Dutch compound constructions in additional language acquisition: a diasystematic-constructionist approach

Kristel Van Goethem & Isa Hendrikx
Introduction
Compound constructions in Dutch and French

- “[S]yntactic constructions may form an alternative to, or compete with the morphological expression of semantic and grammatical content” (Booij 2002: 301)

- In both Dutch and French, morphological and syntactic patterns are available to build *lexical multi-word units*
  - Du. *wetenschapsbeleid* ‘science policy’ vs *wetenschappelijk beleid* ‘scientific policy’ (Booij 2019: 105)
  - Fr. *village(-)vacances* vs *village de vacances* ‘holiday resort’

- Languages may significantly vary with respect to their *degree of analyticity* (cf. « Germanic / Romance Sandwich », e.g. van Haeringen 1956, Hüning et al. 2006, Lamiroy 2011)
  - Dutch is a more synthetic language than French
  - Dutch has a stronger tendency towards compounding than French (Van Goethem 2009; Van Goethem & Amiot 2019)
Introduction

- **3 important differences** between Dutch and French compounding:

  1. **Productivity**: Compounding is more productive in Dutch than in French (Van Goethem 2009; Van Goethem & Amiot 2019)
     - Du. *badkamer* vs Fr. *salle de bains* ‘bathroom’
     - Du. *zoutwaterzwembad* vs Fr. *piscine d’eau salée* ‘saltwater pool’

  2. **Word order**: Dutch has right-headed compounding, whereas French has left-headed compounding
     - Du. *postzegel* vs Fr. *timbre-poste* ‘(postage) stamp’

  3. **Demarcation compound/phrase**: The distinction between compounds and (lexicalized) phrases is more clearly established in Dutch than in French (spelling, prosody, linking elements, loss of adjectival inflection)
     - Du. *hoogspanning* vs Fr. *haute tension* ‘high voltage’

**Research question**: What is the impact of these differences on the acquisition of Dutch compounds by French-speaking learners?
Outline

- 1. State of the art
- 2. Diasystematic Construction Grammar
- 3. Aims of the study and research hypotheses
- 4. Corpus data and methods
- 5. A multilevel constructional analysis
- 6. Conclusions and discussion
1. State of the art
• Little attention has been paid to the acquisition of word-formation (Lefer 2011)

• Morphological awareness is well documented in English (e.g. Pasquarella et al. 2011), but it is still an uncharted territory for languages such as Dutch and French (except for some fragmented studies, e.g. Deacon et al. 2007 for French)

• Nevertheless, several studies emphasize the need for more explicit attention to word-formation in foreign language pedagogy (a.o. Balteiro 2011, Jeon 2011, Leontjev et al. 2016)
• Content and Language Integrated Learning (CLIL) is a pedagogical approach promoted by the European Union to enhance widespread multilingualism (Coyle, Hood, & Marsh 2010).

• Although the CLIL approach has been extensively documented internationally (e.g. Ruiz de Zarobe et al. 2011, Rumlich 2016), its **impact on AL acquisition** remains unclear (Dalton-Puffer 2007).

• **Multidisciplinary project on CLIL** (2014-2019, UCLouvain & Université de Namur) exploring the linguistic, cognitive, educational and socio-affective effects of CLIL in French-speaking Belgium (cf. Hiligsmann et al. 2017)
  - General positive effect of CLIL, especially on AL Dutch.
  - But limited number of case studies: phraseology (Bulon 2019), intensification (Hendrikx 2019).
CLIL in French-speaking Belgium
2. Diasystematic Construction Grammar
• DCxG recently developed by Höder (2012, 2014a, 2014b, 2018)

• Integration of CxG into the study of multilingualism, following the most recent cognitive insights on multilingualism
  • “multilingual speakers store and process all of their languages in terms of constructions that are organized into one common constructicon” (Höder et al. 2021: 311) ↔ earlier static conceptions of separate language systems in the bilingual’s mind

• The multilingual constructicon
  • contains “some constructions [that] are unspecified for language (such as abstract syntactic constructions and lexical concepts), while others (above all lexically and phonologically filled constructions) are language-specific” (Höder 2012: 247)
  • The common structures are called “diaconstructions”, the idiosyncratic structures are “idioconstructions”.

