

CROSS-LINGUISTIC TRANSFER IN CLASSROOM L3 LEARNING

МЕЖЪЯЗЫКОВЫЕ ВЛИЯНИЯ В ИЗУЧЕНИИ ТРЕТЬЕГО ЯЗЫКА КАК ИНОСТРАННОГО

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ABSTRACT

Introduction. The paper investigates cross-linguistic influences between the two previously learnt languages and their effects on classroom L3 acquisition. The study checks the predictions of the existing theories of mechanisms of transfer into the L3 attested for naturalistic learners. The main predictions get confirmed with the population of classroom learners of English as the L3. All the participants are native speakers of Russian. They all learnt their dominant foreign language, either French or German, in the classroom. The results suggest a governing role of the Universal Grammar in classroom language learning.

Materials and Methods. The experiment uses three production tasks: written production, oral production and pronunciation task. The written assignment asks the participants to translate sentences from Russian into English. The target sentence contains the existential *there are* that does not exist in Russian. The way the participants structure the target sentence in English allows for conclusion about possible influences of the first foreign language on the development of their L3-English. In the oral production task, the participants are prompted to produce negative sentences. The influences from previously learnt languages is traced through the placement of the negation *not*. In the pronunciation task Praat was used to measure the duration and the formant frequency of the nasal [N] in English. Differences in sound quality trace back to the influences from the previously learnt languages. The data were analyzed with one-way ANOVA for between and within group differences.

Results. In the written task, the participants who studied German as their first foreign language prefer verb final placement in the subordinate, which is ungrammatical in English but grammatical in German. The L2-French group put the verb in the right place, but they do not use the existential *there are*, which required in English. In the oral task, the placement of negation is Russian-like in both groups. In pronunciation, the quality of English [N] is influenced by the amount of nasality the participants learnt before, i.e. French influences make the English [N] more nasalized than the [N] in the group with German as the first foreign language.

Discussion and Conclusion. Classroom learners of English as the L3 experience influences from all the previously learnt languages, the native language and the first foreign language. These findings pattern with the assumptions of the main generative theories of naturalistic L3 acquisition. Concluding that classroom language learning is governed by universal grammar, the teaching can benefit from predicting what cross-linguistic influences can be facilitative or not for the acquisition of the target language.

Key words: classroom language learning, L3 acquisition, transfer, cumulative linguistic experience, (non)facilitative effects.

АННОТАЦИЯ

Введение: В статье исследуется взаимовлияние между двумя ранее изученными языками индивида и их воздействие на освоение третьего языка как иностранного. Эксперимент проверяет основные теоретические положения генеративного подхода к изучению третьего языка в естественных условиях. Все участники эксперимента являются носителями русского языка, которые изучали немецкий или французский в качестве первого иностранного языка. Результаты исследования демонстрируют, что механизм «универсальная грамматика» лежит в основе изучения иностранного языка в учебной ситуации.

Материалы и методы: Эксперимент включает в себя три задания: речепорождение в письменной форме, речепорождение в устной форме и задание на произношение. В письменном задании участники переводят предложения с русского на английский. Ключевое предложение содержит структуру *there are*, не существующую в русском языке. Форма построения ключевого предложения на английском языке позволяет сделать вывод о возможном влиянии первого иностранного языка на формирование и развитие английского, как второго иностранного. Устное задание подталкивает участников к использованию отрицательного предложения. Влияние уже изученных языков проявляется в выборе места для отрицательной частицы *not* в предложении. Задание на произношение использует программу Praat для измерения длительности и высоты формантов назального [N] в английском языке. Различия в качестве анализируемого звука объясняются влиянием ранее изученных языков. Для статистической обработки данных использовался однофакторный анализ ANOVA, устанавливающий разницу между группами и внутри группы между участниками.

Результаты исследования: В письменном задании участники эксперимента, изучавшие немецкий язык как первый иностранный, предпочитают ставить глагол на последнее место в придаточном предложении, что является правильным в немецком языке, но некорректным в английском. Группа со знанием французского языка поставила глагол в правильном месте, но участники не использовали экзистенциальное *there are*, необходимое в английском языке. В устном задании обе группы использовали отрицание по правилам русского языка. В фонетическом задании качество английского [N] зависит от количества назализации, которой участники овладели до этого, т.е. под влиянием французского языка английский [N] становится более назализованным, чем [N] в группе, где первый иностранный язык был немецкий.

Обсуждение и заключения: При изучении английского как второго иностранного студенты испытывают влияние всех ранее изученных языков, а именно родного русского и первого иностранного. Результаты исследования совпадают с основными положениями генеративного подхода к изучению третьего языка в естественных условиях. Следовательно, освоение второго иностранного языка контролируется механизмом «универсальная грамматика», а процесс обучения можно улучшить, предвидя благоприятные и неблагоприятные лингвистические влияния на изучаемый язык.

