

SECOND FOREIGN LANGUAGE ACQUISITION: THE INFLUENCE OF STUDENTS' FIRST FOREIGN LANGUAGE ON LEXICAL SKILLS DEVELOPMENT IN ENGLISH FOR SPECIAL PURPOSES

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ABSTRACT

Globalization and intercultural communication are stepping up the demands for modern specialists' linguistic competencies. To provide successful professional communication, competitiveness and mobility, the graduates of higher education are to master two or more foreign languages. In this regard, it seems important to study the features of multilingual education, identify the difficulties that arise in multilingual teaching and outline the ways to overcome them. Although, there is a number of studies devoted to the impact of the native language on foreign language acquisition, the issue of learners' first and second foreign language interaction seems to be inadequately treated and there is a lack of research on factors that increase learners' second foreign language proficiency in three-language contact (i.e., their native, first and second foreign language). In particular, little attention is paid to cross-linguistic skills transfer or to lexical interference patterns that arise among students mastering their second foreign language.

This paper is devoted to lexical interference that occurs when English for Special Purposes (ESP) is taught as the second foreign language to university students studying French or Spanish as their first foreign language. The purpose of the work is to identify which language(-s) are the source of interference through analyzing students' errors. The hypotheses of the study are as follows: in case of receptive activity (reading) the language which is closely related to the target language will serve as the source of positive transfer. In productive activity (writing and speaking) lexical interference will arise and play a significant role. The source of interference will be learners' first foreign language. To test the hypotheses, a pilot study was conducted, during which typical lexical errors of Russian-speaking students studying ESP as their second foreign language and French or Spanish as their first foreign language were identified. The control group were students with native Russian language and English as their first foreign language. The research methodology included questionnaires, testing and interviews. The research participants were RUDN University students. The results of the study confirm the presence of positive transfer and lexical interference in

ESP terminology acquisition, the source of which is learners' first foreign language. Learners' typical mistakes are associated with the use of articles, prepositions, adjective order, fully and partially assimilated cognates, depend on their language experience and are due to their first foreign language interference.

Keywords: *multilingualism, lexical interference, foreign language, English for Special Purposes, error analysis*

INTRODUCTION

Globalization, the growth of intercultural communication and the expansion of international contacts set out the demands for modern specialists' linguistic skills development. The growing multilingualism of the modern society puts the issues of foreign language learning as a part of polylingual education on the global agenda. To provide successful professional communication, competitiveness and mobility, higher education graduates are to master two or more foreign languages. In this regard, it seems important to study foreign language teaching in a multilingual classroom, to identify the difficulties that arise in a multilingual environment and to outline the ways to overcome them.

One of the challenges to language learning is language transfer (also known as interference or cross-language influence). As T. Odlin puts it, "Transfer is the impact caused by the similarities and differences between the target language and any other language which has been acquired" [1]. Such transfer can be positive and negative, it can benefit teachers and learners or be an obstacle for them.

Language transfer is not limited to the influence of the native language (L1), it refers to the impact of any language that the learner of the target language has acquired (or is acquiring) in the course of multilingual acquisition, i.e., "the acquisition of languages other than the first or the second" [2].

Current research indicates that, apart from the impact of L1, an intricate set of interactions between multiple languages should be considered due to the great diversity and complexity in multilingual acquisition [3]. On the one hand, such multilingual dynamics might create certain difficulties in case of negative language transfer which occurs when learners' previously learned language patterns complicate the performance of the learning task. On the other hand, it can contribute to efficient language learning through positive transfer if learners' prior knowledge supports the performance of learning activities. Thus, in case of second foreign language acquisition (FL2) a positive transfer of skills and competencies obtained in the first foreign language (FL1) learning might be observed. In addition, students' proficiency increases as their speech and cognitive skills (memory, perception, and speech production) necessary to learn FL2 have been already formed in the process of FL1 acquisition.

