The Influence of L2 English and Immersion education on L3 French in the Netherlands[*]

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In this paper, we test the L2 Status Factor (Bardel & Falk, 2007) by examining to what extent Dutch secondary school students (13–15 years) prefer L2 English over L1 Dutch in L3 French acquisition, and we study the influence of L2 education by comparing an English immersion curriculum vs. a regular Dutch curriculum. We investigate verb placement in declarative root clauses, viz. V-to-T movement, where the finite verb moves to T in French but not in English and V-to-C movement, in which the V2-rule applies in Dutch but not in French. We report data from a Grammaticality Judgement Task. The results indicate that in the immersion group there is significantly more influence from English than from Dutch. In the regular group, the L1 and the L2 are both important sources of transfer.

Key-words

L3 acquisition, transfer, L2 Status Factor, syntax, verb placement, L1 Dutch, L2 English, L3 French, intermediate learners, immersion.

1. Introduction

In the Netherlands, English is ubiquitous in everyday life as an L2 (second language) and as a result an increasing number of primary schools and secondary schools offer an English-based immersion programme[1]. The increasing importance of English in society could have an effect on how third foreign languages are learned. Since most schools offer French at secondary

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[1] https://www.epnuffic.nl/en/publications/find-a-publication/at-home-in-the-world-a-view-on-bilingual-education-in-the-netherlands.pdf

school level it could be interesting to see to what extent the acquisition of French is affected by the status of English in the Netherlands and how L2 immersion education affects L3A. The effect of the L2 on third language acquisition (henceforth L3A) is an important topic in the field of language acquisition. L3 learning entails a complexity that is not observed in L2 acquisition since transfer can take place both between the L1 and the L3 and between the L2 and the L3. Over the last decade, there has been increasing interest in L1 and L2 transfer in L3A. Several studies indicate that transfer from both background languages plays a role in L3A depending on factors such as typological resemblances (Rothman, 2010, 2015), L2 status (Hammarberg, 2001; Bardel & Falk, 2007, Falk & Bardel 2011, amount of input (Tremblay, 2006), L2 proficiency (Jaensch, 2009; Hammarberg, 2009, Tremblay, 2006), L2 education (Thomas, 1988), and immersion (Sánchez, 2015), also called Content and Language Integrated Learning, i.e. CLIL. However, since the studies devoted to learning an L3 show divergent results, more empirical research is needed.

In the present study, we test one of the theories proposed in the literature to account for L3A, the L2 Status Factor hypothesis, and we investigate how L2 education affects the role of the L2 as a background language hypothesising that L2 immersion education furthers the role of English in L3A, based on the results of, e.g., Sánchez, 2015. Therefore, we examine if and to what extent learning English in a school immersion programme increases its role as a background language in L3A. The present study was conducted on 27 third-year Dutch secondary school students (13–15 years) who are intermediate L3 French learners. The students are divided into two groups: one group is enrolled in an English immersion programme where more than 50% of the subjects are taught in English, and the other group is enrolled in the regular programme where students receive three hours a week of English as a school subject, and receive therefore less input of English in the school context. We look at two verb placement constructions, one where French differs from Dutch and one where it

differs from English. We investigate the role of L2 English and L1 Dutch by means of a grammaticality judgement task.

2. Transfer and current L3A research

Kellerman (1977) states that transfer is a 'psychological process whereby the learner, consciously or not, incorporates native language features into his target language production'. In L3A, possible transfer can occur from both previously acquired languages (the L1 and the L2). Transfer can be positive, leading to target-like production, or negative, leading to mistakes in the target language. In current L3A research, several L3 models have been postulated predicting negative and/or positive transfer and conducted on initial state and/or intermediate L3 learners. Amongst the most influential ones are (1) Rothman's Typological Primacy Model (TPM) (Rothman, 2010, 2015) proposing that positive/negative language transfer from the L1/L2 is an unconscious process and depends on (perceived) typological similarity: the learner transfers in the initial state, the full grammar of the language that is perceived to be the most appropriate one to transfer into the L3; (2) the Cumulative Enhancement Model (Flynn et al. 2004), claiming that transfer from both previously learned languages can occur when it is facilitative to L3 acquisition and (3), the L2 Status Factor Hypothesis, postulated for both initial state and intermediate learners, claiming that the L2 is the preferred source of positive/negative transfer in L3 acquisition because of the shared foreign language status between the L2 and the L3.

