

Chapter 4

L2 development of *-ing* clauses: A longitudinal study of Norwegian learners

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Abstract

Although *-ing* clauses are frequent in English, their acquisition has not received much attention, and there is a lack of longitudinal studies and detailed explorations of cross-linguistic influence. This longitudinal case study of five young Norwegian students reveals a developmental sequence for the syntactic roles of *-ing* clauses: complements of aspectual verbs > complements of other verbs and prepositions > bare adjuncts and postmodifiers of nouns > subjects. The sequence may arise from a combination of frequencies in the input and grammatical selection. Syntactic restrictions on Norwegian present participle clauses are not mirrored in the acquisition of *-ing* clauses, indicating that the students do not make an interlingual identification. Cross-linguistic influence is evident mainly in late acquisition and infrequent use of *-ing* clauses.

Key words: *-ing* clauses, developmental sequence, cross-linguistic influence, second language acquisition

Introduction

The use of *-ing* clauses is a frequent feature of English and one that second language (L2) learners have to learn to master. Even so, few studies have focussed on the acquisition of such clauses. Particularly, there is a lack of longitudinal studies which explore the developmental path taken by learners. There is also a need for more detailed investigations of cross-linguistic influence. Some studies show infrequent use of *-ing* clauses among L2 users when compared

to first language (L1) users, and transfer has been suggested as a possible reason. However, the studies have not made any detailed comparison of the learners' use with similar constructions in their first languages. This chapter ventures to address both of these shortcomings, reporting on a case study of five Norwegian learners of English. The chapter starts with a definition of *-ing* clauses, and a review of studies that include observations on L2 use of such clauses. Then follows a detailed comparison of *-ing* clauses and Norwegian present participle clauses. These first four sections form the background for the research questions and for the discussion of findings, following the description of material and method.

***-ing* clauses**

An *-ing* clause is here understood as a non-finite subordinate clause with the first (or only) verb in the *-ing* form, such as the italicized clause in example (1).

- (1) She read the letters very carefully, *looking for clues*.

Historically, *-ing* clauses derive from constructions with either present participle verbs or verbal nouns (gerunds). In present-day English, these clauses are in most cases indistinguishable in form. The only difference that remains is the possible realisations of their subjects. Both can have subjects in the objective case, but gerundial clauses, such as (2a), can also have subjects in the possessive form, whereas present participle clauses, such as (2b), can have subjects in the subjective case.

- (2) a. She resented his/him/*he being invited to open the debate.

- b. We appointed Max, he/him/*his being much the best qualified of the candidates. (Examples from Huddleston, 2002, p. 1220)

Since most *-ing* clauses do not have overt subjects and the difference between subjective and objective case is only visible on pronouns, the two types are indistinguishable in most cases, and according to Huddleston (2002, pp. 1220–1222) the distinction cannot be upheld for modern English.

As gerundial clauses originated from verbal nouns and participle clauses typically have adverbial and adjectival functions, present-day *-ing* clauses have a wide range of uses, including adverbial, adjectival and nominal ones. This makes them a frequent, but also very complex feature of English, which learners need to master.

Second language acquisition and use of *-ing* clauses

To my knowledge, there are no longitudinal studies focussing specifically on the L2 development of *-ing* clauses. However, some knowledge about L2 use of such clauses can be gleaned from studies with a slightly different scope (for example writing complexity or L2 use of non-finite clauses). Most of the relevant studies are cross-sectional, comparing L1 and L2 users at one point in time, or pseudo-longitudinal, analysing data from students at different proficiencies, so the conclusions about development over time can only be tentative.

However, there are hints that certain sequences may be expected.

There are indications that *-ing* clauses are first used as complements of aspectual verbs (e.g. *He kept/started/stopped reading the papers*). In Wold (2017), a pseudo-longitudinal study where 11- and 15-year-old learners and native speakers wrote stories based on the

picture book *Frog, where are you?* (Mayer, 1969), only a minority of the 11-year-old learners produced *-ing* clauses, and those were almost exclusively complements of aspectual verbs (2017, p. 276). A similar tendency can be seen in Tizón-Couto (2014), where the least proficient learner group¹ had a higher percentage of aspectual verbs as the controlling verbs of *-ing* clauses than the other learners (2014, p. 226).

Further, it may seem as though adverbial *-ing* clauses are used before subject *-ing* clauses. Tjerandsen (1995) compared the English writing of 14 to 15-year-old Norwegian students who received above and below average marks.² Although the development of *-ing* clauses does not necessarily correlate with global achievements (i.e. appear at the same proficiency level for all learners and thus correlate with the marks they achieve), the high-achieving students might still in average be at a higher developmental level with respect to such clauses than the others. There were more bare adjunct clauses in the stories written by the high-mark students (10 out of 98 adverbial clauses vs. 3 out of 94). Although the high achievers also used more non-finite subject clauses (most of them extraposed), Tjerandsen does not say whether any of them were *-ing* clauses, and the only example given is an infinitive clause (1995, p. 42).

Based on the 11-year-olds' exclusive use of *-ing* clauses with aspectual verbs and on the distribution of *-ing* clause types in the texts by the 15-year-olds, Wold (2017) argues that *-ing* forms may spread from more to less progressive-like contexts. The 15-year-old learners had about 25% each of adnominal, nominal and supplementive clauses, and about 14% conjunction-headed adverbial clauses (2017, p. 276), see examples (3) to (6).

¹ There is some uncertainty about the proficiency levels. See Tizón-Couto (2014, pp. 179–185).

² At the time, Norwegian children started school one year later than at the present and had English classes from year 4, instead of from the start, so they might not compare directly with the similarly-aged students in the other studies reviewed.