Ключевые слова: изучение иностранного языка, освоение третьего языка, перенос, накопленный лингвистический опыт, (не)благоприятное влияние.

Introduction

It is widely known that instruction plays a crucial role in language acquisition. In the context of foreign language learning, instruction is aimed at re-creating a native-like environment for the target language foreseeing possible learning problems and walking the students through the process of formation of the non-native grammar (Ilaltdinova & Kisova 2018, Ilaltdinova & Frolova 2018, Archipova et al 2018, Medvedeva et al 2018). This guided or shaped acquisition achieves extremely high results if a learner undergoes intensive training and polishes her classroom obtained skills in real-life communication, for example through Internet chats.

Classroom learners often make observations that another foreign language is learnt faster and using the same learning strategies as for the first foreign language. Meanwhile, there is a question of whether learners' intuitions are right and foreign languages are learnt in the same way as any other school subject and whether cognitively, the mechanisms of learning a new foreign language are similar to the strategies for the previous one (Falk & Bardel, 2011). An alternative assumption is that foreign language acquisition is not fundamentally different from the acquisition of a native language in childhood. In this case, there should be similarities between the stages and patterns of cross linguistic influence between naturalistic second/third (L2/L3) language acquisition and classroom foreign language learning.

In naturalistic language acquisition, cross linguistic influences among the languages acquired by an individual show in many aspects. On the large scale, a previously learnt language(s) influences and to a great extent predicts the path of a new language acquisition (Swartz & Sprouse 1995, Hermas 2010, Bley-Vroman 2009, Falk & Bardel 2011, Flynn, Foley, & Vinnitskaya 2004, Rothman 2011, Mychaylyck et al 2015, Slabakova 2016).

When the process of acquisition is investigated in stages, a previously learnt language can be viewed as a set of morpho-syntactic feature bundles. In the process of L2 acquisition the existing sets of feature bundles get reassembled to meet the norms of the new language, i.e. there appear novel sets of features nodes that can partially overlap with the old ones (Lardiere 2009, Slabakova 2000, 2008, 2016, Lardiere 2009, Tsimpli & Dimitrakopoulou 2007, Hawkins and Casillas 2008, and Hawkins et al 2008).

In many language pairs an L2 may present features that are entirely new for the learners, i.e. the features that are not instantiated in the L1 but exist in the L2. Approaches that understand L2 acquisition as being fundamentally different from the L1, claim a learning problem. The parser cannot fully process the unfamiliar features and therefore they cannot be fully acquired in the L2 (Tsimpli & Dimitrakopoulou 2007, Hawkins and Casillas 2008, and Hawkins et al 2008).

On the other hand, if native language acquisition in childhood is similar to a new language acquisition. The parser should be able to spot a new feature and figure out its grammatical meaning, as predicted in Universal Grammar (UG)-governed L2 acquisition (Swartz & Sprouse 1995). Experimental evidence of successful acquisition of completely new linguistic features comes from Slabakova (2000, 2008, 2016), Lardiere (2009), among others. Generative scholars show that when a feature is salient enough for the parser to notice and process it, this feature can be successfully acquired in the new language (Slabakova 2000, 2008, 2016, Ionin 2003, 2004, 2006, Lardiere 2009).

Unfortunately, little has been done to investigate cross-linguistic influences in foreign language learning. Linguistic approaches that deal with naturalistic language acquisition are aimed at showing UG effects in isolation from other strong developmental factors. Consequently, generative approaches to L2 acquisition are almost always separated from, if not opposed to, classroom language learning.

In the instructed second language acquisition (SLA), first language (L1) is mainly used in contrastive methods of teaching, where comparisons between the L1 and L2 highlight and clarify a new phenomenon to acquire. Meanwhile, instructed and naturalistic language learning have a lot in common if approached from psycholinguistic perspective. A child that is learning to swim in the river and a child that is trained by a professional coach will still be using the same lung system to breathe. This metaphor works for language acquisition too. Both, instructed and naturalistic language learners use the same human brain that functions in the same way and governs similar cognitive processes. Methodological comparisons between languages increase feature salience, proposed as a required condition for language acquisition by generative scholars. Differences between linguistic systems create similar processing and learning difficulties for both naturalistic and classroom learners. Instruction shapes the process of language learning, but a learner uses the same brain as for naturalistic language acquisition.

The current paper makes a pioneering attempt to highlight the similarity in cognitive processes between naturalistic and classroom learners. It is a pilot study to test whether cross linguistic influences attested for naturalistic language acquisition can be traced in classroom learners. A threefold pilot study in language production investigates acquisition of English as the L3 by native speakers of Russian. Half of the L3 participants speak German as their L2, and half of them has L2 French. The experiment moves from more to less controlled speech production and checks for the effects of the two previously learnt languages on the formation of the linguistic system of English, the L3.