Diasystematic Construction Grammar (DCxG)
DCxG applied to AL acquisition

- DCxG first applied to language contact (Boas & Höder, 2018, 2021), but more recently also to additional language acquisition (Höder et al. 2021; Jach 2021; Van Goethem and Hendrikx 2021)

  - Dynamic and emergent view on AL learning:
    - Dynamic process of constructional reorganization involving construction addition (entrenchment of newly acquired constructions) and deletion (so-called “disentrenchment” of redundant constructions) (Höder et al. 2021)
    - ALA involves many cognitive reorganizational processes (interlingual identification, abstraction, generalization, categorization) ↔ ‘transfer’ too narrow to capture all these cognitive processes

  - Effects of cross-linguistic similarities and differences:
    - Typologically similar languages have more shared ‘diaconstructions’ and learners can build on their L1 constructions to form AL productions
    - The greater the typological difference between the L1 and AL, the more reorganizational processes need to take place in the learners’ constructicon.
DCxG applied to the acquisition of Dutch compounds

During AL acquisition:

1. Dutch compounds ([N2 N1]_N, e.g. badkamer) will have to be added to the learner’s constructional network and have to be tagged as Dutch idioconstructions.

2. Some other constructions will have to be “disentrenched”, evolving into French idioconstructions (e.g. [N1 Prep N2]_NP, e.g. salle de bains vs *kamer van bad).

3. Some schematic phrasal constructions evolve into shared diaconstructions: e.g. [N1 Prep Det N2]_NP (e.g. fête pour mon anniversaire / feest voor mijn verjaardag) or [A N]_NP (e.g. meilleur ami / beste vriend).
3. Aims of the study and research hypotheses
• The **aims of this study** are threefold:

i. to provide a **corpus analysis of the acquisition of Dutch compounds at multiple levels of abstraction** (schematic and substantive compound constructions)

ii. to investigate the impact of **additional target-language input through CLIL programs** on the acquisition of compound constructions, within the context of learning Dutch in French-speaking Belgium

iii. to describe and interpret the results from the perspective of **DCxG**

• **Focus on Dutch nominal compounds**
Research hypotheses:

i. Overgeneralization of French (phrasal) idioconstructions (mistagged as shared FR-DU diaconstructions):
   - Phrasal structures instead of compounds (*kamer van bad instead of badkamer)
   - Left-headed compounds instead of right-headed compounds (*kamerbad)

ii. Positive impact of CLIL on compound formation in AL Dutch
4. Corpus data and methods
Data collection and corpus sample

- **Multilingual Traditional, Immersion and Native Corpus (MulTINCo)** (Meunier et al. 2020)
  - Written corpus collected in 2015-2017
    - 213 AL Dutch learners in 5 schools in French-speaking Belgium (CLIL + non-CLIL)
    - 59 L1 Dutch speakers (The Netherlands + Flanders)
    - 6th year of secondary school; on average 17 years old
  - Task: write an e-mail to a friend about a party or their holidays

<table>
<thead>
<tr>
<th></th>
<th>AL Dutch non-CLIL</th>
<th>AL Dutch CLIL</th>
<th>Native Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants</td>
<td>84</td>
<td>129</td>
<td>59</td>
</tr>
<tr>
<td>Number of nouns</td>
<td>3205</td>
<td>5964</td>
<td>2146</td>
</tr>
<tr>
<td>Number of nominal compounds*</td>
<td>240</td>
<td>476</td>
<td>155</td>
</tr>
<tr>
<td>Proportion compounds per nouns</td>
<td>0.075</td>
<td>0.080</td>
<td>0.072</td>
</tr>
</tbody>
</table>

*Excluded: blends, derivational compounds, lexicalized compounds, proper names*
Data collection and corpus sample
• **Formal properties:**
  - Compound length (number of lexical components)
  - Compound structure ([NN]$_N$, [VN]$_N$, [AN]$_N$, ...)

• **Semantic properties:**
  - Compound function

(Bisetto & Scalise 2005: 326)
Data annotation

Accuracy:

- Accuracy of the compound (spelling mistakes, grammatical mistakes, lexical mistakes, linking morpheme, codeswitching, word order)
- Word-formation accuracy (phrase instead of compound*, simplex instead of compound, etc.)