- (3) Adnominals (postmodifiers of nouns): The boy and dog then notice [notice] the little frogs *jumping out from behind the bushes*.
- (4) Nominals (obligatory elements, such as subjects, objects and subject predicatives. Wold includes complements of aspectual verbs and motion verbs here): Doggy tries to scare the raindeer away, but ends up *falling down on the same place as Fred*.
- (5) Supplementives (bare adverbials): Jeffrey and Rufus are outside, *calling for the frog*.
- (6) Subordinator-headed adverbial clauses: *Instead of finding Wilbert* he found a moose.
(Examples from Wold, 2017, pp. 155–156)

Wold includes aspectual complements among the nominal uses, and these still dominate the nominal category among the 15-year-olds. She argues that the other two most frequent uses among the 15-year-olds are also somewhat progressive-like: the adnominals mainly follow the pattern *see + noun + -ing* clause, which Comrie sees as a construction with “specifically progressive force” (1976, p. 40, cited in Wold, 2017, p. 333), and the bare adverbials “in function seem to be coordinated with the main clause” and “can be seen as an extension of the finite verb phrase” (2017, p. 278).

However, frequencies at later stages do not necessarily mirror sequences of emergence, so Wold’s claim needs to be tested against properly longitudinal data. It should also be kept in mind that genre may influence the distribution of different kinds of *-ing*

clauses. The distribution found in the narratives in Wold (2017) is very different from the distribution in the argumentative academic texts investigated by Granger (1997). Looking at adverbial and adnominal uses in the L2 English writing of Swedish, French and Dutch university students, Granger (1997, pp. 189–194) finds augmented adverbials (headed by prepositions or conjunctions) to be the most frequent (e.g. *By considering the problem, a borrower's mindset has begun to take form; When dealing with the history of genetic research, one should bring up eugenics...*), followed by adnominal clauses (e.g. *The thought conveyed in this prayer is shallow in meaning*) and finally unaugmented/bare adverbials (e.g. *They study the relation between genotypes and phenotypes, attempting to determine the generic basis...*). Since the native-speaker control groups had the same distribution as the learners in both studies, the differences are probably due to genre, topic or possibly age rather than L2-related processes.

When that is said, it is also true that novice writers (L1 and L2 alike) often encounter different genres at different stages. If the genres contain different types of *-ing* clauses, the sequence in which they are encountered may influence the acquisitional sequences of *-ing* clauses. Biber et al. (2011) hypothesise that writing development will follow a path from the complexity characteristic of oral conversation, which is easier because it is based on structures acquired naturally in childhood, towards a more academic phrasal style. In a study of the differences between oral conversation and academic writing, they find that the complexity of oral conversations is dominated by finite subordinate clauses functioning as clausal constituents, whereas academic writing complexity is dominated by phrases embedded in noun phrases, with non-finite clauses having an intermediate status. Since they distinguish between different uses of non-finite clauses, it is possible to isolate a sequence for *-ing* clauses from their hypothesised developmental stages: Such clauses emerge as complements of common verbs in stage 2, followed by a spread to a wider set of verbs in stage 3. In stage 4

(the most advanced), we find adjectival complements, extraposed complement clauses, nominal modifiers and complements headed by prepositions (as in *The idea of using a Monte Carlo approach*) (2014, pp. 30–31). This sequence agrees with the findings in Wold (2017) and Tizón-Couto (2014) with respect to the early use of *-ing* clauses as complements of common verbs, but the explanation is different from that proposed by Wold (2017).

When attempting to explain language development, we should be open to finding effects of a combination of different factors, as recognized in usage-based and cognitive approaches. Frequencies in the input and the move from an oral to a more academic writing style may be such factors. Another factor that has received much attention in L2 acquisition is cross-linguistic influence.

Several studies have shown that English learners at university level use *-ing* clauses less frequently than L1 English peers. This has been found for adverbial and adnominal *-ing* clauses in academic writing (Granger, 1997, p. 188) and for *-ing* clauses that are complements of verbs, both in writing (Biber & Reppen, 1998, pp. 150–151) and speech (Tizón-Couto, 2014, p. 210). As the L1s of the learners either did not have present participial clauses or showed restricted use of such clauses, the authors of these papers suggest that cross-linguistic influence might be one possible explanation for the differences in frequency. This seems plausible, as the learners may choose other clauses instead, which correspond to clause types they would use in their L1s in similar contexts.

Cross-linguistic influence may also cause learners to start using *-ing* clauses later than other types of clauses. There are indications that this is the case for Norwegian learners of English. In Raaen and Guldal (2012), students in year 7 (the final year of primary school) used *-ing* clauses infrequently compared to other clause types: only 5.7% out of all subordinate clauses. However, this was the clause type that increased the most over the following years, constituting 18.5% of all subordinate clauses in year 10, at the end of lower

secondary school. Drew (2010) looks at even younger learners, from years 4 to 6 in the Norwegian system (age 8 to 12). He compares the frequencies of nominal, adverbial and adjectival (adnominal) clauses and does not give numbers for *-ing* clauses as such. However, when discussing nominal clauses, he says that the students used almost exclusively *that*-clauses and infinitive clauses in year 5, whereas they frequently used *-ing* clauses as objects of verbs in year 6.

The learners also start using *-ing* clauses later than L1 users do, as shown by Wold's pseudo-longitudinal study mentioned above. The 11-year-old learners at A1 level did not use *-ing* clauses at all, and less than a fourth of the 11-year-olds at A2 level did so (2017, p. 267).³ The 11-year-olds in the native-speaker group, on the other hand, all used *-ing* clauses (2017, pp. 277–278).

Despite the indications that cross-linguistic influence plays a role in the acquisition of *-ing* clauses, such influence has not yet been investigated systematically and in detail. Those who claim possible cross-linguistic influence do so on the basis of an assessment that the learners' L1s do not have a proper equivalent to *-ing* clauses, or have present participle clauses that are much more infrequent. A more detailed comparison of these clauses should form the basis for investigations of whether learners transfer features from their L1 present participle clauses when acquiring English *-ing* clauses, and whether this influences the sequences found. It is currently recognised that several different factors interact with and may constrain transfer. One of these is interlingual identification (Ortega, 2008, pp. 32–34; Jarvis & Pavlenko, 2007, p. 11): it is not just the objective similarities and differences between languages that create cross-linguistic influence, but learners' perceived similarities and differences. More thorough comparisons between L1 present participle clauses and L2 *-ing* clauses may therefore show whether learners make an (unconscious) interlingual

³ The exact number of 11-year-olds at A2 level who used *-ing* clauses is not given, but 8 out of 33 used *-ing* forms outside the progressive (Wold 2017: 267), and most of these belonged to *-ing* clauses (2017, p. 277).

identification between them or whether they regard *-ing* clauses as something different and new to be acquired. The following section contains a comparison of English *-ing* clauses and Norwegian present participle clauses that will be used to such effect in the present study.

