as seen in Table 3.

*Table 3: Four conditions of the experiment*

|  |  |  |
| --- | --- | --- |
|  | *kakoj-to* [+specific, −referential] | *kakoj-nibud’* [−specific, −referential] |
| [+specific] context | acceptable (condition 1) | unacceptable (condition 2) |
| [−specific] context | unacceptable (condition 3) | acceptable (condition 4) |

A repeated-measures ANOVA was conducted to see if there was a significant effect of Group, Condition or an Interaction between Group and Condition. In order to examine the robustness of effects across participants as well as test items, both by-participants (F1) and by-items analyses (F2) are reported. Additional *t*-tests were used on the mean rates of each group to find whether each group showed a significant rate-difference between acceptable (felicitous) and unacceptable (infelicitous) sentences. In order to avoid the possibility of higher Type I error when doing multiple *t*-tests, we conducted each *t*-test independently for each group and each comparison instead of using a Bonferroni correction.

RESULTS

**Group results**

As can be seen in Figure 2 and Figure 3, both the L1-English and L1-Korean groups as well as the Russian native speaker control group generally rated *kakoj-to* higher than *kakoj-nibud’* in [+specific] contexts and rated *kakoj-nibud’* higher in [−specific] contexts. Columns in green are for the acceptable construction in each condition.

*Figure 2: Mean ratings of acceptable and unacceptable sentences in [+specific] contexts*

*Figure 3: Mean ratings of acceptable and unacceptable sentences in [−specific] contexts*

A repeated-measures ANOVA (7 groups x 4 conditions) performed on the whole dataset showed a significant effect of Condition (*F*1(3, 453) = 170.86, *p* < .0001, partial eta squared = .531, observed power = 1.0), a significant effect of Group (*F*1 (6, 151) = 2.336, *p* = .035, partial eta squared = .085, observed power = .794), and a significant interaction between Condition\*Group (*F*1 (18, 453) = 3.911, *p* < .0001, partial eta squared = .134, observed power = 1.0).[[9]](#footnote-9) A by-items analysis on the data revealed that there is a main effect of Condition (*F*2 (1, 15) = 10.229, *p* < .006, partial eta squared = .405, observed power = .848). A series of *t*-tests were run to find whether learners (and which group) have established a significant contrast between acceptable and unacceptable sentences in their grammar by correctly mapping [+specific] and [−specific] meanings onto *kakoj-to* and *kakoj-nibud’*, respectively. The comparison results are summarized in Table 4 below.[[10]](#footnote-10)

*Table 4: Paired samples t-tests between acceptable and unacceptable sentences in two different contexts within each group*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | [+specific] contexts  ✓*kakoj-to* vs. #*kakoj-nibud’* | | [−specific] contexts  *#kakoj-to* vs. ✓*kakoj-nibud’* | |
|  | *t* | *p* | *t* | *p* |
| Russian NS  (n = 56) | 12.33 | < .0001\* | −10.257 | < .0001\* |
| E-Beginner  (n = 10) | 5.947 | < .0001\* | −2.498 | .034\* |
| E-Intermediate  (n = 24) | 5.904 | < .0001\* | −3.503 | .002\* |
| E-Advanced  (n = 15) | 15.369 | < .0001\* | −16.528 | < .0001\* |
| K-Beginner  (n = 19) | 2.536 | .021\* | −1.856 | .08 |
| K-Intermediate  (n = 15) | 6.909 | < .0001\* | −6.883 | < .0001\* |
| K-Advanced  (n = 19) | 9.008 | < .0001\* | −5.147 | < .0001\* |

Note: # stands for unacceptable, ✓ stands for acceptable

As seen in the table above, all groups except the Korean beginner group made a significant distinction in their rating between acceptable and unacceptable sentences in both specific and non-specific contexts. The Korean beginner group showed a contrast between acceptable and unacceptable sentences in the specific context but not in the non-specific context. We return to this issue in the discussion section and offer some possible explanation for the data and discuss the significance for teaching and learning in the discussion.

The grammaticality judgment data from the native control group confirmed the predicted pattern for the grammatical and ungrammatical condition (the presence/absence of licensor), as can be seen in Table 4. A repeated-measures ANOVA on the whole data revealed a main effect of grammaticality in by-participants (F1) and by-items (F2) analyses (*F*1 (6, 147) = 3.728, *p* = .002, partial eta = .132, observed power = .956; *F*2 (1, 7) = 10.109, p = .016, partial eta = .591, observed power = .778). Additional t-tests were conducted to identify which group has established a contrast between grammatical and ungrammatical sentences. Table 5 presents means and contrasts in the grammaticality judgment task.