2.1 The L2 Status Factor at a morphosyntactic level

Bardel & Falk (2007) and Falk & Bardel (2011) studied the role of the L2 in L3 acquisition at a morphosyntactic level. In a study amongst initial state learners on verbal negation with L2 Dutch/German/English, and L3 Swedish/Dutch, Bardel & Falk (2007) found that syntactic structures are more easily transferred from the L2 than from the L1. In a study amongst intermediate L3 German learners on object placement with L1 French, L2 English or L1 English, L2 French, Falk & Bardel (2011) found that the L2 is more important than the L1 as a source of both negative and positive transfer.

The present study focuses on the L2 Status Factor since this is the most suitable existing L3 model for this research: we concentrate on negative transfer from L2 English in L3 French acquisition, and we test intermediate French learners. The French learners have already received a considerate amount of input in French. In order to avoid the possibility that target-like production is the result of the learner already knowing the L3 feature, we only look at negative transfer.

2.2   *The role of L2 education in L3 acquisition*

Several studies point out that knowing a second language in general increases cognitive abilities such as metalinguistic awareness and communicative strategies (Thomas, 1988; Hammarberg, 2009; Forsyth, 2014). Furthermore, the way in which the L2 is learned can also affect its role as a background language in L3A. Hammarberg (2001) points out that acquisition and use in a natural learning environment furthers L2 transfer because of the 'automatized use' and frequent input and output of the L2. In addition to the learning environment in which the learners' L2 is very present, Hammarberg also points out that a greater and more current knowledge of the L2 furthers its influence in L3A. Thomas (1988) on the other hand proposes that formal training in the L2 increases the positive effect of

bilingualism on L3A. Learning the L2 in a formal context may have an impact on 'grammatical sensitivity' developing students' metalinguistic awareness. According to Forsyth (2014), however, bilingualism does not necessarily facilitate language learning: it may also result in errors triggered by L2 transfer.

3.   This study

In this study we test the L2 Status Factor Hypothesis by examining to what extent L2 English is more important than L1 Dutch in L3 French acquisition. To learn more about the role of L2 education in L3 acquisition, we explore Hammarberg's (2009) hypothesis according to which the L2 is furthered when it is learned in a natural learning environment. However, in this case the natural learning environment is a school immersion context, where the L2 is also very present and learned in an implicit way.

We conducted our experiment amongst third-year secondary school students at a partially bilingual Dutch secondary school in the Netherlands,[2] where students can opt for an immersion track, the Middle Years Programme (MYP) of the International Baccalaureate,[3] or a regular Dutch secondary school curriculum (VWO).[4] The MYP is a four-year programme and gives the students access to the fifth year of the VWO. The teaching of L2 English differs in these two tracks. In the regular curriculum, students receive three hours a week of English as a school subject. The MYP immersion programme is a content and language integrated learning programme in which students learn English in an implicit way, that is by using the language a lot in the daily school practice. Moreover, at least 50% of the subjects are taught in

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English, meaning that the immersion students receive a lot more input in English and use more English.