English *-ing* clauses and Norwegian present participle clauses compared

In Norwegian, verbal nouns have not developed a verbal syntax (Næs, 1952, p. 243) or merged with present participle clauses like English ones have. This means that Norwegian present participle clauses can only be used in a subset of the functions that English *-ing* clauses can have, excluding the nominal functions of subject, object, predicative or complement of preposition. (The only exception is the augmented absolutes described below, which need a preposition.) Present participle clauses are used only as complements to a small set of verbs and in adverbial and adnominal functions, as will be illustrated below. However, there are restrictions on the verbs that can occur in present participle clauses, and on the internal syntax that such clauses can have. This limits their use further and means that they are less frequent even in the syntactic functions where they overlap with *-ing* clauses.

In English, a large range of verbs select *-ing* complement clauses. One important subset is auxiliary-like and includes aspectual verbs, such as *start*, *keep* and *stop*, and verbs of motion and posture, such as *come* and *sit* (Lee, 2007, p. 165). Uses of *-ing* clauses with such verbs are illustrated in examples (7) and (8).

(7) They kept wondering what had happened.

(8) She came barging into the room.

Norwegian has a parallel to this construction, but only with the controlling verbs *bli* ('remain') and *komme* ('come'), as shown in examples (9) and (10). The *bli*-construction has an aspectual (continuative or ingressive) meaning (Heggstad, 1931, p. 139; Faarlund et al., 1997, p. 653; Kinn, 2014, pp. 76 and 79).

- (9) De ble sittende ved bordet i tre timer.
They remained sitting by the-table in three hours.
'They remained sitting at the table for three hours.'

- (10) Hun kom ruslende nedover gata.
She came strolling down the-street
'She came strolling down the street.'

As shown, there are indications that learners first use *-ing* clauses with aspectual verbs, so this parallel might be significant. However, the restricted set of controlling verbs in Norwegian must be kept in mind, as well as the much smaller range of verbs that they can select as part of the following present participle clause. The verb *bli* takes posture verbs, some movement verbs and verbs for being at a place, in addition to *hete* ('be called') and *være* ('be'), and the verb *komme* takes manner-of-movement verbs (Lødrup, 2016, p. 383).

A second construction in which Norwegian present participle clauses can occur corresponds to what Quirk et al. (1985, p. 1202) call a variant of complex transitive complementation, in which the controlling verb is followed by an object pronoun or noun phrase and then an *-ing* clause. The verbs that have this complementation pattern are verbs of perception (*feel, hear, notice, observe, overhear, perceive, see, smell, spot, spy, watch*),

encounter (*catch, discover, find, leave*) and coercion (*have, get*).⁴ A smaller set of such verbs get this complementation pattern in Norwegian too, illustrated in (11).

- (11) Han fant dem liggende på bakken.
He found them lying on the-ground
'He found them lying on the ground.'

As seen above, the 15-year-old Norwegian learners of English in Wold (2017) used a large number of *-ing* clauses in the pattern *see* + noun + *-ing* clause. Again, we may wonder whether transfer could be a contributing factor.

Thirdly, Norwegian present participle clauses can function as adverbials. Optional adverbials in participial form are often divided into absolutes, which have an internal subject (12), and free adjuncts, which do not (13) (see e.g. Kortmann, 1991, p. 5; Lee, 2007, pp. 166–167). In English both types can be augmented, free adjuncts with subordinating conjunctions or prepositions and absolutes with the prepositions *with* and *without* (and more seldom *what with* and *and*) (Kortmann, 1991, pp. 7 and 11). In Norwegian, on the other hand, absolutes, such as (14), always have to be augmented with *med* ('with') or *uten* ('without') (Hasselgård, 2012, p. 230), whereas free adjuncts, such as (15), can never be augmented.

- (12) Absolute: (With) the weather being so bad, Anne wanted to stay inside.

- (13) Free adjunct: (When) travelling abroad, he always brought his computer.

⁴ The complex complementation pattern of these verbs must be distinguished from the monotransitive pattern of verbs such as *love, imagine* or *remember*, which can take an *-ing* clause with an internal subject. The noun phrase following the verb in the complex complementation pattern can be made the subject of a passive and must therefore be considered the object of the verb (He found them lying on the ground. They were found lying on the ground.), whereas this is not possible with in the monotransitive pattern (He loved her reading stories to him. *She was loved reading stories to him.) See Quirk et al. (1985, p. 1203) and Huddleston (2002, pp. 1205–1206).

- (14) Med boka liggende i veska, beveget hun seg innover i rommet.
With the-book lying in the-bag, moved she herself inwards in the-room.
With the book lying in her bag, she moved further into the room.
- (15) Stående på gatehjørnet, husket han plutselig hva hun hadde sagt.
Standing on the-street.corner, remembered he suddenly what she had said.
Standing on the corner of the street, he suddenly remembered what she had said.

Finally, Norwegian participle clauses can be postmodifiers in noun phrases (Kinn, 2014, p. 84), as exemplified in (16).

- (16) De viste oss et gammelt bilde av en mann og to damer stående utenfor hotellet.
They showed us an old photo of a man and two women standing outside the-
hotel.
'They showed us an old photo of a man and two women standing outside the
hotel.'

As with the complements of *bli* and *komme*, there are restrictions on the verbs that can occur in the other three types of present participle clauses that exist in Norwegian: they can only denote unbounded activities or states (Behrens et al., 2012, p. 224). This also affects their internal syntax. Whereas they commonly contain adverbials and predicatives (Kinn, 2014, pp. 71–73), they cannot contain objects or reflexives (Behrens et al., 2012, p. 223), at least not in colloquial Norwegian (Lødrup, 2016, p. 382). If learners make an interlingual identification

between Norwegian present participle clauses and English *-ing* clauses, we might see similar restrictions in operation in their L2 English use, particularly in the early stages.

