

DIFFERENCES IN ADULT L2 GRAMMARS OF LITHUANIAN: THE CASE OF GENDER AGREEMENT

Simona Mačiukaitė

Abstract. This article presents results obtained from an empirical investigation into the acquisition of gender agreement in Lithuanian as a second language (L2). A total of 59 L2 learners of Lithuanian and 10 Lithuanian native speakers, as controls, took part in this study. The participants came from diverse first language (L1) backgrounds (i.e., Russian, Ukrainian, Belorussian, Latvian, and English). The data were collected using a written translation task. The results of the study showed some statistically significant differences between English speaking learners of Lithuanian and non-native English speaking learners of Lithuanian. The findings support the Full Transfer Full Access hypothesis (Schwartz, Sprouse 1994, 1996) which argues for the interaction of L1 transfer and Universal Grammar in the development of adult L2 grammars.

Keywords: non-native language acquisition, adult learner, Universal Grammar, initial state grammar, Lithuanian

1. Introduction to the study

Languages exhibit variation in gender agreement. In Lithuanian, for instance, every noun is marked for gender and most modifiers preceding or following the noun must agree in gender with it, whereas in English, gender marking on nouns, as well as gender agreement within the noun phrase are absent. Consider representative examples given in (1).

- (1a) Sulting-as obuol-ys
 Juicy-masc apple-masc
 ‘A juicy apple’

- (1b) Sulting-a slyv-a
 Juicy-fem plum-fem
 ‘A juicy plum’

Since languages vary with respect to gender agreement, the question is, how does a second language (L2)¹ learner go about acquiring a new feature, not present in his/her language, and how s/he deals with the additional morphological complexity associated with the new feature (i.e., gender agreement). For example, Lithuanian belongs to a fusional type of language where a single morpheme marks number, case and gender. Consider representative examples given in (2).

- (2a) Ger-as vaik-as valg-o obuol-ius
 Good-sg.masc.nom child-sg.masc.nom eat-pres apple-pl.masc.acc
 ‘The good child is eating apples’
- (2b) Mokytoj-a pagyr-ė ger-a vaik-a
 Teacher-sg.fem.nom praise-past good-sg.masc.acc child-sg.masc.acc
 ‘The teacher praised the good child’
- (2c) Ger-a mergait-ė dav-ė man knyg-a
 Good-sg.fem.nom girl-sg.fem.nom give-past I-dat book-sg.fem.acc
 ‘The good girl gave me the book’
- (2d) Mokytoj-a pagyr-ė ger-a mergait-ė
 Teacher-sg.fem.nom praise-past good-sg.fem.acc girl-sg.fem.acc
 ‘The teacher praised the good girl’
- (2e) Ger-i vaik-ai valg-o obuol-ius
 Good-pl.masc.nom children-pl.masc.nom eat-pres apple-pl.masc.acc
 ‘Good children are eating apples’
- (2f) Mokytoj-a pagyr-ė ger-us vaik-us
 Teacher-sg.fem.nom praise-past good-pl.masc.acc children-pl.masc.acc
 ‘The teacher praised the good children’
- (2g) Ger-os mergait-ės valg-o obuol-ius
 Good-pl.fem.nom girl-pl.fem.nom eat-pres apple-pl.masc.acc
 ‘The good girls are eating apples’
- (2h) Mokytoj-a pagyr-ė ger-as mergait-es
 Teacher-sg.fem.nom praise-past good-pl.fem.acc girl-pl.fem.acc
 ‘The teacher praised the good girls’

From examples in (2), we see that in Lithuanian, morphological inflections vary depending on the case, number and gender of the noun phrase. Specifically, examples in (2a), (2b), (2c) and (2d) illustrate the change in the morphological inflection of the noun phrase when the case marking for the phrase changes from nominative to accusative but gender and number stay the same (the noun phrases in (2a/2b) are marked for masculine gender/singular number and the noun phrases in (2c/2d) are marked for feminine gender/singular number). Examples given in (2e–2h) illustrate the changes in inflectional morphology when masculine and feminine

¹ In this paper, L2 is used to cover a term for non-native language acquisition of second, third, fourth, or even fifth language.

plural noun phrases (2e/2f and 2g/2h respectively) appear in two different positions, subject and object. In addition to this, even though there is always agreement between the noun and its modifier in all three features (number, case and gender), the morphological markings on the noun and the adjective do not always match (cf. examples in 2).

In Lithuanian, nouns and adjectives are declined according to the existing declensions (i.e., five nominal declensions and three adjectival). Consider representative examples of each declension given in (3) and (4).