*Checked in Corpus Hedendaags Nederlands: the compound had to be at least 10 times as frequent as the phrase to consider it misuse:
  e.g. mensen van mijn klas (1 hit) vs mijn klasgenoten (123 hits) → misuse
  e.g. in het centrum van de stad (1076 hits) vs in het stadscentrum (956 hits) → no misuse
5. A multilevel constructional analysis
Schematic level: formal properties

**2 lexical components:**
- *Er waren veel nachtclub en het was niet duur.* (non-CLIL) ['night club']

**3 lexical components:**
- *Ik dacht vandaag weer terug aan de leuke avond die we gisteren hadden op de kerstboomverbranding en in de winterbar* (Native) ['lit. Christmas tree-burning']

**4 lexical components:**
- *We hebben een groot voetbal wedstrijd met anderen jongeren georganiseerd.* (non-CLIL) ['lit. football game']

<table>
<thead>
<tr>
<th>Compound length</th>
<th>AL Dutch non-CLIL</th>
<th>AL Dutch CLIL</th>
<th>Native Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 components</td>
<td>227 (94,58%)</td>
<td>443 (93,07%)</td>
<td>139 (89,68%)</td>
</tr>
<tr>
<td>3 components</td>
<td>10 (4,17%)</td>
<td>33 (6,93%)</td>
<td>16 (10,32%)</td>
</tr>
<tr>
<td>4 components</td>
<td>3 (1,25%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td>240</td>
<td>476</td>
<td>155</td>
</tr>
</tbody>
</table>
Schematic level: formal properties

**[N+N]_N**
- Daarna trekken we meer het regenwoud in en gaan we daar op safari. (Native) [‘rainforest’]

**[V+N]_N**
- We zullen met de auto gaan omdat mijn moeder voor het vliegtruijg bang is? (Non-CLIL) [‘airplane’]

**[A+N]_N**
- Ze heef een auto gehad van haar ouders, een niewe gsm van zijn grootouders en ze heeft veel geld gehad (non-CLIL) [‘grandparents’]

**[Prep/Adv+N]_N**
- Het tegendeel is onwaarschijnlijk, niet waar? (CLIL) [‘lit. against part; opposite’]
Attributive endocentric
• het was de verjaardag van mijn buurjongen. (Non-CLIL) ['neighbour boy']

Attributive exocentric
• We konden ook alcohol drinken zelfs als we nog snotneuzen zijn, ik moet toch aanvaarden dat ik vandaag een kater heb (CLIL) ['lit. snot noses; brats']

Subordinative endocentric
• Daarna hebben we de GSM gedrogen met een haardroger en we hebben zijn geld op de chauffage gezet. (CLIL) ['hairdryer']

Subordinative exocentric
• Er waren veel mensen in de straten en wij waren bang voor pickpocketen. (CLIL)
## Most frequent compounds per condition

<table>
<thead>
<tr>
<th>Top 5</th>
<th>AL Dutch non-CLIL</th>
<th>AL Dutch CLIL</th>
<th>Native Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>zwembad</strong> (27)</td>
<td><strong>verjaardag</strong> (54)</td>
<td><em>zwembad</em> (9)</td>
</tr>
<tr>
<td></td>
<td>‘swimming pool’</td>
<td>‘birthday’</td>
<td>‘swimming pool’</td>
</tr>
<tr>
<td></td>
<td><strong>verjaardag</strong> (22)</td>
<td><strong>zwembad</strong> (52)</td>
<td><em>verjaardag</em> (6)</td>
</tr>
<tr>
<td></td>
<td>‘birthday’</td>
<td>‘swimming pool’</td>
<td>‘birthday’</td>
</tr>
<tr>
<td>2</td>
<td><strong>vliegtuig</strong> (19)</td>
<td><strong>vliegtuig</strong> (17)</td>
<td><em>verjaardagsfeest</em> (5)</td>
</tr>
<tr>
<td></td>
<td>‘aeroplane’</td>
<td>‘aeroplane’</td>
<td>‘birthday party’</td>
</tr>
<tr>
<td>3</td>
<td><strong>aeroport</strong> (6)</td>
<td>*Paasvakantie ‘Easter holidays’ (10), verjaardagsfeest (10)</td>
<td>°dansvloer (4)</td>
</tr>
<tr>
<td></td>
<td>°dansvloer (4)</td>
<td>‘dance floor’</td>
<td>‘dance floor’</td>
</tr>
<tr>
<td>4</td>
<td>°voetbal (5) / °volleybal (5) / verjaardagsfeest (5)</td>
<td>°ziekenhuis (9)</td>
<td>°halfuur (3) / °vliegtuig (3) / °zonsondergang ‘sunset’ (3)</td>
</tr>
<tr>
<td></td>
<td>‘hospital’</td>
<td>‘hospital’</td>
<td>‘hospital’</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>240</td>
<td>476</td>
<td>155</td>
</tr>
</tbody>
</table>