To test the L2 Status Factor and to learn more about the role of L2 immersion, we hypothesise that the L2 is the preferred background language in L3A and that L2 immersion education furthers its role as a background language. We formulated the following research questions:

1. Is L2 English a more important background language than L1 Dutch in L3 French acquisition?

2. To what extent does a school immersion programme affect the English L2 as a background language?

3.1. Participants

On the basis of background questionnaires containing language-related details, we selected 27 third-year students (13–15 years) of whom 16 were enrolled in the immersion based MYP-curriculum and 11 were enrolled in the regular VWO-curriculum. All bilinguals or students who had lived outside of the Netherlands were excluded from the tests. The students were intermediate French learners and received the same amount of input in French according to the French school curriculum.[5]

3.2. Finite verb movement in Dutch, English and French

In this section, we describe the grammatical constructions that are relevant to this study.

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[5] First- and third-year students receive three hours a week of French as a school subject, and second-year students receive two hours a week. The same books and the same achievement levels are used in both tracks.

Examining negative transfer, we look at two word order structures where French differs from English or from Dutch. We concentrate on (1) declarative root sentences containing manner/frequency adverbs or a floating quantifier where the finite verb moves to T in French and Dutch but does not do so in English, and we also look at (2) declarative root sentences with sentence-initial adverbs where the finite verb in Dutch moves to C (the so-called V2-rule) (Den Besten, 1983) but not in French and English, resulting in V3 word order in these languages.

3.2.1. French differs from English: V-to-T movement. In English declarative root clauses, there is no finite verb movement to T with the effect that an adverb appears pre-verbally (Pollock, 1989). This situation contrasts with that in French, where the finite verb does move to T, leading the adverb to appear post-verbally.[6] As a result, the surface structure of English differs in this respect from French. White (1991) shows that 'no V-to-T' in English is difficult to acquire for L2 learners having French as their L1.

No V-to-T movement (in English)

(1)   John often watches television

V-to-T movement (in French)

(2)   Jean regarde souvent la télé.

        * John watches often television.

3.2.2. French differs from Dutch: V-to-C movement. The second construction involves V-to-C movement (the so-called V2-rule) and applies in all Germanic languages except in English.

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[6] Dutch and French share the same surface structure in this case: in both cases the verb moves from V to T, nevertheless, in Dutch this is followed by movement from V to C (Den Besten, 1983).

In Dutch declarative root clauses, the finite verb always raises to the second position of the sentence (Den Besten, 1983) so that the finite verb is placed immediately after a sentence-initial adverbial phrase. In French there is no V-to-C movement in declarative root sentences. For this study we focus on clauses starting with a temporal and locative noun phrase or adverb.

V-to-C movement (in Dutch)

(3)   Vandaag doet Manon haar examen.

        * Aujourd'hui passe Manon son examen.

        'Today Manon takes her exams.'

No V-to-C movement (in French)

(4)   Dans une heure Manon passe son examen.

        'In one hour Manon does her exams.'

The next table gives an overview of the differences in finite verb movement in Dutch, English, and French.

Dutch	+ V-to-T	+ V-to-C (V2)
English	− V-to-T	− V-to-C
French	+ V-to-T	− V-to-C

Table 1: Presence of V-to-T and V-to-C in Dutch, English and French root sentences

3.2.3. Predictions. Hypothesising that French L3 learners prefer L2 English over L1 Dutch as a background language and that the immersion programme furthers the role of L2 English in

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L3 acquisition, we make the following predictions with respect to the research questions formulated above:

1a. Negative transfer from English to French in the case of (no) V-to-T movement, leading to the acceptance of the English word order in French in declarative root clauses such as *Jean souvent mange une pomme* 'John often eats an apple' and the rejection of grammatical clauses such as *Jean mange souvent une pomme*.

1b. No negative transfer from Dutch to French in the case of V-to-C movement, leading to the rejection of Dutch word order in French in declarative root clauses such as *Aujourd'hui mange Jean une pomme* and the acceptance of grammatical French sentences such as *Aujourd'hui Jean mange une pomme* 'Today John is eating an apple'.

2. Immersion students (MYP) will accept the (ungrammatical) English word order more often than the regular students (VWO).