- (3a) First Nominal Declension (masculine gender)
sod-as (nom.sg) – *sod-ai* (nom.pl) ‘garden’; *mėnul-is* (nom.sg) – *mėnul-iai* (nom.pl) ‘moon’; *pasiuntin-ys* (nom.sg) – *pasiuntin-iai* (nom.pl) ‘messenger’
- (3b) Second Nominal Declension (feminine gender)
sag-a (nom.sg) – *sag-os* (nom.pl) ‘button’; *kriauš-ė* (nom.sg) – *kriauš-ės* (nom.pl) ‘pear’
- (3c) Third Nominal Declension (masculine and feminine genders)
šal-is (nom.sg.fem) – *šal-ys* (nom.pl.fem) ‘country’; *žvėris* (nom.sg.masc) – *žvėrys* (nom.pl.masc) ‘animal’
- (3d) Fourth Nominal Declension (masculine gender)
dang-us (nom.sg) – *dang-ūs* (nom.pl) ‘sky’;
- (3e) Fifth Nominal Declension (masculine and feminine genders)
rud-uo (nom.sg.masc) – *ruden-ys* (nom.pl.masc) ‘autumn’; *ses-uo* (nom.sg.fem) – *s eser-ys* (nom.pl.fem); *dukt-ė* (nom.sg.fem) – *dukt-ys* (nom.pl.fem)
- (4a) First Adjectival Declension
maž-as (nom.sg.masc) – *maž-i* (nom.pl.masc); *maž-a* (nom.sg.fem) – *maž-os* (nom.pl.fem) ‘little’; *geresn-is* (nom.sg.masc) – *geresn-i* (nom.pl.masc) ‘better’
- (4b) Second Adjectival Declension
stipr-us (nom.sg.masc) – *stipr-ūs* (nom.pl.masc); *stipr-i* (nom.sg.fem) – *stipr-ios* (nom.pl.fem) ‘strong’
- (4c) Third Adjectival Declension
nuolatin-is (nom.sg.masc) – *nuolatin-iai* (nom.pl.masc); *nuolatin-ė* (nom.sg.fem) – *nuolatin-ės* (nom.pl.fem) ‘permanent’; *geresn-ė* (nom.sg.fem) – *geresn-ės* (nom.pl.fem) ‘better’

From these examples, we see that to acquire Lithuanian nominal gender, a second language learner would have to memorize the inherent gender of each noun and would have to know the inflectional endings for each noun depending on the declension it belongs to, as well as the number and case of the noun. Now, to acquire a target-like gender agreement in Lithuanian, in addition to the above, the learner would have to learn the morphological endings of various modifiers, which also vary given the existing declensions and the case, number and gender of a given noun that

it would agree with. Besides the complexities of remembering all of these various inflections, the learner would also have to remember some of the ambiguous cases present in the Lithuanian nominal system.²

Given such complexity, the question is, how different is the learning of gender agreement between L2 learners from morphologically rich and morphologically poor first language backgrounds. Are these differences reflected in faulty gender agreement morphology or in the time it takes to acquire this grammatical feature? These are some of the questions posed for the study presented in this article.

To this day the work on gender agreement in the field of second language acquisition (SLA) has mainly focused on languages such as Spanish, French, and Dutch. Gender agreement is present in these languages, but when compared to Lithuanian gender agreement system, the systems do differ with Lithuanian showing by far more complexity. Thus, the hope is that the results of the present study will add more to the knowledge of how the acquisition of L2 gender agreement proceeds in languages that are morphologically very rich.

The organization of this paper is as follows. In the next section, the theoretical proposals for L2 acquisition are outlined. Then, a review of studies on the acquisition of gender agreement follows. Finally, the methods and the results of the study are presented and discussed.

2. Theoretical background of the study

In the field of SLA, several hypotheses have been put forth in order to explain how adult learners acquire grammatical features in L2 that are not present in their first language (L1) (for an in-depth overview of these hypotheses, see White 2003). One such hypothesis, namely The Failed Functional Features Hypothesis (FFFH) (Hawkins, Chan 1997) predicts that grammatical features that learner's L1 does not have but learner's L2 requires will not be fully acquired. The reason for this is that according to this view, adult learners no longer have direct access to the universal grammar (UG) which plays a central role in the acquisition of these features in L1. For adult L2 learners, UG can only be accessed indirectly, namely through L1 transfer. To illustrate how this works, let us take the languages represented in the current study sample. In the case of English learners acquiring Lithuanian gender agreement, the prediction of the FFFH will be that target-like acquisition of gender agreement will not take place because English language does not have this feature and it cannot be transferred to Lithuanian. Since UG is also unavailable to help these learners, the feature cannot be acquired in a target-like fashion. On the other hand, in the case of Ukrainian learners of Lithuanian, gender agreement will transfer to Lithuanian because gender agreement is present in Ukrainian and these learners will be able to acquire this feature in a target-like way.

Contrary to the FFFH, the Full Transfer Full Access (FTFA) hypothesis (Schwartz, Sprouse 1994, 1996) argues that UG is accessible to adult learners. The FTFA hypothesis makes it clear that L1 transfer is also involved in the building of L2 grammars. Specifically, the initial stages of L2 grammars are based on L1 grammars; however, UG comes into play when, for instance, L2 requires a feature that cannot be transferred from L1 because L1 does not possess it.

² As pointed out by a reviewer, the inflection for masculine 1st declension noun marked for singular number and nominative case and the inflection for feminine 3rd declension noun marked for singular number and nominative case is the same, namely *-is* (*mėnul-is* 'moon' and *šal-is* 'country'). Also, pointed out by the same reviewer, the plural genitive ending is the same for all nouns (i.e., *ų*). In the current study, ambiguous cases were not used.