The paper begins with a literature review that summarizes the main approaches to L3 acquisition. The section makes predictions on what effect of the L1 or the L2 can be expected under each of the approaches or if none of them holds true for classroom language learning. The paper continues with a detailed description of the pilot study highlighting its procedure, characterizing the participants and explaining the method. The results of the study presented further and discussed in a separate section. The paper finishes with eliciting the prospective lines of research and their implications for classroom language instruction.

Literature Review

The last ten years have experienced a rise in scholarly interest to psycholinguistic mechanisms of third language (L3) acquisition. The first studies in this field focus on the initial state of L3 acquisition (Hermas 2010, Bley-Vroman 2009, Falk & Bardel 2011, Flynn, Foley, & Vinnitskaya 2004, Rothman 2011). These studies were challenged by the Typological Primacy Model (TPM) offered by Rothman (2011). The TPM (Rothman, 2011) is based on typological proximity of languages and proposes that either L1 or L2 can serve as the initial state for L3 acquisition. Following the TPM, the language that is typologically closest to the L3 will form the linguistic base for its learning and facilitate its acquisition.

The TPM-based methodology to study transfer at the initial stage of L3 acquisition was first introduced by Rothman and Cabrelli Amaro (2010; Rothman, 2010). One of their studies examined L1-English/L2-Spanish learners of L3-Brazilian Portuguese (BP) for word order and relative clause usage. The linguistic targets of the experiment structurally patterned with the learners' L1, English. Meanwhile, the participants provided Spanish-like language in their L3-BP. The experiment showed that at the initial stage the learners transferred their Spanish linguistic system into their L3-BP even in the situation when their L1 English would have provided more similar patterns. The study gave evidence that typological similarity between languages facilitated transfer at the initial stage of L3 acquisition.

The TPM has three other competing models of L3 acquisition as its scholarly opponents: the L1 Transfer Model (Hermas, 2010; Bley-Vroman, 2009); the L2 Status Factor Model (Falk

& Bardel, 2011) and the Cumulative Enhancement Model (CEM) (Flynn, Foley, & Vinnitskaya, 2004).

The L1 Transfer Model (Bley-Vroman, 2009; Hermas, 2010) insists on the prevailing status of L1 in L3 acquisition and proposes that any learning of a new language is facilitated by transfer from L1. This theory is refuted by experimental data that shows evidence of L2 transfer in most of the cases of transfer into L3 (Flynn, Foley, & Vinnitskaya, 2004; Rothman & Cabrelli Amaro, 2010; Montrul, Dias, and Santos, 2011; Rothman, 2011; García-Mayo & Rothman, 2012). The TPM scholars provide account for the L1 transfer data in terms of typological similarity.

The second theory opposed to the TPM is the L2 Status Factor Model (Falk & Bardel, 2011). This theory insists on the priority of L2 in front of L1 in L3 acquisition. The theory is built on the assumption of cognitive similarities between two non-native linguistic systems (Falk & Bardel, 2011). The point of contact of this theory and the TPM is in stating that transfer is based on similarity. However, the TPM bases itself on typological similarity while the L2 Status Factor Model draws on the notion that the L2 and L3 are cognitively similar. Meanwhile, the L2 Status Factor ignores the evidence for L1 transfer reported by other scholars in L3 acquisition (Bley-Vroman, 2009; Hermas, 2010). Thus, the L2 Status Factor Model does not take into consideration the whole combination of the three languages being acquired.

The third approach to L3 acquisition, the CEM, has much in common with the TPM. This model proposes that L3 acquisition is a cumulative process and the two previously learnt languages shape the path for L3 acquisition (Flynn, Foley, & Vinnitskaya, 2004). In this respect the CEM goes hand in hand with the TPM as it does not advocate a privileged status of either L1 or L2 for transfer into L3. What makes the CEM different from the TPM is the claim the language that is typologically distant can be a source of transfer. The only condition that restricts the transfer is a facilitation condition: Transfer will have facilitative effects on L3 or there will be no transfer. The CEM had to give account for the examples of non-facilitative transfer and even L1/L2 attrition during L3 acquisition, shown by TPM researchers (Cabrelli Amaro, 2013).

According to the TPM, the same as to the CEM, any newly acquired language is never acquired separately. A set of languages acquired by a human brain during lifespan forms a system which is never stable as every new linguistic pattern acquired by a learner changes the whole system and boosts cross-linguistic interaction within it. The changes within the system can be facilitative and non-facilitative, additive and subtractive, the processes overlooked by the CEM.

The results of experimental studies of Rothman and his collaborators provide evidence for the key points of the TPM – as a theory of the initial state of L3 acquisition (Rothman, 2011; García-Mayo & Rothman, 2012; Rothman & Cabrelli Amaro, 2010). Meanwhile, studies investigating beyond the initial stage of L3 acquisition brought back the key assumption of the CEM: All previous linguistic experience is equally available during L3 acquisition.

