



L1 Interference Related Errors in Advanced Czech Students of English

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Abstract

The purpose of this study is to assess how the accuracy of advanced learners' language can be influenced by a focused intervention. Even advanced learners of English frequently manifest rather high occurrence of errors which are believed to be caused by mother tongue (L1) interference and fossilization. These two concepts have recently seen renewed interest of researchers; studies of second language acquisition in advanced learners are, however, lacking.

In this research project, three groups, pilot, experimental and control, of advanced Czech university students majoring in English were tested for accuracy. All students took a grammaticality judgement test (GJ), which has been proved to be a reliable measure of L2 knowledge, in order to assess their ability to identify errors, and they were also asked to express their certainty in answering (Certainty-based marking - CBM). The pilot and experimental groups then participated in a 13-week blended course focused on the most problematic areas caused by L1 interference. All groups were then tested again, the results were compared and analysed, and the efficiency of the intervention evaluated. Despite a number of limitations, the low number of participants in particular, (26 students in the pilot group, 24 students in the intervention group, and 14 students in the control group), the preliminary results show an increase in accuracy in all groups. This paper presents an analysis of GJ and CBM testing.

Keywords: *accuracy, learner language, L1 interference related errors, fossilization, grammaticality judgement test, certainty-based marking;*

1. Introduction

Students' proficiency in second or foreign language (in this paper, the two terms will be used interchangeably and referred to as L2) can be characterised by three categories: complexity, accuracy and fluency (CAF). This three-dimensional model has been successfully adopted since the 1990s when it was introduced by Skehan, building upon Brumfit's original accuracy and fluency model from 1979 [1]. Advanced students of English as a foreign language tend to be fluent, and their language is often complex; accuracy of their performance is, however, frequently problematic. The construct of accuracy is usually perceived as "the ability to produce target-like and error-free language" [1].

The study of errors in learner language has traditionally been an important part of research into SLA. While the original error analysis (EA) has been largely disproved, computer-aided error analysis (CEA) of learner language, especially building large corpora of learner language which has enabled analysing large amounts of texts has triggered renewed interest in EA [2]. A number of studies applying CEA have been conducted recently producing impressive results [3]. They have reported that many of these errors seem to be related to the influence of learners' mother tongue on the acquisition of a second or foreign language, *L1 transfer*, and to the fact that learner language often reaches a 'plateau' and tends to cease to develop, a feature called *fossilization* [4]. Despite the controversy of the latter construct, coined by Selinker in *the Fossilization Hypothesis* in 1972, it has recently received significant attention of researchers, and a new hypothesis was formulated by Han in 2009 as *the Selective Fossilization Hypothesis* [6]. Unlike Selinker's original belief, according to Han "fossilization is local, not global" [5], affecting only certain features of learner language.

This research study seeks to explore to what extent L1 induced errors can be minimized by a focused intervention. This paper provides an overview of one part of a broader research project, in which aspects of oral and written production, and the ability to detect and correct errors in advanced Czech students of English are investigated.

2. Theoretical frame

The two typical features of learner language, L1 interference and fossilization, appear to be closely related: "native language influence is the major shaping force in fossilizable speech behaviour" [5]. In order to investigate the two features and their mutual influence, samples of learner language, ideally

both written and spoken, should be collected and analysed, and contrasted with students' intuitions about language, which could be measured by the *grammaticality judgement test* (GJ) [6]. Although studies into the reliability of GJ tests have often produced conflicting results, they enable "a focused scrutiny on specific linguistic features", e.g. fossilization, as they can test features which are impossible to test in learners' production due to the fact that "naturalistic production often involves limited use of a given grammatical structure", and therefore "GJ methodology is a viable alternative for studying fossilization" [7].

Certainty-based marking (CBM), in which participants express their levels of certainty about their answers on a 3-point scale, is adopted to ensure that they would neither take unnecessary risks in answering, nor guess the answers, and thus helps to produce reliable results [8].

3. Research aim

The principal aim of this research paper is to test whether a focused intervention will produce an improvement in advanced students' ability to distinguish between grammatical and ungrammatical sentences and raise their certainty in assessing this. The intervention is a 13-week course in which accuracy of language and raising awareness of features typically problematic for Czech speakers of English represent the main focus.

4. Methodology

Before the main research was conducted, a *pilot study* was carried out to test the research tools, grammaticality judgement test and certainty-based marking, and to assess the efficiency of the intervention. *The one-group pre-test-post-test design* was adopted in the piloting. To improve chances of a clear outcome, the following changes were suggested for the main study: a control group should be included to enable comparison, more detailed instructions should be provided before the test, namely in CBM, which is a tool largely unknown by students; samples of students' written and spoken language should be collected and analysed to form a more complex picture of their learner language.