3.3.   Method

We collected data using a Grammaticality Judgement Task (GJT) testing receptive knowledge. We aimed at comparing similar constructions by selecting verb placement constructions in declarative root clauses, and we used test sentences with a low degree of difficulty.[7] We also created an English gap-filling task to control for the students' knowledge of finite verb placement in English declarative root clauses. We tested during school hours, to ensure that the students were sufficiently motivated. We emphasised that concentration is essential and gave explicit instructions so that the students could carry out the task in as automatic a fashion as possible. We gave the session an official and important character by

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[7] We used vocabulary from the curriculum and handed out a vocabulary list beforehand.

using an exam set-up in the classroom and by serving drinks. The students had 15 minutes for the GJT and 5 minutes for the English gap-filling test.

3.3.1. The GJT. The GJT contains 45 French test sentences: 14 items testing V-to-T movement, 14 items testing V-to-C movement and 17 fillers to check whether the students took the test seriously and to distract them from the constructions being tested. It was a forced choice task: the students had to decide whether they accepted a sentence by marking it as correct (c) or incorrect (i). Since we were only looking at negative transfer, we concentrated on the number of wrong answers.

Examples GJT:

    1. Jean mange souvent une pomme.   c / i

    2. Aujourd'hui mange Jean une pomme.   c / i

In the case of 'no V-to-T' (transfer from English), the students got a 'miss' accepting a sentence such as **Jean souvent mange une pomme* or rejecting *Jean mange souvent une pomme.* In the case of V-to-C (transfer from Dutch), the students got a 'miss' accepting sentences such as **Aujourd'hui mange Jean une pomme* or rejecting *Aujourd'hui Jean mange une pomme.* The distractors were simple SVO-sentences with a subject, a finite verb, and a direct and/or indirect object such as *Mes parents aiment le café,* 'My parents like coffee', of which 9 were grammatical and 8 ungrammatical.

3.3.2. The L2 English task. Knowledge of the lack of V-to-T movement in English was an absolute necessity for the students to be taken into account, because if they do not know the (correct) English word order, this order is not expected to influence their L3 French. We used

an English gap filling task with a simple vocabulary so that the student could focus on the verb placement. The test contained 36 items (12 testing V-to-T movement and 24 fillers). We used twice as many fillers as test items because it was a very simple test and we wanted to avoid the students becoming aware of what we were testing. The students were excluded if they answered more than 3 of the 12 questions incorrectly.[8]

Example English gap-filling task:

1. John……………….... sometimes …………….. to the cinema.   *Goes*

4.   The results

In this section we give an overview of the results. In Section 4.1, we report the results within both groups of the examined constructions: V-to-T and V-to-C movement. In section 4.2, we compare the regular group to the immersion group. Before conducting statistical tests in SPSS, all data were controlled for normality of distribution using the Shapiro–Wilk test.

4.1.   Comparing V-to-T to V-to-C movement

Table 2 shows the results from the immersion group and the regular group reporting data from 16 immersion students and 11 regular students.

	V-to-T misses	V-to-C misses	V-to-T vs. V-to-C
Immersion students:	95/224 (42.4%)	55/224 (24.6%)	p=0.005

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[8] We also tested their proficiency in English by means of a Meara vocabulary size task. We did not find, however, a correlation between the results of the proficiency task and the test scores.

N. of items = 224			
Regular students: N. of items = 154	53/154 (34.4%)	65/154 (37%)	p=0.742

Table 2: Misses V-to-T movement and V-to-C movement in the immersion and the regular group

The immersion students misjudged the (no-)V-to-T items in 42.2% of the cases. In 24.6% of the cases, they misjudged the V-to-C items.[9] The Paired-Samples T-test conducted on the results showed that the performance of the immersion group with respect to the V-to-T movement construction was significantly different from the results of the V-to-C movement construction. (t=3,250 df=15, p=0,005). However, the regular group misjudged 34.4% of all (no-)V-to-T items and 37% of all V-to-C items (Paired-Samples T-test, t=-.339 df=10, p=0.742), a difference that is not significant.