The essential difference between the FFFH and FTFA hypotheses is UG involvement proposed in the latter and the differences predicted for the end-state grammars of L2 learners. Using the same example of an adult English-speaking learner of Lithuanian, following the FTFA hypothesis, the prediction is that eventually gender agreement will be acquired by this learner. However, the initial state of an English-speaking learner would differ from the initial state of a Ukrainian-speaking learner since initially, L2 grammars will be built on L1 grammars. Since Ukrainian has gender agreement, this feature will transfer to Lithuanian and in the initial stages the learner will show his/her knowledge of this feature. On the other hand, the initial grammar of an English speaker will be based on English, which lacks the feature of gender agreement, and because of this, faulty gender agreement will surface more often in the L2 grammars of English speaking learners of Lithuanian, as opposed to Ukrainian-speaking learners. However, ultimately UG will aid English speaking learners of Lithuanian in the acquisition of gender agreement.

Lastly, the Full Access hypothesis (Flynn, Martohardjono 1994; Epstein et al. 1996, 1998), unlike the FFFH and the FTFA hypothesis, argues for full and direct UG access throughout the entire process of L2 acquisition. From this, it means that all adult learners despite their L1 backgrounds will proceed in a similar fashion when acquiring L2 grammars. Again, using the example of English and Ukrainian speakers of Lithuanian, both groups of learners will show similarities in the acquisition of gender agreement feature at all stages of their L2 grammar development since UG will guide this process.

To sum up the above discussion, the FFFH predicts that there will be differences in the grammars of the learners whose L1 have gender agreement and whose L1s do not have gender agreement when the L2 they are acquiring is Lithuanian (i.e., with gender agreement). The FTFA hypothesis predicts that initially the learners coming from languages with gender agreement and languages without it, will show differences, as L1 transfer will be the basis for their initial L2 grammars. However, this will change when learners pass through the initial stage. Finally, the Full Access view predicts that all learners, despite their L1 backgrounds, will show similarities in the acquisition of gender agreement since their initial state as well as the entire L2 development is driven by the direct access to UG.

3. Previous studies on gender agreement in SLA

The theoretical assumptions regarding how much influence L1 transfer or UG has on the acquisition of L2 grammatical features have been put to a test by a number of researchers in the field of SLA (see White 2003). A number of studies have also been conducted to examine the acquisition of gender agreement in order to determine which theoretical predictions (outlined in the previous section) hold true.

For instance, White, Valenzuela, Kozłowska-MacGregor and Leung (2004) investigated the acquisition of Spanish gender and number agreement using 48 French and 68 English native speakers of Spanish from three different proficiency levels (i.e., low, intermediate, and advanced). Both French and English languages have number agreement but vary with respect to gender agreement (i.e., English does not have it, whereas French does). The findings of the study showed that

only the proficiency level of a learner had an effect on the production of target-like gender agreement (i.e., learners with lower proficiency levels were less accurate in producing correct gender agreement in Spanish than were the learners with higher proficiency levels). Most importantly, the effect of the first language did not turn out to be significant in the acquisition of Spanish gender agreement, as would have been predicted by the FFFH. The authors concluded that gender agreement can be acquired by speakers whose first languages lack such features.

A few other interesting observations were made by White et al. (2004). They observed a difference in the production of number versus gender agreement. That is, number agreement was more accurately produced than gender agreement. And finally, a tendency among low proficiency learners was noticed to use a feminine noun with a modifier marked for masculine gender.

The opposite view, namely the FFFH, was pursued by Francheschina's (2001) study. In her study Francheschina examined the end-state grammar of an adult English speaker of Spanish, Martin, and investigated his knowledge of Spanish gender as reflected in the spontaneous production data. The findings of the study showed that in Martin's grammar there were more errors in gender agreement than in number agreement. Specifically, as given by Francheschina (2001: 237), in the subject's data there were a total of 239 (93%) gender agreement errors out of 257 and only 18 (7%) number agreement errors out of 257. Francheschina also found that Martin tended to substitute masculine gender for the required feminine or neuter. These findings led Francheschina to offer strong support for the FFFH.

Finally, the study conducted by Sabourin, Stowe, and de Haan (2006) examined the differences in the acquisition of Dutch inherent gender and gender agreement among English, German and Romance native speakers of Dutch as an L2. For the most part, this study was interested in finding out whether the same type of L1 transfer was used in the acquisition of inherent gender and gender agreement. In this study, L1 transfer was subdivided into two types, namely "surface transfer" and "deep transfer":

Surface transfer is represented by the direct transfer of morphologically similar gender realization between the L1 and L2. [---] Deep transfer, on the other hand, would be the transfer of the category gender (whether it is a congruent system or not) from the L1 to the L2. (Sabourin et al. 2006: 6)

The results of the study showed that all three groups, English, German, and Romance, showed excellent knowledge of inherent gender markings on Dutch nouns. However, when German and Romance groups were compared to the English-speaking group, the former outperformed the latter showing that transfer, more specifically "deep transfer", was involved in the assignment of inherent gender markings on nouns. Furthermore, when the results of German-speaking group were compared to the results of Romance group, Germans scored higher than Romance group showing the effect of "surface transfer" in the acquisition of inherent gender markings on Dutch nouns.

The findings regarding the acquisition of Dutch gender agreement argued for the significance of "deep transfer" since German and Romance groups did better than English speaking group in supplying correct Dutch gender agreement and no

differences of significant importance were observed among German and Romance groups.