° = occurs in native corpus, but not in the learner corpora
* = occurs in learner corpora, but not in native corpus
** = misuse (codeswitching)
Productivity of compounds per condition

Productivity

<table>
<thead>
<tr>
<th>Condition</th>
<th>TTR</th>
<th>PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-CLIL</td>
<td>0.49</td>
<td>0.37</td>
</tr>
<tr>
<td>CLIL</td>
<td>0.44</td>
<td>0.29</td>
</tr>
<tr>
<td>native</td>
<td>0.75</td>
<td>0.62</td>
</tr>
</tbody>
</table>

60% mistakes!
Substantive level: accuracy

**Spelling mistake**
- De vlucht was so lang en de vlichtuig was niet leuk. (Non-CLIL) [vliegtuig]

**Grammatical mistake**
- Iedereen houdt van vuurwerken, en een beetje in de frisse, zwarte nacht stappen en naar de sterren kijken (CLIL) [vuurwerk]

**Code switching (FR/ENG)**
- Het koek kwam van mijn vriend die een aspirant-pâtissier is. (Non-CLIL)

**Lexical mistake**
- Bovendien waren er geen proper voetweg zoals het uitgelegd werd in onze guide. (CLIL) [wandelpad]

**Mistake in the linking morpheme**
- Daarna hebben we een aardbeienstaart gegeten dat de koker had gemaakt. (CLIL) [aardbeientaart]

**Mistake in the word order**
- hij was in dezelfde schoolmuziek als jij en jullie kennen elkaar sinds ongeveer zes jaren. (CLIL) [muziekschool]
Phrase instead of compound

- *ik kan niet goed zwemmen maar ik had 2 lessen van zwembad* (...). (non-CLIL) [zwemlessen]

Compound instead of phrase

- *dat was een idea op mijn zusje en mijn bestvriend Floriane.* (non-CLIL) [beste vriend]

Simplex instead of compound

- *Daarna zijn we naar Venesie gegaan met een stap in Padoue waar we de stad, de katedraal en de klooster hebben bezocht.* (CLIL) [uitstap]

Compound instead of simplex

- *Ik was de kookman, ik weet het als het best idée was want ik heb nooit koken van mijn hele leven* (CLIL) [kok]
6. Conclusions and discussion
Multilevel constructional analysis:

➢ Schematic level:
  • **Compound length:**
    • Learners use 2-component compounds more frequently than natives; natives use more often 3-component compounds
  • **Compound structure:**
    • \([N+N]_N\) compounds are predominant in the native and learner datasets
    • Compared to the natives, the learners use more often \([V+N]_N\) compounds (cf. high frequency of *verjaardag* ‘birthday’, *zwembad* ‘swimming pool’, *vliegtuig* ‘plane’)
  • **Compound function:**
    • Attributive endocentric compounds are predominant in the native and learner datasets

➢ Substantive level:
  • **Productivity:**
    • Lower productivity (both TTR and PP) of compounds in learner group; natives use a greater variety of compounds (e.g. *dansvloer* ‘dance floor’, *halfuur* ‘half-hour’) (in spite of a smaller dataset!)
  • **Accuracy:**
    • Mostly spelling and grammatical mistakes in compound use (+ codeswitching in non-CLIL group)
    • ‘phrase instead of compound’ is the most frequent word-formation mistake in learner group
Cf. Research hypotheses

(1) **Overgeneralization of French (phrasal) idioconstructions** (mistagged as FR-DU diaconstructions)?

Phrasal structures instead of compounds

→ ‘phrase instead of compound’ (e.g. *lessen van zwembad*) is indeed the most frequent word-formation mistake in the learner group (= mistagged as FR-DU diaconstruction instead of FR idioconstruction)

→ However, also cases of overgeneralization of Dutch compounds (compound instead of phrase/simplex, e.g. *bestvriend, *kookman*)

~ difficulty: competition between compounds and phrases in Dutch

Left-headed compounds instead of right-headed compounds

→ Difference in word order between FR/DU does not seem to be an obstacle (few mistakes)

(= DU right-headed word order correctly tagged as DU idioconstruction by the learners)

~ saliency of distinctive word order + learnt through frequent compounds
(2) Positive impact of CLIL on compound formation in AL Dutch?