The first studies of intermediate L3 learners (Foote, 2009; Montrul, Dias, and Santos, 2011) specify the predictions by the TPM and provide evidence that the pattern of transfer among the languages may change with the learners' growth in L3 proficiency. At the intermediate level of proficiency selectivity in transfer does not go to one of the linguistic systems, the L1 or L2. The parser seeks similarity to a particular linguistic phenomenon across the two previously learnt languages. Norwegian-Russian bilinguals demonstrate facilitative effects of Russian in acquisition of L3 English. Notice that Russian is typologically more distant from English than Norwegian (Mykhaylyk et al 2015). This result challenges the TPM and supports the initial assumption by the CEM. Even though Mykhaylyk et al (2015) do not find direct non-facilitative effects of any of the language on L3 English, they rely on the previous findings by TPM scholars and admit non-facilitative influences from the L1+L2 system.

A change in the pattern of cross linguistic influences at intermediate stages of L3 acquisition informed two new models of L3 acquisition: The Scalpel Model (SM) (Slabakova 2016) and The Linguistic Proximity Model (LPM) (Westergaard et al 2016). Together with the CEM these models define selectivity in transfer as property by property transfer of a linguistic phenomenon into the L3. The search for the relevant phenomenon is performed across both linguistic systems of previously learnt languages. Unlike the CEM, the SM and the LPM anticipate non-facilitative effects from either of the previously learnt languages, which is in line with the TPM.

The study reported in this paper tests the predictions of the SM and the LPM with a novel population of language learners. The participants of the study are classroom learners of English as the L3. They are native speakers of Russian, whose L3 is English. They form 2 groups differentiated by the L2, for Group1 the L2 is German, for Group2, it is French.

With these groups of subjects many variables are automatically controlled (common L1 and L3, common age of exposure to L2 and L3, educational background) and the role of L2 can be studied as an independent variable in almost perfect laboratory condition.

Second, Russian is typologically distant from the languages scholarly investigated before. Therefore, the study sheds light on transfers between Slavic and Romance/Germanic languages and expands the scope of L3 theories to an entirely new data base.

Third, UG-based assumption for language acquisition have not been tested with instructed language learners. The study is looking for similarity in language acquisition past and checks whether there are fundamental differences in the formation of a non-native grammar in the context of guided language learning.

Predictions

Having the data from the Russian-English bilingual subjects, as a control group, vs. the data from Russian-German/French-English subjects, as the experimental group, will provide evidence for the SM and the LPM and separate their hypotheses from the assumptions of the TPM.

The example of German- or French-like usage of English should not occur in the English of a Russian-English bilingual group. If there are effect of Russian, both trilingual and bilinguals are expected to show them. Evidence of influences from the L1 and L2 will provide support for the SM and the LPM and will dismiss the TPM for the intermediate stage of L3 acquisition. Experimental evidence of non-facilitative influence of either of the previously learnt languages on English will belie the predictions of the CEM and support the relevance of this part of the TPM for intermediate stages, as predicted by both the SM and the LPM.

Research Questions and Hypothesis

The study of transfer into L3 at the intermediate stage of acquisition aims to answer to following questions:

Research question 1: Does the mechanism of transfer at the intermediate level of L3 acquisition remain selective and based on typological similarity to one of the previously learnt language?

In other words, Research Question 1 will test the validity of the TPM for Intermediate learners. There are two possible hypotheses generated by Research Question 1. The first hypothesis is that the TPM will be confirmed:

Hypothesis 1 (for RQ 1): At the Intermediate level of acquisition L3 adult learners transfer selectively. Typological similarity is the cognitive and linguistic foundation for transfer.

Within the confines of the research population, Hypothesis 1 will be confirmed if there is evidence that Russian L1 speakers who acquire English as L3 prefer to transfer from their German L2 or French L2 rather than from Russian, even if transfer from Russian is more facilitative.

The alternative hypothesis for Research Question 1 is based on the SM and the LPM: Russian learners of English as L3 will transfer from both Russian and their L2:

Hypothesis 2 (for RQ 1): At the intermediate level L3 learners select linguistic patterns to transfer into L3 from both L1 and L2 in parallel rather than transferring the whole linguistics system of either L1 or L2.

Bearing in mind that bilingualism has already been proven to have additive effects on L3 acquisition (Cummins, 1978, 1991; Cenoz, 2003; Kaushanskaya & Marian, 2009; Bialystock, 2012) one can assume that meta-linguistic awareness of an L3 learner grows alongside the speaker's growth in proficiency. This process can booster more detailed selectivity in transfer which will result in transferring separate linguistic patterns from both systems, the L1 and the L2 in parallel. If that is true, at the Intermediate level of L3 acquisition we will deal a complicated background linguistic system "L1+L2" which facilitate selective transfer into L3.