Research questions

As the literature review has shown, more knowledge is needed about the actual path of development in the use of *-ing* clauses. Since frequencies at later stages do not necessarily mirror sequences of emergence and since group averages can obscure individual differences, studies should preferably be longitudinal, follow the same individuals over time and start when they are in their early stages of acquiring *-ing* clauses. The role of cross-linguistic influence should also be explored in more detail, taking into account not only the presence, absence or scarcity of similar clauses in the L1 of the learners, but also the features of such clauses, to see if they influence the developmental path. The present study addresses these issues.

In usage-based and cognitive approaches to language acquisition, it is recognised that multiple factors together influence L2 learning, making it possible that individuals have distinct developmental trajectories. However, many factors will influence Norwegian learners in a similar way, as they experience similar educational contexts. Moreover, they have the same L1, a source of cross-linguistic influence. Also, importantly, properties of the English language itself, such as the frequencies of different constructions, will influence the acquisition process. Based on these considerations, the following research questions were formulated:

1. What common sequences (if any) can be found in the development and use of *-ing* clauses by young Norwegian learners?
2. Are there individual differences in the paths taken?
3. What kinds of L1 influence can be detected?

Material and method

The L2 data for the present study are taken from the TRAWL Corpus (Tracking Written Learner Language), a longitudinal corpus currently under construction by researchers at the University of Oslo, the University of Agder and the Inland Norway University of Applied Sciences (see Dirdal et al., 2017). The corpus contains texts written by Norwegian schoolchildren in the four L2s most commonly taught in Norway: English, German, French and Spanish. In addition, it has L1 Norwegian texts from some of the students. All the texts are written as part of regular school work.

To facilitate a detailed examination of individual developmental paths, I decided on a case study of five focal students from whom there are data from a period of four school years – the three years of lower secondary and the first year of upper secondary school (age 13 to 17). All five students had Norwegian as their L1 and had only ever lived in Norway. For the most part, the texts were written in test situations at school. For each of the students, there are texts written at two times in year 8, three times in year 9, four times in year 10 and 4 to 5 times in year 11. The texts from years 8 and 9 are a mix of narrative and non-narrative types, whereas those from year 10 are predominantly non-narrative and those from year 11 exclusively non-narrative. The students in the TRAWL Corpus have received individual

codes, and the five students selected for this study have the codes P01002, P01007, P01015, P01029 and P01032.

The inclusion of five focal students means that there were enough individuals to detect common sequences and other similarities, but few enough to carry out a thorough qualitative investigation at an individual level. The function of each *-ing* clause and its internal syntax could be scrutinized in detail, and the development followed over a long period of time.

To distinguish between L1 influence and development that was due to properties of the target language or maturational processes, the data were compared with L1 English texts from the Growth in Grammar Corpus (Durrant & Brenchley, 2018), a pseudo-longitudinal corpus of texts written by schoolchildren in years 2, 4, 6, 9 and 11 in the British school system, also as part of regular school work. In years 8 and 10, the Norwegian students would be of the same ages as the British students from years 9 and 11, since British children start school one year earlier. However, as the Norwegian students were expected to lag behind their British peers in the production of *-ing* clauses, I included data from all the year groups in the Growth in Grammar Corpus. One narrative and one non-narrative text from ten students from each year were included (except for year 4, for which there is little material, and where three of the students are only represented with a narrative and one with only a non-narrative text). None of the selected students had been classified as L2 speakers of English.

Each clause in the material was manually coded for clause type and syntactic function. In the case of coordination, I only considered clauses with their own subject as separate coordinated clauses, and in cases with direct speech, both the quoted material and the reporting clause were counted as main clauses. Since the texts are of different lengths and there are different numbers of texts in each year for the L2 learners, the numbers of *-ing* clauses were normalized per T-unit, understood as an independent or coordinated clause (with all its dependent clauses). It was deemed more accurate to normalise clause counts per T-unit

than per number of words. The following syntactic roles of *-ing* clauses were distinguished, based on distinctions that had been found to be important through the literature review and the comparison of English and Norwegian:

1. Complements of aspectual verbs and motion/position verbs (e.g. He kept *looking at them*)
2. Complements of verbs in the complex complementation pattern described above (e.g. They saw him *running across the road*)
3. Other complements of verbs (including phrasal verbs, but not prepositional ones) (e.g. We enjoyed *swimming in the sea*)
4. Complements of prepositions (e.g. He was punished for *looking in the files*; They were scared of *going there*)
5. Postmodifiers of nouns (e.g. He visited a girl *living in the same town*)
6. Complements of adjectives (e.g. They were finished *doing their job*)
7. Bare adjuncts (e.g. *Entering the gate*, he ran straight into his boss)
8. Adjuncts with subordinating conjunctions (e.g. *When entering the gate*, he ran straight into his boss)
9. Subjects (*Writing the report* was not easy)

An Excel file was programmed to automatically go through the coded texts and pick out the verb phrases, the codes, the names of the files and the sentences that the verb phrases were a part of.⁵

⁵ I would like to thank Bjarte Berntsen for programming the Excel file for me.

Findings

A preliminary look at the rates with which the five Norwegian students use *-ing* clauses shows that they are indeed in the early stages of acquisition. Three of the five Norwegian students are just starting to use *-ing* clauses in year 8, with only one or two instances in their first text. This means that their development can be followed from the early stages. P01029 and P01032 have no instances in the second text, but P01015 has five, bringing her total rate for year 8 closer to the final two students, who seem to be slightly ahead at the beginning of year 8. These two students also see a larger increase in their use in year 11 than the others (see Figure 4.1).