Based on the theoretical proposals and the literature review presented above, the following research questions are formulated for our study: Does L1 play a role in the acquisition of Lithuanian gender agreement? Specifically, in the initial stages of L2 acquisition, do learners from L1s with gender agreement (i.e., Russian, Ukrainian, Latvian and Belorussian) outperform the English-speaking learners of Lithuanian?

By means of these research questions, the study sets out to find out which theoretical predictions presented above are true. If the findings show that all groups perform the same on Lithuanian gender agreement, we obtain support for the Full Access view. But if L1-related differences are observed, support for the FTFA view is obtained. Finally, if the English-speaking group performs significantly worse than other groups involved in the study, partial support is obtained for the FFFH. The reason why this would grant only partial support for the FFFH is because in the current study, only the learner's initial state, not the end state, is investigated.

4. Methodology

4.1. Subjects

The subjects in this study were 59 students from the *Introduction to Lithuanian I* class. Before taking this class, none of them had any exposure to Lithuanian. At the time of data collection, all students had 3 months of instruction in Lithuanian language. For the purposes of this study, the subjects were subdivided into 7 groups based on their native language. In the case of English speaking subjects, two groups were formed: first group (namely Group 6) consisted of students who had absolutely no prior knowledge of a language with gender agreement and second group (i.e., Group 7) consisted of students who have been exposed to a language with gender agreement from age 10 or later. Table 1 presents information about the subjects of the study.

Table 1. Subject information

Group number	Number of Subjects	L1(s)
1	17	Russian
2	10	Ukrainian/Russian
3	5	Latvian
4	4	Ukrainian
5	6	Russian/Belorussian
6	5	English
7	12	English

Besides the seven experimental groups, the study also had a control group which consisted of 10 native speakers of Lithuanian.

4.2. Data collection method

The data for this study were collected using a written translation task. The subjects were presented with an illustrated text in Lithuanian. They had to read the text and translate the English noun phrases (i.e., adjective + noun), verb phrases (*loves* ‘myli’) and prepositional phrases (*to the park* ‘į parką’) into Lithuanian. All subjects were fluent speakers of English. Since the subjects of this study were early beginners of Lithuanian, the noun phrases (NPs) that were used in the tasks were placed in the context which required nominative case only and all NPs were singular except for 3 cases that were plural and served as distracters of the study (e.g., *young sons* ‘jauni sūnūs’). Besides these three distracters, the study had a number of other distracters that took the form of prepositional phrases and verb phrases. When data were coded the distracters were not analyzed.

A representative example of the task is given in (5) and the task details are presented in Table 2.

- (5) Ana yra _____ (tall woman), o jos vyras Tomas yra _____ (short man).
‘Ana is a tall woman but her husband Tom is a short man’

Table 2. Task information

Number of Test Items	17
Number of Distracters	12
NPs with Grammatical Gender	5
NPs with Natural Gender	12
NPs with Masculine Gender	9
NPs with Feminine Gender	8

4.3. Analysis of data

In the analysis of the data the most conservative approach was taken in interpreting the responses given by the participants of this study. The process of the data analysis began with a transcription of the test items. Next, these items were coded using the following five categories:

- 1) Correct Masculine Agreement (CMA): (M+M)
žemas vyras ‘short (masc) man (masc)’
- 2) Correct Feminine Agreement (CFA): (F+F)
aukšta moteris ‘tall (fem) woman (fem)’
- 3) Incorrect Masculine Agreement (IMA): (*F+M)
**graži parkas* ‘beautiful (fem) park (masc)’
- 4) Incorrect Feminine Agreement (IFA): (*M+F)
**didelis kavinė* ‘big (masc) café (fem)’
- 5) Ambiguous

The distracters were not coded. The items that were coded were 9 NPs marked for masculine gender and 8 NPs marked for feminine gender. The ambiguous category

included the items that were unfinished, ambiguous, were missing the adjective or the noun, or were not produced at all. In addition to this, if the entire NP was changed from masculine into feminine (or vice versa) but had the target-like agreement, we counted such cases as correct feminine or masculine gender agreement respectively. For example, if the task asked to translate the NP such as ‘nice animal’, which would require a masculine gender agreement in Lithuanian, but the learner translated the phrase as ‘nice fox’, which requires feminine gender agreement, the phrase was counted as target-like if it had target-like feminine agreement or non-target like if the agreement between adjective and noun did not match. In addition to this, we counted as correct agreement if the noun and adjective agreed even though the noun was marked for the incorrect gender. Consider a representative example given in (6).

- (6) graž-i park-a
 Beautiful-fem park-fem
 ‘A beautiful park’

As we see from (6), ‘park’ is marked for feminine case in this learner’s L2 grammar, even though in Lithuanian ‘park’ must be masculine (*park-as*). However, since the adjective is marked for feminine gender too, there is feminine gender agreement between the noun and the adjective. Such cases were considered to have correct gender agreement.