If hypothesis 2 is confirmed, the next step is to find out if transfer is always facilitative, as claimed by the CEM proponents. Research Question 2 is meant to address this particular issue:

Research question 2: Is transfer demonstrably facilitative or are there instances of non-facilitative transfer at the intermediate level of L3 acquisition?

If L3 learners at the Intermediate level combine their two existing linguistic systems into "L1+L2" both languages become equally possible sources for transfer into L3. Research Question 2 offers a closer investigation of transfer patterns in order to find out whether the transfer is solely facilitative or not. For the purposes of formulating a hypothesis, I will assume that the CEM is correct:

Hypothesis 3 (for RQ 2): Transfer into L3 at the intermediate level of acquisition is always facilitative.

The study

Procedure

Volunteer students from a higher educational institution in Nizhny Novgorod, Russia, were invited to meet with the experimenter outside class schedule. Participation was totally volunteer and did not entail any financial reward or any encouragement in a form of an extra credit. The experiment took place in a large lecture hall. The room was divided into four sectors. Each sector was devoted to a particular linguistic assignment: (1) English proficiency measure (C-test), (2) written speech production task, (3) oral speech production task, (4) pronunciation task. The pronunciation task took place in a remote part of the room to maximally reduce background noises in sound recording.

The students could begin with any sector and accomplish all the four tasks in any order. The students could quit the experiment at any stage without any consequences. The total time of testing did not exceed 90 minutes.

Participants

The target group in the study were native speakers of Russian who were learning two foreign languages in a highly competitive college level linguistic programme in Russia. All the participants shared the same L1 – Russian, were about the same age (20), the same educational background (3rd year in college) and the same level of proficiency in English (intermediate). All trilingual participants had a higher command in their L2 than in the L3.

Language proficiency assessment. The level of proficiency in L2 and L3 was measured by the standardized tests in English / German / French. The subjects were upper-intermediate

or advanced in either German or French correspondently. The Pearson Test of English showed the results of the intermediate of English proficiency. In the sequence of acquisition English was always the L3, after German or French.

Selection of experimental and control group. All the subjects were classroom learners of English. The target trilingual population was divided into two groups, depending on their L2, German or French. As a result, there were two trilingual groups:

Group 1: 9 people, learners of Russian (L1) – French (L2) – English (L3)

Group 2: 10 people, learners of Russian (L1) – German (L2) – English (L3)

Group 3: 8 people, learners of Russian (L1) –English (L2)

A native speaker of English was asked to provide the target English sentences for the syntactic tasks the subjects were given. The native speaker's data were used as a control measure.

An additional control group of classroom learners of English was used. This group were bilingual intermediate learners of English, as established by the Pearson Test of English. This group was used to make sure that effect of any L2 in the trilingual groups is not by chance and does not occur in the bilingual group, where the participants can only transfer between Russian and English. The control bilingual group were 2nd year college students.

After the exclusion of the faulty data, the number of participants reduced to eight in each trilingual group in the first task and six in the second. The control bilingual group had 4 valid data sets in all the three stages of the experiment.

Method

The pilot study reported in this paper gave students four assignments, three experimental tasks and one language proficiency measure. C-test was used as an additional proficiency measure to make sure that the non-native English grammar had been formed to at least the (low)intermediate level. C-test was a good additional measure for the experiment that investigated sentence structures and was primarily focused on the acquisition of syntax.

There were three main tasks in this pilot study. They ranged from fully controlled to zero-control. The first task was written production, where the participants had an unrestricted amount of time and could make as many corrections in their English texts as they needed. The second task was an oral production, where the pragmatics of the conversation was expected to reduce the students' conscious control over their speech production. In the third task the quality of speech production was measured in Praat. Even if the participants were trying their best to sound native-like in English, format frequency goes beyond the capabilities of a human ear and cannot be adjusted in speech production.

Proficiency Measure. The C-test contained 60 gaps to fill in. There were three independent texts of 5-7 sentences, with 20 gaps per text. The first sentence and the final part of every text remained complete. In the middle of the text the second half of every second word was deleted. The participants had to restore as much of the text as they could. The accepting criterion was 30% completion or more. The data of the participants who did not reach 30% were later excluded from the analysis.

Controlled written production. In the controlled written production task, the students received a short text for translation from Russian into English. The text contained 7 sentences describing a day in a touristy place. The target English sentence (2) and its Russian source (1) are given below:

(1) Сувениры продают там, где много туристов (*Rus*).

Suveniry prodajut tam, gde mnogo turistov

Souvenirs are sold there, where many tourists.

(2) They sell souvenirs there, where there are many tourists (*Eng*).

Notice that the Russian sentence has no copula in the subordinate clause (1). Example (2) shows that a verb is required in English, as well as in French or German.

The expected difference in verb placement may show in English sentences like (3) – (5).