4.2. *Comparing immersion and regular students*

In this section we compare the behaviour of immersion students vs. regular students by means of diagrams. Diagram 1 shows the misses in the V-to-T movement construction and diagram 2 shows the misses in the V-to-C movement construction in the immersion and the regular group.

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[9] In case of doubt, students tend to opt for 'correct'. Since the percentage of 'correct' answers of all 45 items of each individual test was 57.6% (415/720) in the immersion group, and 54.1% (268/495) in the regular group, and since hits were not necessarily related to 'correct', the influence of the so-called 'yes bias' is minimal in this test.
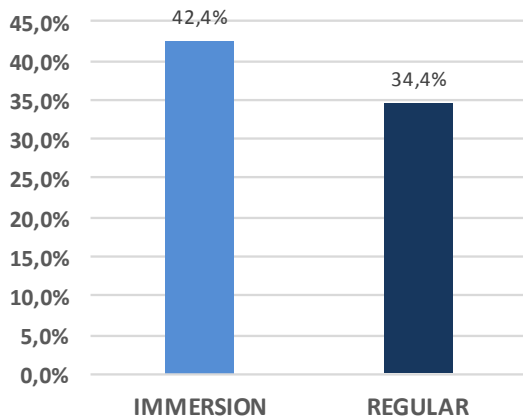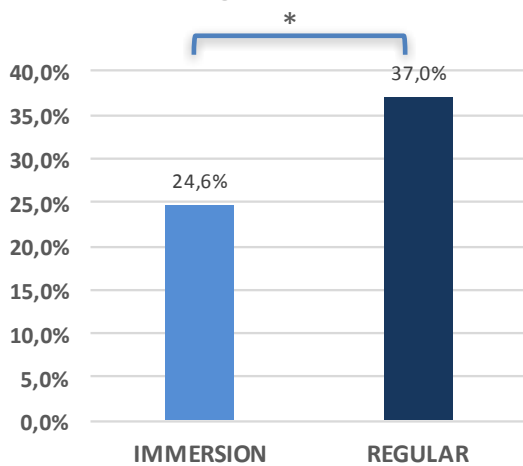
Diagram 1: no V-to-T

Diagram 2: V-to-C

We see in diagram 1 that the immersion students misjudge (no-)V-to-T movement more often than the regular students (in 42.4% vs. 34.4% of the cases respectively). The Independent-Samples T-Test showed that this difference is not significant (t=1,149, df=25, p=0.261) Diagram 2 shows that the regular students made more mistakes in V-to-C than the immersion students (in 37% vs. 24.6% of the cases respectively). The Independent-Samples T-Test demonstrated that this difference is significant (t=-2.254, df=25, p=0.033).

4.3   *Summary of the results*

Here we present a summary of the results:

- The immersion students misjudged (no) V-to-T movement significantly more often than V-to-C movement.

- The regular students misjudged slightly more often V-to-C movement than (no) V-to-T movement. The difference is not significant.

- The immersion students misjudged (no) V-to-T movement more often than the regular students. The difference is not significant.

- The regular students misjudged V-to-C movement significantly more often than immersion students.

5.   *Discussion*

5.1   *L2 English in L3-acquisition*

The first aim of this study was to test the L2 Status Factor hypothesis at a syntactic level, concentrating on verb placement in declarative root clauses in L3 French in the Netherlands, a country where English is very present. In §3.2.3 we predicted:

-        Negative transfer from English to French in the case of (no) V-to-T movement.
-        No negative transfer from Dutch to French in the case of V-to-C movement.

We found partial support for the L2 Status Factor hypothesis since the results show significantly more transfer from L2 English than from L1 Dutch in the immersion group.

However, the regular students made slightly more mistakes by transfer from Dutch than from English.