5. Results

The results of the study are presented in tables given below. Each table shows the findings obtained from each group of subjects on their use of Lithuanian gender agreement. Consider the results presented in Tables 3–9.³

Looking at tables 3–9, we see that the category with the overall largest percentage was the ‘ambiguous’ category. All groups, except Latvian and Ukrainian native speakers (Tables 5 and 6, respectively), had the most responses that fell into the ‘ambiguous’ category. Looking within groups, the highest rates of ambiguous cases were produced by the two English speaking groups (41% and 46%). The next highest rate came from Russian-Belorussian speaking group (37%), Russian (34.3%), and Ukrainian-Russian (34%) groups. As already mentioned, the lowest rates were among Latvians and Ukrainians (24% and 20%, respectively). Even though the percentage rates for each group differ in this category, these differences were not found to be statistically significant, $F(6, 52) = 1.303, p < .272$. However, statistically significant differences were observed when English and non-native English speaking groups⁴ were compared, $F(1, 57) = 4.779, p < .033$.

Second, tables 3–9 show that correct feminine agreement (CFA) was produced in larger numbers than correct masculine agreement (CMA) even though the task contained more masculine noun phrases (i.e., there were 9 masculine and 8 feminine cases). This difference was seen in all groups except for the Latvians and Ukrainians.

³ The percentages given in the line called *Total* were calculated as follows: since there were 17 possible responses for each participant and the number of participants in each group varied, 17 possible responses were multiplied by the total number of subjects in a given group. For example, group 1 (Russian native speakers) had 17 subjects therefore 17 possible responses were multiplied by 17 subjects which yielded 289. Next, the number of responses for each category (i.e., CMA, CFA, IMA, IFA, and Ambiguous) was obtained and divided from 289 yielding a number listed in the Total line for each category.

⁴ Non-native English speaking groups refer to Groups 1 through 5.

Table 3. Results from Russian speakers of Lithuanian (n=17)

Subject number	CMA	CFA	IMA	IFA	Ambiguous
4	8	7	0	1	1
6	6	9	0	0	2
7	4	6	0	1	6
30	7	8	0	0	2
35	3	5	0	1	8
40	1	4	0	1	11
43	7	8	0	1	1
45	4	3	0	0	10
47	5	5	2	0	5
49	8	7	0	0	2
50	2	1	0	5	9
53	1	3	0	0	13
56	2	3	0	0	12
60	8	3	0	3	3
61	5	5	0	0	7
62	8	5	0	1	3
64	5	7	0	1	4
Total	84 (29%)	89 (31%)	2 (.7%)	15 (5%)	99 (34.3%)

Table 4. Results from Ukrainian/Russian speakers of Lithuanian (n=10)

Subject number	CMA	CFA	IMA	IFA	Ambiguous
1	9	7	0	1	0
3	5	3	0	3	6
5	0	7	1	0	9
28	6	8	0	0	3
33	6	7	1	0	3
34	1	6	1	1	8
42	0	3	2	0	12
44	4	4	1	1	7
57	6	6	0	0	5
65	7	4	0	1	5
Total	44 (26%)	55 (32%)	6 (4%)	7 (4%)	58 (34%)

Table 5. Results from Latvian speakers of Lithuanian (n=5)

Subject number	CMA	CFA	IMA	IFA	Ambiguous
36	8	8	0	0	1
41	6	5	0	0	6
55	6	4	0	1	6
63	7	7	0	0	3
66	4	7	1	1	4
Total	31 (36.%)	31 (36.5%)	1 (1%)	2 (2%)	20 (24%)

Table 6. Results from Ukrainian speakers of Lithuanian (n=4)

Subject number	CMA	CFA	IMA	IFA	Ambiguous
29	9	7	0	0	1
31	8	7	0	0	2
32	2	5	2	0	8
48	7	6	0	1	3
Total	26 (38%)	25 (37%)	2 (3%)	1 (2%)	14 (20%)

Table 7. Results from Russian-Belorussian speakers of Lithuanian (n=6)

Subject number	CMA	CFA	IMA	IFA	Ambiguous
2	1	4	0	1	11
37	8	7	0	0	2
38	3	6	0	1	7
51	4	7	0	1	5
52	3	4	0	2	8
58	4	7	0	1	5
Total	23 (23%)	35 (34%)	0 (0%)	6 (6%)	38 (37%)

Table 8. Results from English speakers of Lithuanian (n=5)

Subject number	CMA	CFA	IMA	IFA	Ambiguous
11	2	8	0	0	7
20	2	6	1	1	7
13	1	0	2	3	11
21	2	9	0	0	6
18	5	5	1	2	4
Total	12 (14%)	28 (33%)	4 (5%)	6 (7%)	35 (41%)

Table 9. Results from English speakers of Lithuanian (who also know a language with gender agreement) (n=12)

Subject number	CMA	CFA	IMA	IFA	Ambiguous
10	4	5	0	1	7
12	6	5	0	1	5
14	2	5	1	1	8
15	1	2	1	0	13
16	4	7	0	1	5
17	7	5	1	1	3
19	4	8	0	1	4
22	5	2	0	0	10
23	1	0	2	5	9
24	3	5	0	0	9
25	0	4	0	4	9
8	1	4	1	0	11
Total	38 (17%)	52 (25%)	6 (3%)	15 (7%)	93 (46%)

In the case of Latvian speakers of Lithuanian, the numbers for CFM and CMA were the same (36.5%), whereas in the case of Ukrainians, 38% went to CMA and 37% to CFA. The lowest numbers for CMA came from the two English-speaking groups (14% and 17%, respectively). In the case of CFA, the lowest number for this category came from the English-speaking group that had exposure to another language with gender agreement (25%). The first English-speaking group (without any exposure to a language with gender system) slightly outperformed the Russian and Ukrainian-Russian speaking groups on CFA (33%, 31%, and 32%, respectively).