(3) The souvenirs are sold in the places where **are** many tourists.

(4) Souvenirs are sold there, where many tourists **are**.

(5) Souvenirs are sold there, where **there are** many tourists.

In sentence (3), the verb is present, as required for English, French or German. Example (4) has the verb at the end of the subordinate, which could be an influence of the German word order. Example (5) is the target-like usage with the existential *there are*. Sentence (5) was produced by a native speaker of English in a written task. The native speaker was learning Russian at the time of testing and had reached the intermediate level of proficiency.

The written production task also yielded examples like in (6), which was grammatically correct but not informative for verb placement. Variants like in (6) were excluded from the analysis.

(6) Souvenirs are sold in **places with** many tourists.

The experiment had eight samples valid for analysis in each trilingual group.

Free oral production. The second part of the experiment was on oral speech production task. The subjects heard a short problem situation describing how something did not work and they were asked for help to fix the problem. The experiment prompted the subjects to use a negative sentence in any form they might prefer. The following are some possible target forms:

(7) It was used in the wrong way. / You did it wrong. / You didn't use it in the right way.

Another possible sentence is shown in (8), where the negation is part of the noun phrase.

(8) It was used in the **not** right way.

The example in (8) is a calque from Russian and is not allowed in any of the languages the subjects were learning, except for very special pragmatic conditions. There were six valid patterns of negation placement in the second part of the pilot experiment.

Pronunciation task. The participants were asked to record themselves reading a five-sentence text in English. This type of assignment was not new to the participants as they were used to self-recording in the course on accent reduction. The participants confirmed that they understood the task. They had as much time as they needed to warm up and practice reading the piece.

The target sentences came in the middle of the text. They are given in (9). The sound under analysis is the nasalized [N] in the context of the *-ing* in word final position. Bearing in mind that German has a nasal velar [N], French has a dentalalveolar [n], a nasal palatal [nj] and nasal vowels and Russian has a denti-alveolar [ɲ] but no nasal velar [N], the study expects to see different cross-linguistic influences on the [N] in English across the groups.

(9) Yesterday I got up early in the morning. I read an interesting book and set up a phone call with my family.

The nasality of the target sound was measured with Praat and estimated through two variables; F2 formant height and sound duration. Unclear sound recordings and the recordings that did not show a clear wave form on the spectrogram were excluded from the analysis. The task yielded six valid patterns in each trilingual group

Results

The independent variables of the study are the set of languages being acquired by the subjects and the subjects' level of proficiency in English.

The dependent variable of the study is the mechanism of selective transfer at the intermediate level of L3 acquisition.

The results were entered in the Excel data sheet and analyzed with one-way ANOVA for statistical significance. The results are presented by experimental task and include the trilingual and bilingual groups.

Controlled written production yielded the two types of sentences predicted in (3) and (4), repeated here as (9) and (10).

(9) The souvenirs are sold in the places where **are** many tourists.

(10) Souvenirs are sold there, where many tourists **are**.

Sentence (9) comes from experimental group 1, Russian (L1) – French (L2) – English (L3). All the participants used a verb in the subordinate clause but did not recall the target expletive *there are*. Since Russian does not require a verb in the subordinate, sentence (9) can be considered as the influence from the participants' L2 French.

The assumption above gets additional support from the results of the second experimental group, Russian (L1) – German (L2) – English (L3). 62% of the participants in this group produced sentences like in (10) above. Verb final structure of the subordinate is not required by any language of the experiment, but German. This group also shows evidence of the L2 influence on the L3. Table 1 in the Appendix shows the results of sentence production by group.

Even with such a little data pool the group difference comes out as highly significant. In between group comparison $F(1,3) = 36.49, p = .005$.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	173,125	3	57,70833	36,49539	1,5E-13	2,758078
Within Groups	94,875	60	1,58125			
Total	268	63				

The only difference between the experimental groups in the L2 of the participants. The results in written production suggest different influences of different L2s in the L3 English.

After the exclusion of the invalid data, the Russian-English control group had only 4 participants. We cannot speak about any significant results in this group. Meanwhile, the data from the bilingual control groups are informative on what is not happening when neither German or French are present in the monolingual's mind.

Two participants in the bilingual group wrote the correct translations. The other two, had a sentence like in (11):

(11) Souvenirs are sold there, where it is many tourists.

The pattern in (11) is very different from either (9) or (10). The participants feel the need for a special type of a subject but erroneous the expletive *it* instead of the existential *there are*. Notice that subject-verb agreement is observed in (11).

Free oral production. In the production task, when the attention of the participants was focused on the delivery of the pragmatic meaning rather than on syntax of the incoming sentence, both groups showed negation placement like in (12) in 93% of the cases.

(12) It was used / You used it in the **not** right way.