Although, there have been numerous studies devoted to the role of L1 in FL1 learning and the follow-up language transfer (both negative and positive) [4], [5], several questions regarding language transfer in the context of multilingual contact (L1, FL1 and FL2) and factors (linguistic and extralinguistic) contributing to the efficiency of FL2 learning remain to be addressed. In particular, the research on lexical and grammatical transfer in learning English for Special Purposes (ESP) as FL2 in multilingual environments where learners study two or more foreign languages remains limited.

As a rule, two methodological approaches are applied to study cross-linguistic influence in the context of FL2 learning: contrastive analysis and error analysis. The contrastive analysis hypothesis [6], [7] postulates positive transfer between FL1 and FL2 in case of their similarity and negative transfer (language interference) caused by language differences. Despite several limitations, this theory can be conveniently applied to predict learners' potential errors in multilingual context. Error analysis theory [8], [9], [10] is used to find out how errors are made by learners and to reveal the sources of errors to correct and prevent them.

A pivotal issue in learning English in the sphere of professional communication (ESP) is subject-specific vocabulary and professional terminology acquisition [11]. Lexical skills development in ESP implies learners' mastering general, interdisciplinary, and special vocabulary as well as their ability to apply it into speech practice. The general requirements of the Common European Framework of Reference for Languages in the sphere of subject-specific vocabulary and terminology for ESP learners provide the following criteria for foreign language vocabulary skills: vocabulary size, vocabulary range, vocabulary control and the delimitation between language learning for receptive and productive use [12].

MATERIAL AND METHOD

The study focuses on language transfer in a multilingual environment, where students (with the Russian language as L1), learn two foreign languages: English as the language for professional communication (ESP) as FL2 and French (or Spanish) as FL1.

An important issue to be considered in multiple language learning is the factors determining the source language of transfer in multilingual environment. The main factors mentioned by the scholars are the order of language acquisition, the age of acquisition, speaker's level of proficiency, the degree of typological similarity between the languages and language distance [3]. The research is inconclusive, but most scholars agree that linguistic transfer is more likely to occur when the circumstances of learning two languages are similar and they are closely related [13], [14]. This is certainly the case when the English language is learned as FL2 alongside the French (or Spanish) language as FL1, which are

quite far from learners' mother tongue, Russian, in terms of a writing system and pronunciation.

The content analysis of "A Dictionary of Diplomacy" [11], [15] shows that more than 80 percent of English diplomatic terminology is of French and Latin origin. Typologically, English is a German language but historically it has acquired many loan words from Latin and the French language [3]. That is why learners of English for professional communication in International Relations as FL2 whose FL1 belongs to the Romance language group can benefit from the low linguistic distance between the languages. We do not differentiate here between the Spanish language and French as both languages are abundant in words of Latin origin as far as diplomatic terminology is concerned and are closely related. The native language of students is Russian, which is linguistically distant from the English language and can hardly be a source of negative interference.

The purpose of the study is to show that there is lexical interference and positive transfer in multilingual environment in case of teaching ESP as the language of professional communication (in International Relations) as FL2 to students with French or the Spanish language as their FL1 and the Russian language as L1 and to reveal the sources of lexical and lexical-grammatical interference.

Based on the above considerations we put forward the following expectations:

Hypothesis 1 (H1): in the case of receptive activity (reading) the language which is closely related to the target language (English) will serve as the source of positive transfer in a multilingual environment.

Hypothesis 2 (H2): in productive activity (writing and speaking) negative transfer (lexical interference) will arise and play a significant role. The source of negative interference will be learners' FL1.

To test the hypotheses, a pilot study was carried out during which typical lexical errors of Russian-speaking students studying ESP as their FL2 and French or the Spanish language as their FL1 were identified.

We collected the data using a mixed-method approach: quantitative research methods (reading comprehension and vocabulary tests, questionnaires) and qualitative research (observation, interviews).

The participants of the study were 40 Russian-speaking students who enrolled at Peoples' Friendship University of Russia in Master's Program in International Relations (IR), which envisages studying ESP for International Relations and offers elective module of FL2 studies.