- Only partial positive impact of CLIL:
  - Many mistakes in both groups!
  - At the schematic level:
    - Results of the CLIL group are closer to the results of the natives with respect to compound length, structure and function
  - At the substantive level:
    - Higher productivity scores in non-CLIL group, but affected by more misused types and hapaxes
    - More misuse in compound formation (significantly more codeswitching) in non-CLIL group (= overgeneralization of FR substantive idioconstructions)
    - Significantly more word-formation mistakes in CLIL group (‘simplex instead of compound’ and ‘compound instead of simplex’)

➢ The non-CLIL learners still heavily rely on their L1 constructions to create compounds (codeswitching, e.g. *aeroport)

➢ Especially the CLIL learners seem to go a bit more beyond their L1 and gradually entrench the AL Dutch idioconstructions, not only at the substantive level (concrete frequent compounds, e.g. ziekenhuis), but also applying the abstract compound schema \([N_2 N_1 N]\) to creatively form new compounds, with varying success however (e.g. *voetweg, *ookman)
Cette photo par Auteur inconnu est soumìs à la licence CC BY.


References


Höder, S. (2018). Grammar is community-specific. Background and basic concepts of
Constructional perspectives on contact phenomena in Germanic languages.
Amsterdam/Philadelphia: Benjamins. 37-70.
Neerlandistiek Leiden.
Constructicons. In Boas, Hans C. & Steffen Höder (Eds.), Constructions in Contact 2. Language
change, multilingual practices, and additional language acquisition. Amsterdam, The
Lamiroy, B. (2011). Degrés de grammaticalisation à travers les langues de même
proficiency: How do they link? System 59. 73-89.
References


Discussion and conclusions

• Benefits of the DCxG approach:
  
  • The constructionist approach invites us to approach additional language acquisition at different levels of abstraction
    • The results found for one level are not systematically transposable to another one
    • Allows for a more fine-grained analysis of the acquisition of specific linguistic structures
  
  • Combining CxG with the most recent insights into multilingualism DCxG an interesting model to explore additional language acquisition
    • Learner corpus research framed in DCxG provides indirect access to the cognitive restructuring processes taking place in the minds of language learners
### Data annotation: formal properties

<table>
<thead>
<tr>
<th>Formal properties</th>
<th>Categories of the variable</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Compound length   | Number of lexical components | 2: *voetbal* ‘football’  
|                   |                             | 3: *voetbalclub* ‘football club’ |
| Compound structure| [N+N]_N                     | *telefoonnummer* ‘phone number’ |
|                   | [V+N]_N                     | *surfplaatsje* ‘surfing site’ |
|                   | [A+N]_N                     | *rondtrip* ‘round trip’ |
|                   | [Num+N]_N                   | *vijftal* ‘about five’ |
|                   | [NP+N]_N                    | *onderwaterwereld* ‘lit. under water world; the universe under the water’ |
Data annotation: semantic properties

<table>
<thead>
<tr>
<th>Compound function</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributive endocentric</td>
<td>windmolen ‘windmill’</td>
</tr>
<tr>
<td>Attributive exocentric</td>
<td>leeghoofd ‘air head’</td>
</tr>
<tr>
<td>Coordinative endocentric</td>
<td>hotel-restaurant</td>
</tr>
<tr>
<td>Coordinative exocentric</td>
<td>ouder-kind(relatie) ‘parent-child (relationship)’</td>
</tr>
<tr>
<td>Subordinative endocentric</td>
<td>kurkentrekker ‘corkscrew’</td>
</tr>
<tr>
<td>Subordinative exocentric</td>
<td>zakkenroller ‘pickpocket’</td>
</tr>
</tbody>
</table>