The one-way ANOVA does not return any significant differences for negation placement between experimental groups, $F(1, 3) = 39.64, p = 2.2$. Table 2 in the Appendix shows the results for negation placement by experimental group.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	178,125	3	59,375	39,63839	2,99E-14	2,758078
Within Groups	89,875	60	1,497917			

The control bilingual group produced sentences like in (12) 100%. These results go in line with the prediction of L1 Russian influences on English, be it L2 or L3.

Pronunciation task.

The nasality of [N] in both trilingual groups was measured through the comparison of formant frequencies and sound duration. The trilinguals were compared to each other and to the bilingual group and one monolingual native speaker of Russian.

For formant frequencies, the difference between the trilingual groups is marginal significant, $p = .09$.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3824714	3	1274905	2,64781	0,09658	3,490295
Within Groups	5777930	12	481494,1			
Total	9602644	15				

Meanwhile, these results were received from the pool of six participants in each L3 group. With a bigger data pull the difference in groups' performance is likely to reach significance. Chart 1 already shows a clear tendency for the L2-French group to be different from the L2-German group. Meanwhile, both L3 groups are different from the bilingual group and the [H] sound produced in Russian.

For sound duration, the statistical analysis returns marginally significant results between the groups, $p = .07$. The same as with the F2 height, this result is likely to reach significance with a bigger population. Chart 2 shows groups results for sound duration. There is a noticeable difference between the L2 French and the L2 German trilingual groups and practically no difference between the trilingual group with German as the L2 and the control bilingual group.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0,012919	3	0,004306	3,026354	0,071273	3,490295
Within Groups	0,017075	12	0,001423			
Total	0,029994	15				

Chart 1. Formant height per group.

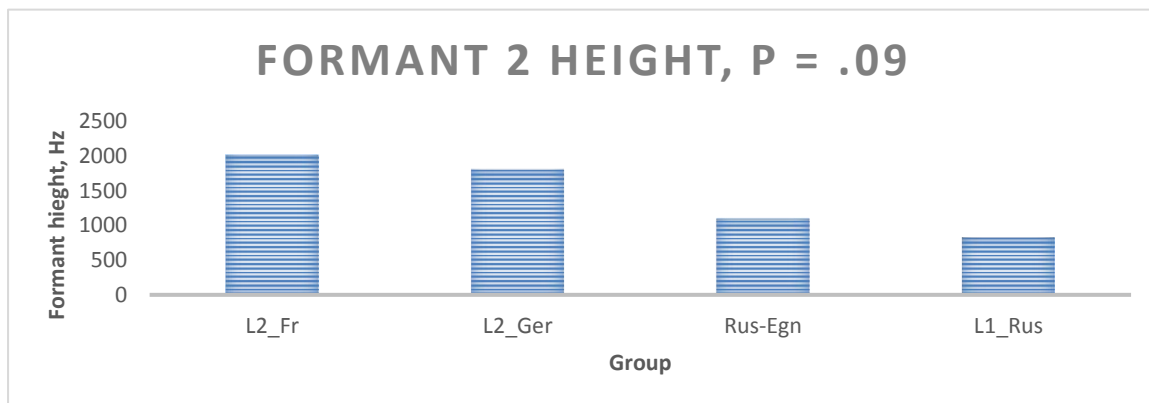
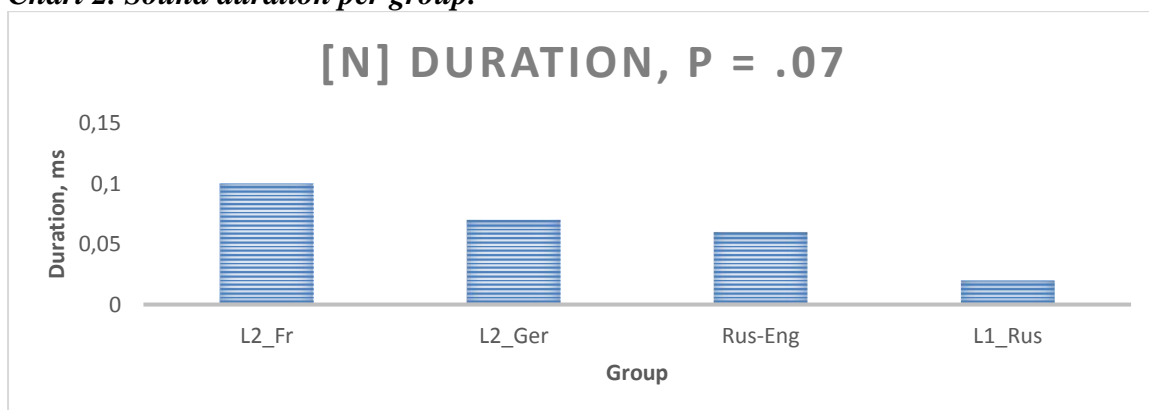


Chart 2. Sound duration per group.