The ESP language course prerequisite is B1/B2 level in English, that is, learners have obtained necessary fluency in main language skills and competencies (phonetical, grammar, word-building and communicative). The language course is aimed at using language flexibly and effectively for academic and professional purposes, mastering professional vocabulary and word-formation patterns, developing grammar and vocabulary skills for academic literacy.

Two groups of participants were chosen: the experimental one and the control one. The experimental group were students with the native Russian language, who studied the French (or Spanish) language as their FL1 and ESP in the sphere of IR as FL2. The control group were students with the native Russian language who studied the English language as their FL1 and did not have experience in studying a Romance language. The participants, all of them 19 to 22 years old, were selected based on their skills in the English language (B2). Each group included 20 students.

RESULTS AND DISCUSSION

Firstly, to test Hypothesis 1, both groups were offered reading comprehension test designed by the authors, which comprised a subject-specific text and multiple-choice questions. Mean grade points (out of 100) and mean time required to complete the tasks for both groups are shown in Table 1.

Table 1. Reading comprehension test: mean grade points and mean time.

	Groups	N	Mean	Std. Deviation	DF	T observed
Mean grade points	Group A1	20	72,90	9,84	19	T=1,728
	Group A2	20	67,55	9,74	19	F=1,020
Mean time	Group A1	20	31,4 min.	4,03	19	T=4,514
	Group A2	20	38,0 min.	5,18	19	F=1,656

Table 1 shows T-statistics for mean grade points earned by students of Group A1 and A2 and the mean time to complete the test. It is worth mentioning that the Student's t-test is relevant here because the variances in all cases are equal considering the F-statistic for standard deviations at a standard significance level $\alpha = 0.05$.

The mean time required to complete the tasks for Group A1 (multilinguals with French or Spanish as FL1) was 31,4 minutes, the mean time for Group A2 was 38 minutes, T observed = 4,514. As T observed is above T critical (2,024), there is statistically significant difference between the two groups.

The mean grade point in reading comprehension test for Group A1 is 72,9 (out of 100), which is higher than the mean grade point of Group A2 (67,55). Since T observed (1,728) is less than its critical value (2,024), no statistically significant difference is observed between the two groups.

Thus, the results obtained clearly show statistically significant differences in mean time spent by students of A1 and A2 to complete reading comprehension tasks, but no differences altogether are observed in mean grade points.

Hypothesis 1, which states that in case of receptive activity (reading) in multilingual environment the language which is closely related to the target language will serve as the source of positive transfer, is proved. There is a positive transfer, and the source of transfer is FL1 (French or Spanish).

The results obtained indicate that there is positive interference in multilingual environment and its source is learners' FL1. Multilingual students of the experimental group understand academic texts on IR abundant with the terminology of Latin and Greek origin better than their counterparts from the control group and they have developed cognitive abilities for language learning from their FL1 course. That is why they need less time to answer the questions and to complete the tasks. Their grade points are also somewhat higher while no statistical difference is observed. One possible explanation is that the students of the control group might take their time and fulfil the test correctly being industrious and motivated learners of ESP. The other possible interpretation is that multilingual students are more effective in FL2 learning as they successfully apply cognitive strategies previously acquired in the course of FL1 to master FL2 grammar and vocabulary.

Next, to test Hypothesis 2 (ESP productive skills of multilinguals studying French or Spanish as FL1 are influenced by negative transfer, the source of which is FL1) both groups of participants were offered a test on subject-specific diplomatic vocabulary and lexical skills in IR designed by the authors, which comprised two parts.

A qualitative analysis of potential errors of multilinguals with the French (or Spanish) language as FL1 was carried out before testing. The analysis revealed that the sources of potential errors could be cognate terms, words of Latin origin, "false friends" (words similar in form but different in meaning) and multicomponent compound terms derived according to the models "Adjective plus Noun", "Noun plus Noun". In the first part of the test students were presented cards with English definitions of partly or fully assimilated cognate diplomatic terms and they were expected to pronounce the required term in English. The second part of the text comprised compound terms which might cause difficulties with word order. Students were presented cards with definitions of international organizations, and they were to provide the correct name or acronym of the organization.