*Table 5: Mean ratings and grammaticality contrasts (paired samples t-tests) on Grammaticality Judgment Task, probing for acceptability of kakoj-nibud’*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Licensor (n = 4) (Grammatical) | No licensor (n = 4 ) (Ungrammatical) | Contrast: grammatical vs. ungrammatical sentences | |
| Mean (SD) | Mean (SD) | *t* | *p* |
| Russian NS  (n = 56) | 4.43 (.58) | 1.58 (.68) | 24.184 | < .0001\* |
| E Beginner  (n = 10) | 3.54 (1.21) | 3.45 (1.28) | 0.168 | .87 |
| E Intermediate  (n = 24) | 3.96 (.99) | 3.04 (1.34) | 3.276 | .003\* |
| E Advanced  (n = 15) | 4.21 (.74) | 2.17 (1.43) | 5.047 | < .0001\* |
| K Beginner  (n = 19) | 3.71 (1.35) | 3.15(1.43) | 1.787 | .091 |
| K Intermediate  (n = 15) | 3.98 (1.19) | 2.87 (1.53) | 3.501 | .004\* |
| K Advanced  (n = 19) | 4 (.94) | 2.25 (1.23) | 6.102 | < .0001\* |

**Individual results**

Group results on the felicity judgment showed that Korean beginner learners had established a contrast between the acceptable and unacceptable sentences in [+specific] contexts (where the specificity marker *kakoj-to* should be rated high), while they failed to show a contrast in [−specific] contexts (where the non-specificity marker *kakoj-nibud’* should be preferred. (See Tables 3 and 4 for *t* and *p* values). This outcome is as we predicted. The L1-English group data, however, indicated that all levels of the English-speaking learners had established a contrast between the acceptable and unacceptable sentences in both [+specific] and [−specific] contexts. We expected that the English and Korean learners will show the same developmental patterns, that is, learners would have more difficulty in acquiring *kakoj-nibud’* than *kakoj-to* since the acquisition of *kakoj-nibud’* requires feature re-assembly while *kakoj-to* does not. Thus the English group data did not confirm our prediction. We return to this point in the discussion.

Since group data often conceal different mean ratings of individuals, we further examined individual response patterns. Note that ratings were on a scale of 1 to 5 both in the FJT and the GJT. We analyzed individual performance in the following way. If a learner rated felicitous/grammatical sentences higher than infelicitous/ungrammatical sentences by at least one point, then we accepted that this individual had established a contrast between felicitous and infelicitous interpretation. This criterion of calculating individual results, although admittedly arbitrary, is sufficiently conservative, as even some native speakers did not meet it fully. The results are given in Table 6.

*Table 6: Individual data: Contrasts between acceptable and unacceptable sentences on FJT and grammatical and ungrammatical sentences on GJT (by 1 point or more)*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Contrast between acceptable (*kakoj-to)* and unacceptable (*kakoj-nibud’*) sentences in  [+specific] contexts | Contrast between acceptable (*kakoj-nibud*’) and unacceptable (*kakoj-to*) sentences in  [−specific] contexts | Contrast between grammatical and ungrammatical sentences with *kakoj-nibud*’ |
| Russian NS (n = 56) | 48 (85.71 %) | 41 (73.21 %) | 55 (98.21%) |
| E Beginner (n = 10) | 10 (100%) | 7 (70%) | 3 (30%) |
| E Interm. (n = 24) | 20 (83.33%) | 18 (75%) | 10 (41.67%) |
| E Advanced (n = 15) | 15 (100%) | 15 (100%) | 10 (80%) |
| K Beginner (n = 19) | 13 (68.42%) | 10 (52.63%) | 7 (36.84%) |
| K Interm. (n = 15) | 15 (100%) | 13 (86.67%) | 6 (40%) |
| K Advanced (n = 19) | 19 (100%) | 16 (84.21%) | 15 (78.95%) |

Note: # stands for unacceptable, ✓ stands for acceptable

As indicated in Table 6, all ten learners in the English beginner group showed a contrast in [+specific] contexts (the first column), that is, they correctly rated *kakoj-to* higher than *kakoj-nibud’* in [−specific] contexts. However, fewer individual participants (70%) showed the expected contrast, as indicated in the second column in the table. This pattern is true for both the English and Korean groups across all proficiency levels, as well as for the native controls. As can be seen in the third column, fewer subjects in the two beginner groups had acquired the need for *kakoj-nibud*’ to be licensed (just as English *any* and Korean *amwu*). Both the group and individual data will be discussed in more detail in the next section.