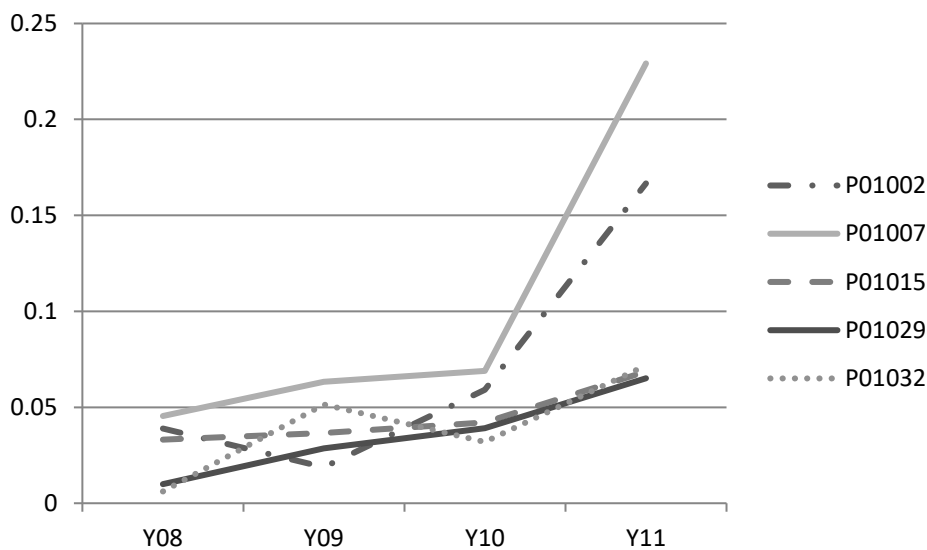


Figure 4.1 Development in the rate of *-ing* clauses per T-unit over four years for the five Norwegian students

The increase in the use of *-ing* clauses over time is not just an effect of increased use of subordination overall, as the proportion of *-ing* clauses out of all subordinate clauses also

rises, from a mean of 4% to one of 11%. This indicates that development is taking place with respect to these clauses in particular.

The following sections deal with each of the three research questions in turn. The next section presents evidence of common stages in the types of *-ing* clauses that are added to the students' repertoire over time, followed by a section dealing with individual differences, and a discussion of cross-linguistic influence.

Developmental stages

The three *-ing* clauses in the first text by P01015 and P01029 are all complements of aspectual verbs, as shown in examples (17) to (19). (P01029 incorrectly uses the infinitive marker together with the *-ing* form.) The only *-ing* clause in the first text by P01032 is technically the complement of an adjective, but one that is formed from an aspectual verb (20). P01002 has five *-ing* clauses in his first text, and four of these are aspectual complements. The only student who does not show the same pattern is P01007, the student who seems to be furthest ahead with respect to *-ing* clauses, producing the highest number from the beginning of the data collection. Whether he also started with aspectual complements at an earlier age is impossible to say on the basis of these data.

(17) Their parents get so scared and NAME_PERSON1_F⁶ *start crying*. (P01015, autumn year 8)

(18) An alarm *begin to screaming*. (P01029, autumn year 8)

⁶ All names that might possibly be connected to the students are anonymised in the TRAWL Corpus. The F at the end of this code shows that the name was female.

(19) The train *begins to breaking* and I think it stopped. (P01029, autumn year 8)

(20) After they was *finished eating* they walked down to the beach. (P01032, autumn year 8)

The initial use with aspectual verbs fits with Wold's (2017) findings that the few 11-year-olds who had started using *-ing* clauses almost exclusively used them with such verbs. It also fits with Biber et al's (2011) hypothesis that *-ing* clauses should first appear with very frequent verbs. Frequency in the input might be responsible for this pattern rather than the fact that they are aspectual (and thus progressive-like, as suggested by Wold). Aspectual verbs and motion verbs are among the most frequent verbs selecting *-ing* clauses, as reported in *Longman Grammar of Spoken and Written English* (Biber et al., 1999, p. 742). The verbs that have a frequency of over 40 per million words are *begin, go (around/on), keep (on), start, stop* and *see* (used in the complex complementation pattern *see NP -ing*). The second most frequent verbs, with a frequency of over 20 per million words, are *come, sit, spend (time)* and *hear* (used in the complex complementation pattern *hear NP -ing*). The Norwegian students start using *-ing* clauses with a few very frequent verbs and enlarge the set over time (Table 4.1). We see that the early uses are almost exclusively from the set with a frequency of over 40 per million words (shaded), and that these are responsible for the majority of *-ing* complements until year 11.

Table 4.1 Verbs used with *-ing* complements in the Norwegian learner data

Year 8	<i>start</i> (6), <i>begin</i> (3), <i>see</i> NP (3), <i>recommend</i> (1)
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Year 9	<i>start</i> (4), <i>go</i> (4), <i>see</i> NP (4), <i>keep</i> (3), <i>continue</i> (3), <i>enjoy</i> (2), <i>stop</i> (1), <i>hear</i> NP (1), <i>include</i> (1) and <i>pass on</i> (erroneously used in the meaning ‘continue’) (1)
Year 10	<i>keep (on)</i> (4), <i>start</i> (3), <i>stop</i> (3), <i>enjoy</i> (2), <i>come</i> (1), <i>manage</i> (1)
Year 11	<i>start</i> (4), <i>see</i> NP (2), <i>keep</i> (1), <i>stop</i> (1), <i>continue</i> (1), <i>end up</i> (1), <i>remember</i> (1), <i>regret</i> (1), <i>try</i> (1), <i>appreciate</i> (1), <i>imagine</i> NP (1), <i>avoid</i> (1), <i>find it difficult</i> (1)

According to Biber et al. (2011), it is only after the spread to a wider set of verbs, when we get to the most advanced stage, that we can expect to find *-ing* clauses as adjectival complements, extraposed complements, nominal modifiers and complements headed by prepositions (2011, p. 31). However, not all these functions appear at the same time for our learners.

Soon after the appearance of aspectual complements, we find complements of prepositions, a category that quickly becomes the most frequent in the data. As shown in examples (21) to (24), the prepositional phrase may be selected by an adjective or a verb or may function as an adjunct.

(21) ... they was so tired *of doing the same thing every day*. (P01002, autumn year 8)

(22) Frank only care *about* fresh air, *eating healthy* and training ... (P01002, spring year 8)

(23) ... and said that it wasn't fair that I got a bad mark *for coming five minutes to late* (P01015, spring year 8)

- (24) ... but NAME_PERSON2_F was so nice and said she was going to help me
instead of playing games on my iPad. (P01015, spring year 8)

Something the early types of *-ing* clauses have in common is that they are selected by a lexical item. Once that verb or preposition is chosen by the student, he or she is forced to find a complement. Prepositions cannot be followed by other clause types in English, resulting in a consistent pattern in the input. The features of frequency and selection may thus be important driving forces in the stages that are found.