Statistical significance between the groups was reached on CMA category,

$F(6, 52) = 2.173, p < .060$. When the differences between English and non-native English speaking learners of Lithuanian were statistically tested on CMA, the results were statistically significant as well, $F(1, 57) = 8.091, p < .006$. The results of group 7 on CMA when tested against all other groups, excluding Group 6, were found to be statistically significant, $F(1, 52) = 4.664, p < .036$. The results of group 6 when compared against the results of all other groups, were not found to be statistically significant, $F(1, 57) = 3.253, p < .077$. But when Group 6 was compared with all non-native English speaking groups (excluding Group 7), the results were found to be statistically significant, $F(1, 45) = 4.531, p < .039$.

As for the CFA category, no statistically significant differences were found among the groups, $F(6, 52) = .787, p < .584$. Also, when English speaking and non-native English speaking groups of learners were compared on CFA category, the results were not statistically significant, $F(1, 57) = 2.203, p < .143$. However, results were statistically significant when group 7 was compared against all other non-native English speaking groups, $F(1, 52) = 4.009, p < .050$. The same, however, was not observed for Group 6 when its production on CFA category was compared to all other groups, $F(1, 57) = .083, p < .775$.

In the case of IFA and IMA categories, there were more IFA cases than IMA. That is, masculine gender agreement was over generalized more often than feminine gender. However, in some groups the differences between IFA and IMA were minor. For instance, Ukrainian-Russian, Latvian and Ukrainian speaking subjects performed either exactly the same on both categories or with 1% difference between these two categories. The highest rate of IFA was 7% and it came from the two English-speaking groups; the highest rate of IMA was 5% and it came from the English-speaking group that did not have exposure to a language with gender agreement. However, the differences seen in percentages were not found to be statistically significant, $F(6, 52) = 1.649, p < .152$ (for IMA) and $F(6, 52) = .614, p < .718$ (for IFA) among all groups. As for English and non-native English speaking groups, only for IMA category the results were close to being statistically significant, $F(1, 57) = 3.303, p < .074$. No statistically significant differences were found between Group 6 and all other groups, $F(1, 57) = 2.735, p < .104$ (for IMA) and $F(1, 57) = .397, p < .531$ (for IFA). The same was true for Group 7 when it was compared to all non-native English speaking groups, $F(1, 52) = 1.439, p < .236$ (for IMA) and $F(1, 52) = 1.807, p < .185$ (for IFA).

In the case of the control group, there was no gender agreement errors found in their responses. Table 10 presents the results from the control group of the study.⁵

⁵ The responses obtained from the controls were coded as follows: CA (correct agreement), NN (null nominal) and Ambiguous. The null nominal is a grammatical option often used by native speakers of Lithuanian. In the null nominal construction, the noun is omitted from the noun phrase and the adjective or another modifier carries the necessary morphology for noun identification. In addition to this, the surrounding context provides the necessary information for the identification of the noun.

Table 10. Results from Lithuanian control group (n=10)

Subject	CA	NN	Ambiguous
C1	9	5	3
C2	17	0	0
C3	10	5	2
C4	17	0	0
C5	17	0	0
C6	15	0	2
C7	13	4	0
C8	17	0	0
C9	14	3	0
C10	12	4	1
Total	141 (83%)	21 (12%)	8 (5%)

As Table 10 shows, the majority of answers given by the controls, namely 95%, were target-like. 5% of ambiguous answers were not ungrammatical but instead lacked an adjective or had some other quantifier in place of an adjective.

Next, consider table 11 which presents information regarding the instances of faulty gender agreement found in the L2 grammars of Lithuanian learners. The groups are listed horizontally and the test cases (a total of 17) are listed vertically. Cases 1 through 5 involved nouns with grammatical gender, whereas cases 6 through 17 involved nouns with natural gender.

Table 11. Faulty agreement

Case number	G1	G2	G3	G4	G5	G6	G7	Total
1 (masc) little market 'mažas turgus'	0	1	0	0	0	0	1	2
2 (masc) beautiful park 'gražus parkas'	1	1	1	1	0	2	1	7
3 (masc) big university 'didelis universitetas'	1	3	0	1	0	0	0	5
4 (fem) big café 'didelė kavinė'	2	1	0	0	1	2	3	9
5 (fem) old shop 'sena parduotuvė'	7	4	1	1	3	2	6	24
6 (masc) quiet painter 'ramus dailininkas'	0	0	0	0	0	0	1	1
7 (fem) young woman 'jauna moteris'	1	0	0	0	0	1	2	4
8 (fem) beautiful woman 'graži moteris'	1	0	0	0	0	1	1	3
9 (fem) tall woman 'aukšta moteris'	0	0	1	0	0	0	1	2
10 (masc) short man 'žemas vyras'	0	0	0	0	0	0	0	0
11 (masc) good cook 'geras virėjas'	0	0	0	0	0	0	1	1
12 (masc) fat waiter 'storas padavėjas'	0	2	0	0	0	0	1	3
13 (fem) sweet waitress 'maloni padavėja'	2	0	0	0	0	0	0	2
14 (masc) sad waiter 'liūdnas padavėjas'	0	0	0	0	0	1	0	1
15 (masc) interesting man 'įdomus vyras'	0	0	0	0	0	0	0	0
16 (fem) young woman 'jauna moteris'	1	1	0	0	0	0	2	4
17 (fem) little daughter 'maža dukte'	1	0	0	0	2	1	1	5