DISCUSSION

**Theoretical Implications**

This experimental study set out to investigate the acquisition of functional morphemes *kakoj-to* and *kakoj-nibud’* in L2-Russian by English and Korean native speakers. within Lardiere’s Feature Re-assembly model, framed within the feature-based contrastive linguistic approach. We hypothesized that both English and Korean groups would perform similarly, since they have similar learning tasks in acquiring Russian indefinite determiners. The choice of English native and Korean native speakers learning Russian as an L2 was deliberate. These two native languages are quite dissimilar, and also quite different from Russian.

However, the Russian indefinite determiners we examined do not require the same amount of reassembly. It was our intent to show that when the task of reassembly is relatively simpler because the L2 target item (*kakoj-to*) can map onto a native lexical item, it will be accomplished earlier and with higher accuracy. On the other hand, the relatively more complicated learning task involving the determiner *kakoj-nibud’* was expected tocreate more difficulty. Note that mapping *kakoj-nibud’* and *kakoj-to* to the English indefinite article *a* would not help the learners much, as the latter allows both [+specific] and [−specific] readings.

Our specific prediction was that English and Korean speakers would acquire *kakoj*-*to* earlier than *kakoj-nibud’* since the acquisition of *kakoj-to* does not require feature re-assembly while the acquisition of *kakoj-nibud’* does. Since English *some* and Korean *eotteon* fully correspond to *kakoj-to* in their functional meanings, learners simply have to map *kakoj-to* onto *some* or *eotteon* without having to add or delete features. The features bundled onto *kakoj-nibud’* [−definite, −referential, −specific], however, are morphologically realized neither in English nor in Korean. We expected that learners would initially map *kakoj-nibud’* onto English *any* and Korean *amwu* based on the similarities in meaning and grammatical function between *kakoj-nibud’* and their L1 morpheme, i.e. *any* in English and *amwu* in Korean. In this mapping, learners may also have been prompted by explicit classroom instruction. After the initial mapping, learners have to re-assemble the L1 features [−definite, ±referential, ±specific] to the appropriate target feature set [−definite, −referential, −specific]. Specifically, learners have to delete the values [+referential, +specific] from their L1 feature set.

The results of our experimental study indicate that acquisition of Russian indefinite determiners distinguishing specificity was not difficult, in general. This conclusion is supported by the fact that the intermediate and advanced learners from both native languages were quite successful (see Table 6). The biggest majorities of participants, up to 100% in some groups, demonstrate they distinguish between acceptable and unacceptable sentences.

Still, our results also allow us to chart a developmental path for the learners. In discussing this path, we rely more on the individual than the group results, although both point in the same direction. Looking at the first two columns of Table 4, we notice that all learner groups have established the required knowledge that in specific contexts, only *kakoj-to* is the appropriate indefinite determiner. This is not the case for the non-specific contexts. Although English beginners as a group demonstrate a successful contrast in specific contexts as well, Korean beginners have not established that contrast yet. We speculate that the lower number of subjects in the English beginning group could have been the reason for this discrepancy. However, when we compare in Table 6 how individual learners do with these two contrasts, further discrepancies are visible. All 10 English beginners evidence knowledge of the specific pronoun while only 7 have mastered the non-specific pronoun. The numbers are 13 versus 10 out of 19, for the Korean beginners, 68% and 52%, respectively.

The next issue we must address is the unpredicted difference in the performance of the English and Korean learners. In the GJT, the language-based sets of groups performed similarly.(see Table 5). However on the FJT, the Korean beginners had not established the expected contrast in [–specific] contexts, while the English beginners had already established that contrast (see Table 4). Thus the English beginners did better than the Korean beginners with the more difficult reassembly task. We speculate that one reason for this finding may be the learning environment. Although the groups were at comparable proficiency levels, most English participants were learning Russian in an immersion program (where instruction was in Russian) while the Korean participants were studying Russian in a traditional classroom setting (where instruction was in Korean). We cannot settle this issue definitively in this article, since we did not set out to study the effect of the learning environment on the acquisition task, and our groups are not suited to such an inquiry. However, we note that at higher proficiency levels, these differences between groups matched by proficiency persist with *kakoj-nibud’* while they disappear with *kakoj-to*, the more easily mapped determiner (see Table 6).