If this is the case, we should expect *-ing* clauses that function as bare adjuncts, postmodifiers or subjects to be acquired later. These clauses are optional, and there are other alternatives that can be chosen by the learners, such as finite adverbial clauses, relative clauses and *that*-clauses/infinitive clauses respectively. Again, this factor may interact with frequency. Adverbial *-ing* clauses are relatively frequent in English (especially in fiction), something that may pull in the direction of an earlier appearance, whereas subject *-ing* clauses are infrequent, and may be expected to appear at the latest stage.

This does indeed seem to fit with the learner data. Three students start using bare adverbials after, and one at the same time as, verbal complements (other than aspectual ones); three after, and one at the same time as, prepositional complements. Bare adverbial clauses are sparse, and one student does not use them at all.

The picture is less clear with respect to postmodifiers of nouns. They appear after prepositional and verbal complements, and as late as in year 10 or 11 for three of the students. However, P01015 has one example in the spring of year 8 (*the people bulling [bullying] her*), at the same time as her prepositional complements appear and before she uses *-ing* clauses as complements of verbs (other than aspectual ones). P01007 may also be using postmodifying *-ing* clauses at an earlier stage, producing *This is the pilot speaking* three times in year 8.

However, this string is ambiguous between a reading where *the pilot speaking* is a clausal complement to *be* (what the passengers hear is that the pilot is speaking) and a reading where *speaking* is a postmodifier of *pilot* (they hear the pilot, who is speaking). The variation in the appearance of postmodifiers will be further discussed in the section on individual differences (7.2).

Subject *-ing* clauses are the latest to appear. They are only encountered in the data from year 10 for P01002 and P01007 (the students who seem to be ahead of the others) and in year 11 for the other three:

(25) *Making friends* is difficult in several ways ... (P01002, spring year 10)

(26) You can also look at it in another way and think that they will learn to believe in themselves and think that *coming in last* is not what matters ... (P01032, spring year 11)

Based on the longitudinal data from these five students, we may then propose the following stages in the acquisition of English *-ing* clauses: complements of aspectual verbs > complements of other verbs and prepositions > bare adjuncts and postmodifiers of nouns > subjects. Frequencies in the input seems to be an important factor explaining this sequence in interaction with the status of the *-ing* clause with respect to being optional or selected. Whether cross-linguistic influence may also be involved in shaping the sequence is something that will be discussed below.

Individual differences

Although frequencies in the input and grammatical properties of English will affect all learners, they may encounter slightly different input (via for example reading or TV), get different amounts of input, and notice slightly different things in the input. Such factors may lead to individual differences, which was the topic of the second research question.

As can be seen in Figure 4.1 above, there are individual differences with respect to when the learners reach different stages and how fast they progress. P01007 and P01002 seem to be slightly ahead of the others, which becomes especially evident in year 11, when these two students show a marked increase in the use of *-ing* clauses compared to the other three.

It was mentioned earlier that two learners produced postmodifying *-ing* clauses at an earlier stage than the others. For one of them, the cases were ambiguous, but the possibility should still be acknowledged. A further difference can be found in the types of postmodifiers that are produced. Some occur in structures that have surface similarities to the complex complementation pattern, whereas others appear in existentials. It may be that these are two different routes into the acquisition of postmodifying *-ing* clauses.

There is an interesting similarity between the early uses of verbal complements and nominal modifiers in the data from P01007. Most of the verbal complements he uses in year 8 and 9 are of the complex complementation type described above, four with the verb *see* and one with the verb *hear* (see examples (27) and (28)). These are among the most frequent verbs to select *-ing* clauses and the only two verbs of the complex complementation pattern that have frequencies above 20 per million words in the Longman corpus.

- (27) *I saw my family eating donuts and drink tea with the people that had kidnapped them* (P01007, autumn year 8)

- (28) as he was walking, he *heard someone shouting his name* (P01007, autumn year 9)

Three of his four nominal modifiers in year 9 are not very far from the complex complementation pattern with *see* and are reproduced in examples (29) and (30).

- (29) ... before he came across *some native people living in an oasis*. (P01007, autumn year 9)

- (30) ... but John noticed *a log floating in the sea and two planks lying in the sand on the bank* (P01007, spring year 9)

It could thus be that this student has picked up on the rather frequent complementation pattern of *see/hear* NP *-ing*, and that this has become a springboard to his use of *-ing* clauses in noun phrases. This accords well with usage based theories with their emphasis on both frequencies and exemplar-based learning. A frequent and fairly consistent pattern will be learnt early, and more variable use and greater abstraction of patterning will slowly develop as the learner encounters other exemplars that are similar to this one (see e.g. Ellis, 2007, pp. 80–81).

The other students do not use the complex complementation pattern as often as P01007, but the contexts in which they use nominal modifiers are still similar. P01002 has his first nominal modifiers in year 10, all three in the pattern *find/have* NP *-ing*. P01029 uses two nominal modifiers in year 11, the first in the pattern *have* NP *-ing*. In the data from P01032, two out of three cases follow the pattern *see* NP *-ing*. For the final student, P01015, three out of seven nominal modifiers belong to existential constructions, such as in (31). This may be

another pattern than can be a way into the use of *-ing* clauses as nominal modifiers. The third of P01032's modifiers also belongs to an existential (see example (32)).

(31) Because of war and starvation *there are a lot of people moving to other countries* hoping for a better life. (P01015, spring year 10)

(32) *It⁷ is already many people speaking German.* (P01032, autumn year 10)

To sum up, the clearest individual differences have to do with overall pace – how early students start using *-ing* clauses and when they reach various stages. However, there may also be differences with respect to the time in which postmodifying *-ing* clauses are acquired relative to other types. The route to acquiring these may also differ, depending on other structures that students notice, which may have surface similarities to nouns with *-ing* postmodifiers.