As a result, a *quasi-experimental design* was used in the main research, with one experimental group subjected to intervention, and one non-equivalent control group without intervention [9]. This methodology was chosen because randomization of participants was impossible due to constraints imposed by the rules of the institution in which the research was conducted. *The pre-test-post-test non-equivalent group design* represents "a decided improvement over the one-group pre-test-post-test design" [10], it is frequently adopted in educational research, and believed to produce more accurate results.

4.1 Participants

For reasons described above (Part 4), together with practicality reasons, *non-probability convenience sampling* was adopted in this study. A pilot study was carried out in February 2016 – pre-test taken by 29 students, and in June 2016 – post-test taken by 26 students.

In October 2016 and January 2017, the main study was conducted. Out of the whole population of 112 students in their third term of university studies, 32 students formed the experimental group, and 16 students the control group. Due to the fact that the participants volunteered for either of the groups, it was impossible to have equally numbered groups. Eight students in the experimental group and two in the control group failed to take both tests and, as a result, the scores of 24 students in the experimental, and 14 in the control group were analysed.

In order to strengthen the equivalence of the groups, which would enable comparisons, the participation in the study was limited by a number of criteria: all participants were majoring in English language and literature, studied in the third term of studies, had the same level of language proficiency – passed the same proficiency exam with very similar scores, and spoke the same mother tongue.

4.2 Tasks and Procedure

All students from the three groups, pilot, control and experimental, took the grammaticality judgement test. This was devised by the author of this paper: students were presented with 30 sentences, both correct and incorrect, and asked to express their intuitions about their grammaticality, and in case of incorrect sentences, were also asked to correct them. Those sentences which were ungrammatical contained errors typical of Czech learners of English, e.g. in the use of articles, prepositions, tenses, and false friends. Students were also asked to decide how sure they were about their answers, indicating one of the three levels of certainty, *Certainty-based marking* (CBM) [8].



5. Results and Discussion

To assess the influence of the intervention, both pre-tests and post-tests taken by all groups were analysed, and changes were compared. Binary distinction, correct – incorrect, was used in the analysis of accuracy in grammaticality judgement test. 21 out of the original 30 questions were taken into account, as 9 questions did not correlate with the test. Those participants who only took one of the tests were not included in the analysis. As both the pilot and experimental groups underwent the intervention, their results were assessed both separately and as one whole, and contrasted with the control group. Due to the relatively small number of participants and significant differences in scores, mean values were used in the analysis.

Table 1 provides the main results for all groups in the accuracy of answering. The most surprising aspect of the data is the fact that all groups improved, irrespective the intervention. The control group, despite not participating in the intervention, improved the most. This result, however, was in all probability biased by the very low number of participants in the control group (14), as compared to the two groups, pilot and experimental, which took part in the intervention (50). The results obtained from the preliminary analysis together with the differences between pre-test and post-test for each of the groups are illustrated in Figure 1. What stands out in the table is the fact that pilot group was the most accurate in their answering in both pre- and post-tests, and their average improvement (4,5) was very close to the highest average improvement in the control group (5). As the number of participants in the pilot group was 26, these results may be more statistically relevant, and could indicate positive impact of the intervention.

Table 1 Accuracy in grammaticality judgement test for all groups

group	test type	n	mean	median	min	max	sd
pilot	pre-test	26	7,80	8,0	5	14	2,53
	post-test	26	12,76	12,5	5	21	4,54
control	pre-test	14	5,21	4,0	0	13	3,80
	post-test	14	8,35	9,0	0	14	4,23
experimental	pre-test	24	6,41	6,0	0	14	3,67
	post-test	24	8,41	9,5	2	13	3,13
experimental and pilot	pre-test	50	7,14	7,0	0	14	3,17
	post-test	50	10,68	10,0	2	21	4,46