The test results of Group A1 and Group A2 and mean grade points (out of 100) for each part of the test are listed in Table 2. As shown in Table 2, mean grade points of the experimental group for both parts of the test are less than those of the control group.

Table 2. *Diplomatic vocabulary test: mean grade points.*

	Groups	N	Mean grade points	Std. Deviation	DF	T observed
Part 1 (cognates, false friends, etc.)	Group A1	20	56,70	10,21	19	T=4,794
	Group A2	20	70,30	7,53	19	F=1,842
Part 2 (word order, “N+A”, “N+N” combinations)	Group A1	20	62,30	10,95	19	T=1,823
	Group A2	20	67,95	8,51	19	F=1,655

Table 2 shows the T-statistics for mean grade points gained by students of Group A1 and A2 for two parts of the test. The Student's t-test is feasible because the variances in all cases are equal considering the F-statistic for standard deviations at a standard significance level of 0.05. Here, the results clearly show statistically significant differences in grade points gained by students in Part 1 of the test. The mean value for Group A1 in Part 1 is 56.7 points (of 100 possible) with the mean-square deviation of 10.21. The mean value for Group A2 in Part 1 is 70.3 points (of 100 possible), with the mean-square deviation of 7.53.

The results of T-statistics application (T observed 4,794 is higher than T critical 2,024) show that there is statistically significant difference between mean grade points of the two groups in Part 1 (fully or partly assimilated cognates) which indicates negative transfer in learners' productive activity (speaking). Hypothesis 2 is proved. There is negative lexical interference, the source of which is FL1. One of the main “soft targets” of negative lexical transfer in ESP is fully or partially assimilated cognates.

In Part 2 of the test (multicomponent terms and international organizations) no statistically significant differences were observed in mean grade points. T1 observed = 1,728 is less than T critical = 2,024. A possible explanation for this is that the phenomenon of “Noun plus Noun” word combination typical for English language is quite rare both in the French (or Spanish) language and in Russian and the word order (i.e., adjective placement before or after noun) is different for the three languages: in the Russian language the word order is rather flexible, in English an adjective is usually in preposition, while the pattern typical for both French and Spanish is “an adjective in postposition”). There are also some exceptions from typical word order in diplomatic terminology of ESP derived from French (e.g., *ambassador extraordinary and plenipotentiary* with an

adjective in postposition uncommon for the English language but typical for French) which may be a source of intralingual transfer or overgeneralization.

CONCLUSION

In our study we analysed positive and negative transfer that occurs in case of multilingual education when learners study two foreign languages and provided the application of language transfer theory to pedagogical practice.

The results of the study confirm the presence and significance of positive transfer and negative lexical interference in ESP subject-specific vocabulary and terminology acquisition, the source of which is learners' FL1 (French or Spanish).

The first hypothesis which states that in case of receptive activity (reading) the language which is closely related to learners' target language will serve as the source of positive transfer is proved. There is positive transfer, and the source of transfer is FL1 (French or Spanish).

The second hypothesis which states that there is negative transfer in ESP productive skills (speaking) of multilinguals studying the French (or Spanish) language as FL1 and ESP as FL2 is proved. There is negative lexical transfer, and the source of interference is FL1. Learners' typical lexical mistakes are associated with the use of articles, prepositions, adjective order, fully and partially assimilated cognates, "false friends", depend on language experience and are due to FL1 interference. One of the main sources of lexical errors in ESP is fully or partially assimilated cognates.

During the study, the authors concluded that a special set of learning activities combined with intensive reading practice and innovated pedagogical techniques should be developed to improve the lexical skills of multilingual students considering their language experience.

The results obtained can be applied in further research of lexical transfer in a multilingual environments, to improve pedagogical techniques for lexical skills development in ESP classrooms, textbooks, teaching aids and manuals in FL2 learning.

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