Cross-linguistic influence

As described above, Norwegian present participle clauses are severely restricted compared to English *-ing* clauses in terms of both syntactic function and internal syntax. The *-ing* clauses produced by the learners were examined to see if they showed evidence of any of these restrictions being transferred from their L1. The learner data were also compared to L1 data from British children to better distinguish transfer effects from developmental effects pertaining to novice writers in general.

⁷ Both *it* and existential *there* correspond to Norwegian *det*, and learners often confuse them.

Norwegian present participle clauses can be used after the auxiliary-like verbs *bli* and *komme*. The fact that the very first *-ing* clauses that Norwegian learners use are complements of aspectual verbs might therefore seem like a possible effect of transfer. Nominal uses, on the other hand, are not possible with Norwegian present participle clauses, and this may be linked to the late appearance of subject *-ing* clauses. However, complements of aspectual verbs are frequent among early *-ing* clauses in the L1 data too, and subject *-ing* clauses relatively late, which means that it is more likely that other factors are responsible. The high frequency of aspectual verbs as controlling verbs for *-ing* clauses (see above) and the low frequency of subject *-ing* clauses in the input might be factors that influence L1 and L2 learners alike.

Another fact that speaks against transfer of the features of Norwegian present participle clauses is the L2 learners' early and frequent use of *-ing* clauses as complements of prepositions. This syntactic function is impossible for Norwegian present participle clauses (except for absolutes, which were very rare in the L2 data). Nevertheless, the proportion of *-ing* clauses that are complements to prepositions is large in the Norwegian learner data compared to the L1 English data, as can be seen in Figure 4.2. This speaks against interpreting the learners' sequences as an effect of transfer and for an interpretation where frequencies and selection are important, as suggested above.

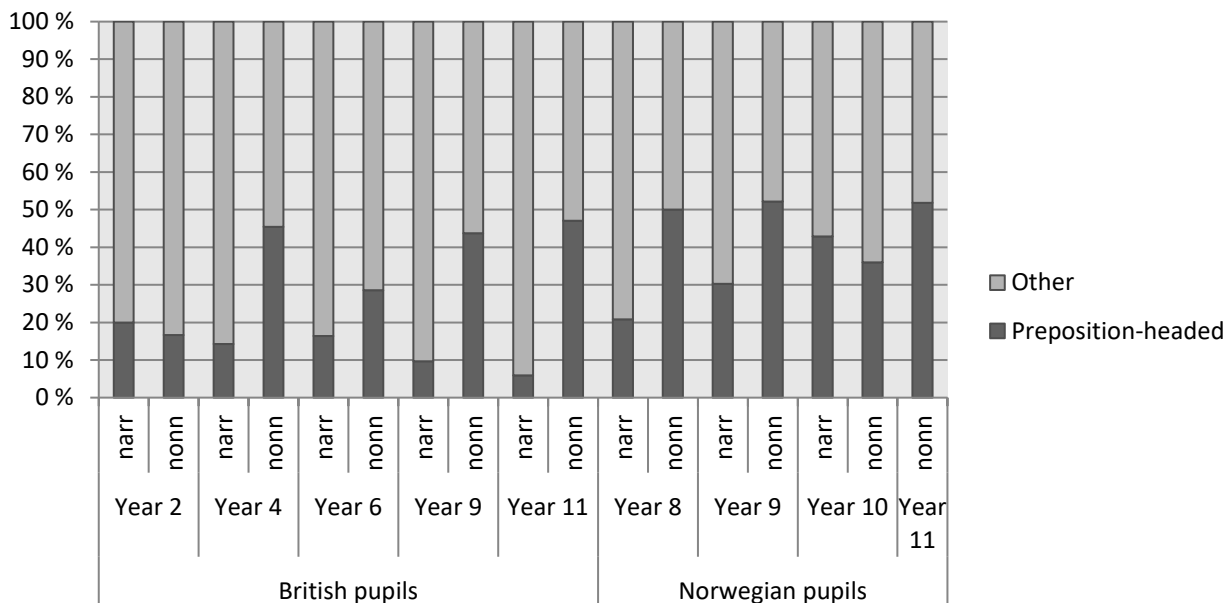


Figure 4.2 Proportions of preposition-headed *-ing* clauses in the data

Another piece of evidence comes from the internal syntax of the learners' *-ing* clauses.

Norwegian present participle clauses can contain adverbials and predicatives, but not objects.

However, 55% of the learners' *-ing* clauses contained objects, and the learners produced *-ing* clauses with objects from the start of the data collection, except for those two students who only had one or two *-ing* clauses in year 8. Three early cases are shown in examples (33) to (35).

(33) NAME_PERSON2_F met a rich guy and start *dating him* because of the money (BIITCH). (P01002, autumn year 8)

(34) ... but NAME_PERSON2_F was so nice and said she was going to help me instead of *playing games on my iPad*. (P01015, spring year 8)

- (35) The children didn't be integrated in the society of just *being told to believe on another culture*. (P01029, autumn year 9)

Both the external syntactic roles of the learners' *-ing* clauses and their internal syntax thus give evidence against transfer of features from Norwegian present participle clauses. The Norwegian present participle clauses do not seem to be similar enough to English *-ing* clauses for the learners to identify the two structures with each other.

However, cross-linguistic influence is still present in the data. Since the learners do not have an L1 structure that they perceive as similar to *-ing* clauses, they have to acquire them from scratch. This delays the acquisition compared to other clause types. As can be seen from Table 4.2, the Norwegian students have a lower mean subordination rate than British students of the same ages. At the age of 12–13, the Norwegians have a similar subordination rate as the British 7–8-year-olds, and at the age of 14–15, they have a rate similar to the British 12–13-year-olds. However, they are even further behind with respect to *-ing* clauses, for which they have a lower rate than the British 5–6-year-olds until at age 15–16, when they reach the level of the British 9–10-year-olds.