Finally, we would like to discuss the native speakers’ non-categorical judgments. As shown in Table 6, the Russian native speakers accepted *kakoj-nibud’* in non-specific contexts only in 73.2% of the test sentences. In other words, the native speakers judged the specificity marker *kakoj-to* in non-specific contexts as not completely unacceptable. In general, native speakers of Russian have told us that they consider *kakoj-to* and *kakoj-nibud’* to be opposed in markedness, with *kakoj-to* unmarked, hence appearing in more contexts while *kakoj-nibud’* marked, hence more restricted. Such oppositions in markedness are pervasive in the Russian grammar, the most famous example being the imperfective–perfective opposition. It is possible that the native Russian speakers needed even more restricted context in order to accept *kakoj-nibud’*. A similar issue has arisen in the native speakers’ judgments on *kakoj-to* in specific contexts. The Russian native speakers accepted *kakoj-to* in 85.7%, which means some native speakers unexpectedly allowed *kakoj-nibud’* in specific contexts. It is possible that the native speaker participants may have created an implicit licensor for *kakoj-nibud’* not explicitly given in our (specific) context. Epistemic modifiers such as *verojatno* ‘possibly’, *možet byt’* ‘maybe’ can also license *kakoj-nibud’*, as in (23).[[11]](#footnote-11)   
(23) Verojatno on vstretil kakogo-nibud’ odnoklassnika.

possibly he met which-nibud’ classmate.

‘Possibly he met a classmate.’   
We leave these findings to be re-tested, confirmed and explained in future research.

**Pedagogical Implications**

In addition to its theoretical implications for L2 learnability, the present study has implications for teaching grammatical morphemes. Recall that the felicity judgment task provided the learners with ample context by asking them to read a fully developed story. In contrast, the grammaticality judgment task asked them to evaluate acceptability of *kakoj-nibud’* in simple sentences, in the presence or absence of a grammatical licensor for the non-specific indefinite pronoun. This task proved harder for the learners. Only around 30% of beginning learners are capable of noticing the need for a licensor of *kakoj-nibud’*, and the percentage of successful learners even in the advanced groups does not go up to 100%. This is true although simple mapping of *any*/*amwu* onto *kakoj-nibud’* would have helped the learners in this case, see example in (24).

(24) \*I bought any toy.

We attribute this lower accuracy on the part of all learners to the more complex learning task: the English and Korean equivalents of *kakoj-nibud’* do not carry exactly the same grammatical features. Although our learners are successful as groups by the intermediate proficiency level (see Table 5), individuals in all three proficiency levels are still figuring out the exact feature reassembly needed for acquiring *kakoj-nibud*’.

Note that all our learners were generally more successful on the task where context was abundant, compared to the task where only grammatical licensors were present for the non-specific indefinite determiner. This finding leads us to propose a pedagogical implication. Indefinite determiners have to be presented and practiced in language classrooms in ample and unambiguous contexts (Slabakova 2008, 2013). Learners can be expected to notice the need for licensors (intensional verb, negation, question, quantifier) for *kakoj-nibud’* and the lack of such restricted context for *kakoj-to,* but it will take substantial exposure to L2 input to accomplish this and the success is not guaranteed. Note also that in explicit classroom teaching, Russian indefinite determiners should not be compared to the English indefinite articles, because *kakoj-to* and *kakoj-nibud’* encode scopal specificify (wide scope vs. narrow scope) while the English indefinite article is underspecified for scope. It could be helpful, just in this particular learning situation, to emphasize the parallel meanings of *any* and *kakoj-nibud*’ which would get learners at least some way to noticing the need of licensing. In addition, feature re-assembly of *kakoj-nibud’* requires deleting feature values in both English and Korean. Since deleting features is essentially unlearning (features), positive input alone would not be sufficient. Learners would need negative evidence to notice that the L2 feature combination is a subset of their L1 feature combination. Ideally, language teachers should be aware of which functional lexicon items they are teaching present more difficulty to learners than others and why they are more difficult (Lardiere 2012, Slabakova 2013).