(Bisetto & Scalise 2005: 326)
<table>
<thead>
<tr>
<th>Accuracy of the compound</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spelling mistakes</td>
<td>*vliechtuig</td>
</tr>
<tr>
<td>Lexical mistakes</td>
<td>*lievelingseetje (lievelingseten)</td>
</tr>
<tr>
<td>Grammar mistakes (gender/number)</td>
<td>*dit e-mail</td>
</tr>
<tr>
<td></td>
<td>*mijn nieuwe zonnebrilen</td>
</tr>
<tr>
<td>Linking morpheme</td>
<td>*verjaarsdag</td>
</tr>
<tr>
<td>Word order</td>
<td>*schoolmuziek (muziekschool)</td>
</tr>
<tr>
<td>Codeswitching (FR/ENG)</td>
<td>pasta met *basilic sauce</td>
</tr>
<tr>
<td></td>
<td>*football</td>
</tr>
</tbody>
</table>
### Data annotation: word-formation accuracy

<table>
<thead>
<tr>
<th>Word-formation accuracy</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phrase instead of compound*</td>
<td>*vakantie van Pasen (Paasvakantie)</td>
</tr>
<tr>
<td>Simplex instead of compound</td>
<td>*een stap in Padoue (uitstap)</td>
</tr>
<tr>
<td>Compound instead of phrase</td>
<td>*vrijtijd (vrije tijd)</td>
</tr>
</tbody>
</table>

*Checked in Corpus Hedendaags Nederlands: the compound had to be at least 10 times as frequent as the phrase to consider it misuse:  
e.g. mensen van mijn klas (1 hit) vs mijn klasgenoten (123 hits) → misuse  
e.g. in het centrum van de stad (1076 hits) vs in het stadscentrum (956 hits) → no misuse
### Variation in the modifier position – TTR

<table>
<thead>
<tr>
<th>Modifier Position</th>
<th>AL Dutch non-CLIL</th>
<th>AL Dutch CLIL</th>
<th>Control corpus native Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-feest</td>
<td>6 tokens, 2 types (TTR = 0.33)</td>
<td>14 tokens, 4 types (TTR = 0.28)</td>
<td>5 tokens, 1 type (TTR = 0.20)</td>
</tr>
<tr>
<td>X-vakantie</td>
<td>8 tokens, 4 types (TTR = 0.5)</td>
<td>14 tokens, 3 types (TTR = 0.21)</td>
<td>3 tokens, 2 types (TTR = 0.67)</td>
</tr>
</tbody>
</table>

Semi-schematic level: frequency and productivity
## Semi-schematic: frequency and productivity

### Variation in the head position - TTR

<table>
<thead>
<tr>
<th></th>
<th>AL Dutch non-CLIL</th>
<th>AL Dutch CLIL</th>
<th>Control corpus native Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>verjaardags-X</strong></td>
<td>6 tokens, 2 types (TTR = 0.33)</td>
<td>14 tokens, 4 types (TTR = 0.28)</td>
<td>5 tokens, 1 type (TTR = 0.20)</td>
</tr>
<tr>
<td><strong>lievelings-X</strong></td>
<td>8 tokens, 8 types (TTR = 1)</td>
<td>6 tokens, 6 types (TTR = 1)</td>
<td>1 token, 1 type (TTR = 1)</td>
</tr>
</tbody>
</table>
Substantive level: accuracy hapaxes

<table>
<thead>
<tr>
<th></th>
<th>non-CLIL</th>
<th>CLIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spelling</td>
<td>20</td>
<td>34</td>
</tr>
<tr>
<td>Grammatical</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Lexical</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Linking morpheme</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Codeswitching</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Word order</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Compound instead of phrase</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Total mistakes in hapaxes</td>
<td>58</td>
<td>82</td>
</tr>
<tr>
<td>Hapaxes with mistakes</td>
<td>53</td>
<td>74</td>
</tr>
<tr>
<td>Total hapaxes</td>
<td>89</td>
<td>139</td>
</tr>
</tbody>
</table>

- **Spelling**: *We kwamen op zaterdag avond aan a een hele dag rijden*. (CLIL)
- **Codeswitching**: *Het koek kwam van mijn vriend die een aspirant-pâtissier is*. (non-CLIL)
- **Compound instead of phrase**: *Als cadeaus heb ik twee mooie parfume van een goede artisanaalwinkel die ik goed kend*. (non-CLIL)
Outlook

• **Perspectives for future research:**
  • Impact of CLIL on accuracy while controlling for general vocabulary knowledge and extracurricular target-language input
  • Other morphological constructions: adjectival compounds, complex verbs, derivations
  • Follow-up project: comparison of AL learners with novice translators