Table 4.2 Mean rates of subordination and *-ing* clauses in the material

Age (School year)	L1 English		L2 English	
	Subord. rate	<i>-ing</i> clause rate	Subord. rate	<i>-ing</i> clause rate
5–6 (Britain: year 2)	0.40	0.08		
7–8 (Britain: year 4)	0.69	0.14		

9–10 (Britain: year 6)	1.11	0.12		
12–13 (Britain: year 9 Norway: year 8)	0.98	0.17	0.69	0.03
13–14 (Norway: year 9)			0.74	0.04
14–15 (Britain: year 11 Norway: year 10)	1.29	0.28	0.96	0.05
15–16 (Norway: year 11)			1.09	0.12

The learners produce fewer *-ing* clauses than the L1 users especially with respect to optional *-ing* clauses. In these cases, other alternatives are possible in English and the learners may choose clause types that have clear equivalents in Norwegian. In the production of adverbials, for example, Norwegian learners have much lower proportions of bare *-ing* clauses and higher proportions of preposition-headed ones than British students, as can be seen in Figure 4.3.

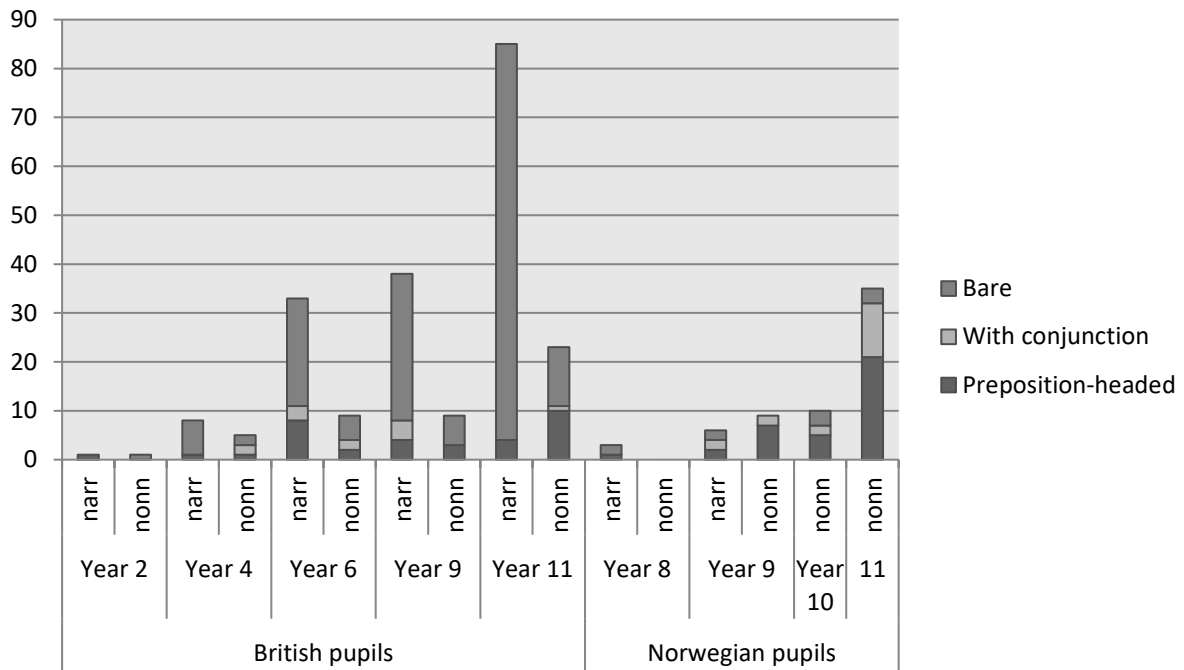


Figure 4.3 The realization of adjuncts with *-ing* verbs in raw numbers of adjuncts

The British students generally have a higher proportion of bare adjuncts both in narrative and non-narrative texts (although they dominate most clearly in narratives). The Norwegian learners most often use *-ing* adjuncts headed by a preposition or a conjunction. As argued above, the choice of a preposition forces the learners to select an *-ing* clause complement. There is no such pressure to use bare *-ing* clauses, and L1 preferences for other clauses can be transferred without leading to ungrammatical English.

Conclusion

In the present study, data from five Norwegian learners of English were investigated to explore the existence of common sequences, individual differences and cross-linguistic

influence in the acquisition of *-ing* clauses. Although some types of *-ing* clauses were sparse in the data, a sequence of syntactic roles could be discerned: complements of aspectual verbs > complements of other verbs and prepositions > bare adjuncts and postmodifiers of nouns > subjects. It was suggested that this sequence is caused mainly by two factors interacting with each other: frequencies in the input and grammatical selection.

Some students may start using postmodifying *-ing* clauses at an earlier stage than the one proposed in the sequence above (i.e. after complements of verbs and prepositions). However, the most apparent difference between the learners in the present study is one of pace. One student seemed to have started using *-ing* clauses before the others, and two increased their use substantially in year 11 and reached the stage of using subject *-ing* clauses earlier than the rest. The findings accord well with usage-based theories of language learning (see e.g. Ellis, 2007; Wulff and Ellis, 2018), where frequencies and salience in the input and abstraction from exemplars are key factors and may explain common developmental paths, but where individual differences are also to be expected because individuals may get slightly different input (both in terms of amount and types) and may notice and pay attention to different things.

No interlingual identification of Norwegian present participle clauses and English *-ing* clauses was detected. Instead of using *-ing* clauses in a way that mirrored Norwegian present participle clauses, the learners seemed to acquire *-ing* clauses as a new type of clause. The cross-linguistic influence from Norwegian was rather manifested as late acquisition and low frequencies, and the sequence proposed above may hold even for learners from other L1s that lack close equivalents to *-ing* clauses.

Teachers need to acknowledge the complexity of structures such as *-ing* clauses and be prepared that full mastery will take time and happen step by step. However, it is important to point out that the sequence proposed here is not deterministic. It is at least in part caused by

frequencies in the input, which may vary depending on students' reading and listening habits. Attention and noticing will also play a mediating role. Teachers can be facilitators in both respects – by choosing good and interesting input for students and by pointing out or highlighting features that they want students to notice. It is good news that students pick up patterns in the input and that they learn to use *-ing* clauses that are grammatically required early, even if they may continue to choose other alternatives when *-ing* clauses are optional.

The study has shown the importance of longitudinal design in studies of acquisition, which is a developmental phenomenon. There is thus a need for more longitudinal learner corpora. Such corpora can be queried using traditional corpus methods, but it is important to remember the value of close reading and a focus on individuals to get a true picture of development and its driving forces.

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