As expected, table 11 shows that there were many more cases of faulty agreement among NPs with grammatical gender than among noun phrases with natural gender. Specifically, in the case of NPs with grammatical gender, there were 47 faulty agreements out of 295 possible (16%), whereas in the case of NPs with natural gender, there were only 26 faulty agreements out of 708 possible (4%) across all groups. ANOVA test did not show any statistically significant differences among all groups for these categories, $F(6, 52) = .679, p < .668$ (for the NPs with natural gender) and $F(6, 52) = .665, p < .678$ (for the NPs with grammatical gender).

Finally, the most common noun phrases marked with faulty gender marking were #5 (24 times) and #4 (9 times). These items are marked for feminine gender in Lithuanian. In order to account for these errors, table 12 provides information about the differences in gender morphology among the languages represented in the study sample for these two items, as well as for the other three noun phrases with grammatical gender.

Table 12. Grammatical gender markings

Item	Russian	Belo-russian	Latvian	Ukrainian	Lithuanian
'little market'	masc	masc	masc	masc	masc
'beautiful park'	masc	masc	masc	masc	masc
'big university'	masc	masc	fem	masc	masc
'big café'	masc	neut	fem	neut	fem
'old shop'	masc	masc	masc	fem	fem

As we see from table 12, the two noun phrases 'little market' and 'beautiful park' are marked with masculine gender in all languages, including Lithuanian, whereas the other three exhibit variation. One possible reason for why item #5 ('old shop') had the most errors in gender agreement is that in Lithuanian it is marked with feminine gender but in all other languages, except Ukrainian, 'shop' is masculine⁶.

The same explanation, namely L1 transfer, could account for the phrase #4 'big café' which is marked for feminine gender in Lithuanian and Latvian but masculine in Russian and neuter in Ukrainian and Belorussian. However, L1 transfer cannot account for the errors made by the English speaking subjects of this study since English does not have grammatical gender marking on nouns. An alternative explanation for the gender agreement errors found in the NPs #5 'old shop' and #4 'big café' is the L2 learner's tendency to overuse masculine gender. Similar findings have already been reported by White et al. (2004) and Francheschina (2001).

Finally, 6 cases were found where gender agreement was correct between the nominal and the adjective but the gender of the nominal was incorrectly supplied. In all these cases, feminine gender was overused. Consider representative examples provided in (7).

- (7a) didel-ė universitet-ė
 Big-fem university-fem
 'A big university'

⁶ A reviewer pointed out that Latvian and Lithuanian morphological systems are very similar and that it would be interesting to find out the errors that Latvians made in the case of 'old shop' which is marked with masculine gender in Latvian. In our study there were only 5 Latvians and only one made an error in gender agreement within the NP, 'old shop'. Specifically, the 'shop' was used with the correct feminine gender marking but the adjective 'old' was marked for masculine gender (i.e., *sen-as* (masc) *parduotuv-ė* (fem)).

- (7b) didel-ė turg-a
Big-fem market-fem
'A big market'
- (7c) graž-i park-a
Beautiful-fem park-fem
'A beautiful park'

Examples in (7) show the cases in which masculine gender is replaced by feminine gender but the agreement is correctly supplied in all these cases. These six cases came from Latvian (one case), Russian (one case) and English (four cases) native speaking learners of Lithuanian.

6. Discussion and conclusion

The research question of this study asked whether learners from L1s with gender agreement would outperform English-speaking learners of Lithuanian on gender agreement. The results of the study found statistically significant differences between English and non-native English speaking groups on Ambiguous and on CMA categories. In addition to this, the results from Group 7 were statistically significant on CFA category. Group 6, however, did not differ from other groups on CFA category. There were no statistically significant differences observed among groups on IMA and IFA categories.

Based on these findings, support for the FTFA hypothesis is obtained. Since learners from L1s with gender agreement performed better on some categories than English-speaking learners of Lithuanian, these differences could be attributed to L1 transfer. Recall that FTFA hypothesis argues that in the initial stages L1 transfer will be the basis for the development of L2 grammar. However, as the study shows, L1 transfer is not the only factor shaping the acquisition of gender agreement in the grammars of these learners. Since Group 6 did not differ from other groups on CFA category and both English-speaking groups did not differ from non-native English speaking groups on IMA and IFA categories, this strongly argues for the UG involvement in the development of L2 grammars of these learners.

If the predictions of the FFFH were borne out, the English-speaking group without knowledge of a language with gender agreement should have performed much worse than all other groups; however, on some of the categories, this group did not perform differently from non-native English speaking groups.

If the results of this study were to support the Full Access view, there should have been no differences among the groups since according to the Full Access view, UG directs the acquisition of L2 grammars without L1 interference. However, some differences were observed among the groups which suggest that L1 is playing a role in the initial stages of L2 grammars of these learners, as predicted by the FTFA hypothesis.⁷

⁷ We agree with a reviewer who pointed out that the differences between the groups tested in the current study were small and that many other factors "frequency of the input, word knowledge, morphophonological considerations of individual words" (directly taken from the reviewer's form) could have had an effect on the results of the study. We acknowledge the importance of these factors but leave the investigation of their effects on the acquisition of Lithuanian gender agreement for future research.