5.2   L2 education in L3 acquisition

To learn more about the role of L2 education, we predicted that immersion students would accept the (ungrammatical) English word order more often than the regular students. A comparison between groups revealed that the immersion students show more transfer from English than the regular students, but this difference is not significant. However, on the basis of a comparison between the two constructions, we *only* found support for the L2 Status Factor in the immersion group meaning that in the immersion group there is more transfer from the L2 compared to the L1 in accordance with Hammarberg's hypothesis (2009), stating that learning the L2 in a natural learning environment and therefore receiving more input furthers its role as a background language. We might find an explanation for the discrepancy between the results within groups and the results between constructions in the role of the L1. Whereas the L2 is an important background language in both groups, the role of L1 Dutch is significantly stronger in the regular group than in the immersion group. It could be the case that whereas the L2 is present in both tracks, the role of the L1 in the immersion programme is suppressed by the L2 as being 'non-foreign'.

The fact that regular students also make mistakes based on English might be due to the fact that English is ubiquitous in everyday life in the Netherlands. The stronger role of L1 Dutch in the regular group compared to the immersion group could be due to the smaller amount of L2 English input or to the larger amount of L1 Dutch input. It could also be the case that the regular students have not overcome the effect of the L1 Dutch V2-rule and thus experience more difficulties accepting the V3 structure in L3 French.

5.3   Our results and other L3 theories

Our results support the L2 Status Factor Hypothesis, but only in the immersion program. Would other L3 theories be able to better account for our results? In section 2 we presented two other L3 theories. The Typological Primacy Model (Rothman, 2010, 2015), claiming full transfer of the grammar based on perceived similarity at the initial state, cannot say anything about our findings since 1) we tested intermediate students (whereas the model applies to beginners) and 2) French, as a Romance language, is typologically related to neither English nor Dutch, which are Germanic languages and consequently no influence from neither L1 nor L2 would be predicted.

The Cumulative Enhancement Model (CEM) hypothesises that L3 learners transfer from L1 and/or L2 if this is facilitative. Since our learners are not initial state learners, it might be that the correct use of a structure is not due to positive transfer, but simply to the L3 structure having been acquired. If we assume, however, that the correct use of a structure in L3 French is due to positive transfer, then the model can account for our results, because in both constructions and in both groups the percentage of correct answers is higher than the percentage of 'misses'. However, CEM does not explain why both languages are facilitative.

This is done by another, recent, model, the Linguistic Proximity Model (LPM), proposed by Mykhaylyk et al. (2015). According to the LPM, transfer in L3 acquisition occurs when a certain linguistic property receives strong supporting evidence from previous learned languages. The higher percentage of correct answers for the V-to-T construction in French would thus be due to positive transfer from Dutch, and the higher percentage of correct answers for the 'no V-to-C' construction in French would thus be due to positive transfer from English. Although this model can account for our results, it would have to be

explained why in the immersion group the percentage of positive transfer from Dutch in the V-to-T construction (57,6%) is relatively low and the percentage of 'misses' is relatively high (43,4%).

6. *Conclusion*

In this study, comparing V-to-T to V-to-C, we found partial support for our first hypothesis based on the L2 Status Factor, i.e. there seems to be significantly more negative influence from L2 English than from L1 Dutch in the immersion group where students receive more L2 input. Comparing groups, we saw that there is more negative influence from L2 English in the immersion group than in the regular group. This difference is not significant, probably because the L2 is also an important source of transfer in the regular group. This might be due to the fact that the regular students are also surrounded by English in everyday life. However, we found indirect support for our second hypothesis concerning the influence of education, more specifically a natural learning environment, on L2 transfer to L3: the role of L1 Dutch is significantly stronger in the regular group as compared to the immersion group. This could be due to the stronger role of L1 Dutch in regular education or to less input of L2 English. It could also mean that the L2 blocks the L1 in the immersion group. In future research, we plan to look at developmental patterns by comparing the results to first year (initial state) learners and advanced students.

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