CONCLUSION

The present study provides new data on the role of the native language in feature acquisition within the feature-based contrastive model. Unlike the theories of L2 development discussed in the introduction (i.e., the Interpretability Hypothesis, the Missing Surface Inflection Hypothesis, the Interface Hypothesis), the Feature Re-assembly model allows us to formulate the L2 learning task and make precise predictions for how the learner’s L1 plays out in L2 grammatical feature acquisition. In this study, crosslinguistic variation was described within the feature organization of the specificity markers in Russian, English, and Korean. Within the feature-based model, the featural co-occurrence [−definite, −referential, +specific] is lexicalized uniformly in the three languages investigated in this study via functional morphemes *kakoj-to* (Russian), *some* (English), and *eotteon* (Korean). The feature combination [−definite, −referential, −specific], however, appears to be language-specific. This particular feature set is lexicalized in Russian through the morpheme *kakoj-nibud*’, but it is not lexicalized in English or Korean. Thus, the learning task for English and Korean speakers was to re-assemble features appropriate for the target feature set. The results showed that the acquisition of the [+specific] marker *kakoj-to* was easier than the [−specific] marker *kakoj-nibud’* since the acquisition of the latter requires re-configuration of the feature set. Our predictions, formulated within the feature re-assembly framework, account for such developmental patterns. Although the present study could not provide direct evidence for the exact mapping of the specificity markers in English and Korean interlanguage, our findings showed that having to re-assemble features delayed the acquisition of *kakoj-nibud*’. Our study upholds the effectiveness of investigating the acquisition of L2 semantic features and functional morphology, as well as their instruction, from the point of view of the feature-based contrastive approach.

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1. Even if we accept an analysis where –*l* is the past morpheme while -Ø, *-a, -o, -i* are agreement morphemes, this analysis still entails that the agreement morphemes are available for the learner to notice on some other (non-past) tense form without the –*l*, which is not uniformly the case. The sketch of an analysis we give as an example here takes the learner’s point of view. [↑](#footnote-ref-1)
2. Although plurality is not marked in the past tense, it is marked in the present simple tense in English (e.g., *He snores* vs. *They snore*); thus, the [plural] feature has already been selected in English. As for the gender feature, it has been argued that English does not have grammatical gender (Sabourin et al. 2006). So, the gender feature needs to be selected by the learner. [↑](#footnote-ref-2)
3. These three nominal features (definiteness, specificity, referentiality) are interdependent in their semantics as well as in acquisition. See Ionin et al. (2004) and Schöneberger (2014) for discussion on the role of specificity in the acquisition of definiteness in L2 English by Russian, Korean, and German speakers. [↑](#footnote-ref-3)
4. The referential *this* carries noteworthiness which is not an obligatory semantic feature of specificity, or rather a pragmatic aspect. See von Heusinger (2011) for discussion on different notions of specificity. [↑](#footnote-ref-4)
5. For additional arguments that English any and Korean amwu ‘any’ are different from Russian kakoj-nibud’ and ljuboj (‘any’) see >>>>>>>>>>>> [↑](#footnote-ref-5)
6. Informal interviews with a number of Russian language instructors revealed that learners are instructed to map *kakoj-to* onto English *some* and Korean *eotteon* and *kakoj-nibud’* onto English *any* and Korean *amwu.* [↑](#footnote-ref-6)
7. We have informally interviewed a number of Russian language teachers in the US and Korea and have also reviewed some major textbooks such as *Golosa* (http://www2.gwu.edu/~slavic/golosa/) [↑](#footnote-ref-7)
8. Beginner groups (*t* = –1.597, *p* = .109); intermediate groups (*t* = –.599, *p* = .208); advanced groups

   (*t* = 1.545, *p* = .072). [↑](#footnote-ref-8)
9. This means that the groups divided by their proficiency level differ from one another (i.e., proficiency is a variable) and each group performed differently in different conditions (i.e., Condition is a variable. See Table 3 for conditions). [↑](#footnote-ref-9)
10. In order to avoid the possibility of higher Type I error when doing multiple *t*-tests, we conducted each t-test independently. [↑](#footnote-ref-10)
11. We thank an anonymous reviewer for this suggestion and example. [↑](#footnote-ref-11)