Both measurements of sound quality suggest group differences. The English [N] of the trilingual group with L2 French has French-like qualities. The trilingual group that learnt the nasal [N] in German is close to the bilingual group, which means that the trilinguals had been exposed to the nasality more than the bilinguals, but their experience with nasalization is much less than the L3 group with the French background. All previous linguistic experience shows in the quality of the English [N], which is very different from the Russian [Н].

Discussion

The **written production data**: are consistent with both the SM and the LPM and embrace the general prediction of the CEM. At the same time, they do not reject the TPM and, the L2-status factor, if we go back to the origins of the main models. L3 English learners definitely

use their L2, which is typologically similar to L3, as the linguistic base to structure the required sentence in English and, in this case, the transfer was always facilitative, as they included a verb in the subordinate clause that would be absent in Russian. L1-Russian/L2-English learners were previously instructed on existential sentences, but this instruction seems to be irrelevant for the learners, some of them still preferred the expletive subject.

In **oral production**, we come across syntactic transfer from Russian which is typologically more distant from English than either French or German. This seems to refute the L2 Status Factor Model, since it denies L1 transfer, and separate the CEM-based approaches from the TPM. The TPM would not predict this transfer, even though it admits non-facilitative effects of cross-linguistic influences. At the same time, this transfer cannot be regarded as facilitative, which entails that the CEM does not provide an exhaustive account for this population of speakers. The results in the second part of the study go in line with the predictions by the SM and the LPM.

The data from my pilot experiment, especially its second part, show that at the Intermediate level English L3 learners transfer from both L1 and L2 in parallel and the transfer can be non-facilitative.

The results of **the phonological analysis** show that the quality of the nasal [N] in L3 English is influenced by the previously learnt L2s. The amount of nasality the participants received in the L2 French influences the height of F2 formant in [N]. It is higher than for the participants with the L2 German. English [N] is also produced longer in English, when the L3 participants have French in their linguistic background. The study does not provide data whether the phonological transfer is facilitative or not since there is no comparison with the monolingual speaker of English. Meanwhile, the implications of the fine-grained phonological analysis suggest that cross-linguistic transfer can be even deeper than the property by property transfer. A feature of a different phonological unit, like the nasality of a vowel, adds to the formation of the concept of nasality in the newly acquired language.

The results of this pilot study support the assumption that the same mechanisms of cross-linguistic influence that were attested in naturalistic learner's occur in classroom L3 acquisition. Therefore, classroom language acquisition is UG-governed and benefits from instruction. Further studies can investigate how the pattern of cross-linguistic influence changes with the growth of classroom learners' proficiency and whether the similarities with naturalistic language acquisition are preserved.

The study also informs language instruction in the second foreign language. It will be beneficial to use potentially facilitative components of the previously learnt languages. What is more, the efficiency of instruction and learning can be ensured by predicting non-facilitative influences across the languages known to a learner and finding ways to smooth them.

The field of instructed language acquisition will benefit from the experiments that will test the hypotheses laid above. Future studies can use the patterns that are typical for either Romance/Germanic languages and occur in English (ex., there is/are) or for Russian (ex., negation patterns) but cannot be fully mapped to any two of the languages under analysis. This field of research is still in the embryonic state.

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Appendix

Table 1. Verb placement in written production by group.

Group	Participant	Sentence type (9)	Sentence type (10)
Rus-Fr-Eng	1	1	0
Rus-Fr-Eng	2	1	0
Rus-Fr-Eng	3	1	0
Rus-Fr-Eng	4	1	0
Rus-Fr-Eng	5	1	0
Rus-Fr-Eng	6	1	0
Rus-Fr-Eng	7	1	0
Rus-Fr-Eng	8	1	0
Rus-Ger-Eng	1	0	1
Rus-Ger-Eng	2	0	1
Rus-Ger-Eng	3	0	1
Rus-Ger-Eng	4	0	1
Rus-Ger-Eng	5	0	1
Rus-Ger-Eng	6	1	0
Rus-Ger-Eng	7	1	0
Rus-Ger-Eng	8	1	0

Table 2. Negation placement in oral production by group.

Group	Participant	NOT_Rus_like	NOT_Eng_like
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Rus-Fr-Eng	1	1	0
Rus-Fr-Eng	2	1	0
Rus-Fr-Eng	3	1	0
Rus-Fr-Eng	4	1	0
Rus-Fr-Eng	5	1	0
Rus-Fr-Eng	6	1	0
Rus-Fr-Eng	7	1	0
Rus-Fr-Eng	8	1	0
Rus-Ger-Eng	1	0	1
Rus-Ger-Eng	2	1	0
Rus-Ger-Eng	3	1	0
Rus-Ger-Eng	4	1	0
Rus-Ger-Eng	5	1	0
Rus-Ger-Eng	6	1	0
Rus-Ger-Eng	7	1	0
Rus-Ger-Eng	8	1	0

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