Abbreviations

acc – accusative
dat – dative
fem – feminine
masc – masculine
neut – neuter
nom – nominative
past – past
pl – plural
pres – present
sg – singular

References

- Epstein, Samuel David; Flynn, Suzanne; Martohardjono, Gita 1996. Second Language Acquisition: Theoretical and experimental issues in contemporary research. – *Brain and Behavioral Sciences* 19, 677–758.
- Epstein, Samuel David; Flynn, Suzanne; Martohardjono, Gita 1998. The strong continuity hypothesis: some evidence concerning functional categories in adult L2 acquisition. – Suzanne Flynn, Gita Martohardjono, Wayne O’Neil (eds). *The generative study of second language acquisition*. Mahwah, NJ: Lawrence Erlbaum, 61–77.
- Flynn, Suzanne; Martohardjono, Gita 1994. Mapping from the initial state to the final state: the separation of universal principles and language-specific principles. – Barbara Lust, Margarita Suner, John Whitman (eds). *Syntactic theory and first language acquisition: cross-linguistic perspectives*. Vol. 1: Heads, projections and learnability. Hillsdale, NJ: Lawrence Erlbaum, 319–335.
- Francheschina, Florencia 2001. Morphological or syntactic deficits in near-native speakers? An assessment of some current proposals. – *Second Language Research* 17, 213–247.
- Hawkins, Roger; Chan, Cecilia Yuet-hung 1997. The partial availability of Universal Grammar in Second Language Acquisition: The “failed functional features hypothesis.” – *Second Language Research* 13, 187–226.
- Sabourin, Laura; Stowe, Laurie A.; de Haan, Ger J. 2006. Transfer effects in learning a second language grammatical gender system. – *Second Language Research* 22, 1, 1–29.
- Schwartz, Bonnie D.; Sprouse, Rex A. 1994. Word order and nominative case in nonnative language acquisition. – Teun Hoekstra, Bonnie D. Schwartz (eds). *Language Acquisition studies in generative grammar*. Amsterdam: Benjamins, 317–368.
- Schwartz, Bonnie D.; Sprouse, Rex A. 1996. L2 cognitive states and the full transfer/full access model. – *Second Language Research* 12, 40–72.
- White, Lydia 2003. *Second Language Acquisition and Universal Grammar*. Cambridge: Cambridge University Press.
- White, Lydia; Valenzuela, Elena; Kozłowska-MacGregor, Martyna; Leung, Yan-Kit Ingrid 2004. Gender and number agreement in nonnative Spanish. – *Applied Psycholinguistics* 25, 105–133.

Simona Mačiukaitė (LCC International University, Lithuania) specializes in the fields of bilingualism/multilingualism, first and second language acquisition, research methodology in applied linguistics and generative grammar theory. Primary research areas include first language acquisition, morpho-syntactic aspects of second language acquisition and grammatical aspects of bilingual/multilingual code-switching.
smaciukaite@lcc.lt

ERINEVUSI TÄISKASVANUD ÕPPIJATE LEEDU KEELE GRAMMATIKAS, KES ÕPIVAD LEEDU KEELT TEISE KEELENA – SOOÜHILDUMINE

Simona Mačiukaitė

LCC Rahvusvaheline Ülikool, Leedu

Sooühildumine nimisõnafaasis ei ole omane kõigile keeltele. Kui teise keelena õpitavas keeles vastav nähtus eksisteerib, oleneb selle omandamise edukus sellest, kas nähtus on neile emakeelest tuttav või mitte. Näiteks on väidetud (Hawkins, Chan 1997), et täiskasvanud õppijad, kelle emakeeles sooühildumine puudub, ei suuda perfektselt ära õppida keelt, kus see esineb.

Käesolevas artiklis uuritakse, kuidas vene-, ukraina-, läti-, valgevene- ja ingliskeelsed õppijad omandavad leedu keele sooühilduvust. Katsealustel paluti teha kirjalik tõlge. Osalesid 59 muukeelset leedu keele õppijat ning 10 emakeelset leedulast.

Mõned statistiliselt olulised erinevused ilmsid kahe inglise keelt oskava rühma vahel, kellest ühele oli inglise keel emakeeleks, teisele mitte. Täpsemalt oli tegemist ühilduvuserinevusega leedu meessugu sõnade tarvituses. Naissugu sõnade puhul jooksis veelahet teisiti: erinevus oli märgatav inglise keelt oskavate rühmade vahel, kellest üks oskas veel üht sooühilduvat keelt, teine aga koosnes mitteinglastest.

Samas polnud naissugu sõnade puhul vahet mitteinglaste ja nende inglise keelt oskajate vahel, kes lisaks mõnda sooühilduvat keelt ei osanud.

Saadud tulemuste põhjal loobutakse Hawkinsi ja Chani hüpoteesist Schwartzi ja Sprouse'i (1994, 1996) kasuks.

Märksõnad: teise keele omandamine, täiskasvanud õppija, universaalne grammatika, lähtegrammatika, leedu keel