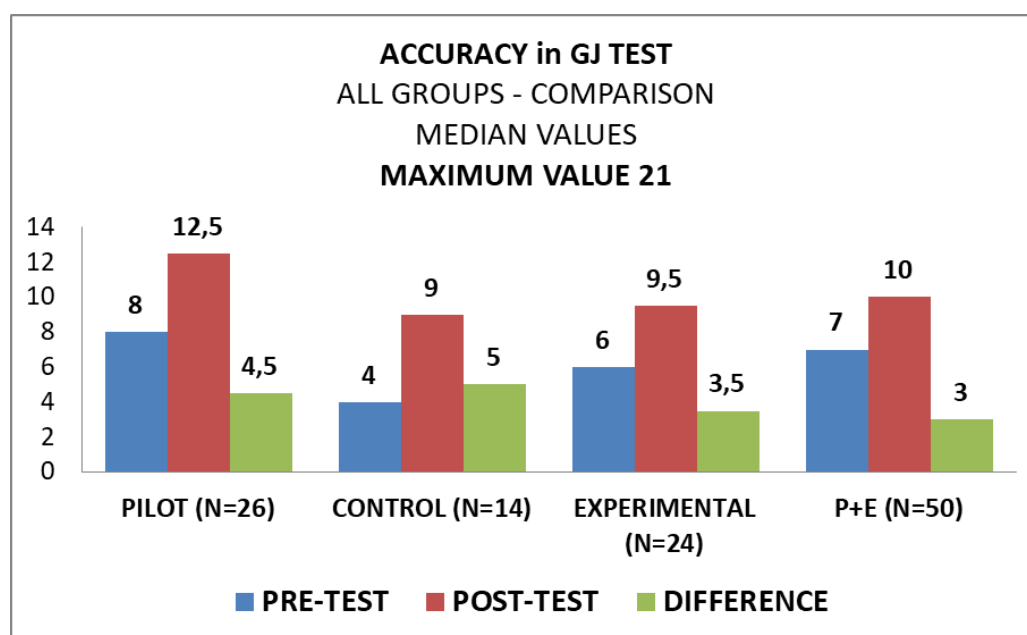




Figure 1 Comparison of accuracy in grammaticality judgement test for all groups

Apart from accuracy, certainty-based marking was also evaluated. The overall results presented in Table 2 indicate improvement in all groups. Interestingly, the control group again showed a marked improvement in CBM. However, it was the pilot group which yielded the best scores both in the pre- and post-tests. This could have caused the less pronounced improvement in this group. The control group reached the lowest entry score and this might have driven the relatively significant improvement in this group. For details, see Figure 2 below.

Table 2 Certainty-based marking in grammaticality judgement test for all groups

group	test type	n	mean	median	min	max	sd
pilot	pre-test	26	114,00	118,5	70	137	16,37
	post-test	26	140,35	137,5	78	178	22,81
control	pre-test	14	98,71	95,5	67	144	20,83
	post-test	14	113,21	121,0	67	150	26,71
experimental	pre-test	24	100,04	105,0	27	146	29,75
	post-test	24	118,66	121,0	72	150	21,41
experimental and pilot	pre-test	50	107,30	110,0	27	146	24,53
	post-test	50	129,94	131,0	72	178	24,50

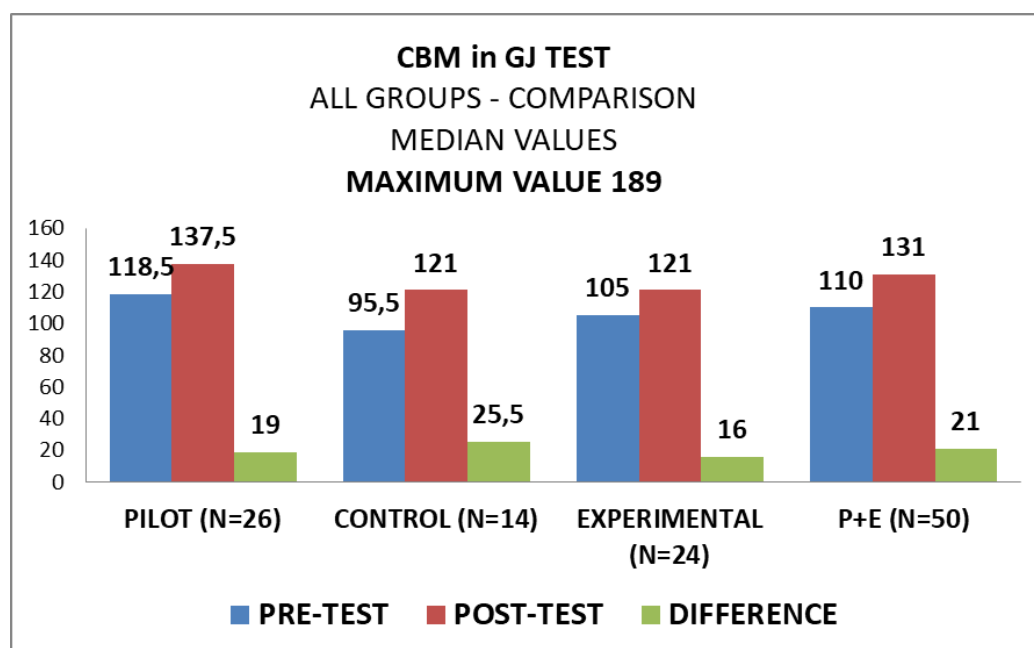


Figure 2 Comparison of certainty-based marking in grammaticality judgement test for all groups

6. Concluding remarks

The present study was designed to investigate the effects of a focused intervention on the accuracy of L2 and on raising awareness of L1-induced errors in advanced Czech students of English. The results indicate that all groups under scrutiny, pilot, experimental and control, have improved, and there are no significant differences between them, which is a rather unexpected outcome. This somewhat counterintuitive result might have been caused by the major limitation of the study, a relatively small sample size, especially the control group. For this reason, the results must be interpreted with caution. Further research should be conducted in which more students in a control group would be tested.



Samples of free spoken and written production which were collected together with the GJ tests and CBM require a careful analysis as they might provide deeper insights into the efficiency of intervention aimed at reducing L1-induced and fossilized errors in advanced Czech students of English.

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