

Cross-linguistic influence in the acquisition of relative clauses by Norwegian learners of English

Hildegunn Dirdal

University of Oslo

hildegunn.dirdal@ilos.uio.no

Abstract

This paper reports on an exploratory study of cross-linguistic influence in the acquisition of relative clauses by young Norwegian learners of English, comparing L1 Norwegian and L2 English material from the TRAWL (Tracking Written Learner Language) Corpus to L1 English material from the GiG (Growth in Grammar) Corpus. Previous reports of cross-linguistic influence in this domain have usually involved language pairs that have very different relativization strategies. This study investigates whether similarities between relative clause systems may lead to more subtle effects in the choice of relativizer, the type of head nominal, the syntactic function of the relativized item, the extent of relativization from embedded clauses and the use of relative clauses in special constructions such as existentials and clefts. Although the material is limited, the study found traces of the Norwegian system in the learners L2 English, signalling that this is an area worth further investigation. The learners struggled with the choice between *who* and *which*, but used *that*/zero in a very similar way to their L1 English peers. The L2 English group also had slightly higher frequencies of relative clauses belonging to existentials and clefts, and where the relativized item stemmed from a further embedded clause. These results are consistent with a usage-based theory of second language acquisition, where learners are assumed to transfer features of constructions from their L1 when they are similar enough for them to make a cross-linguistic identification.

Keywords

Relative clauses, cross-linguistic influence, L2 acquisition, young learners, English–Norwegian contrastive differences.

Copyright © 2022 Author(s). This is an open-access article distributed under the terms of the Creative Commons CC BY-NC 4.0 License (<https://creativecommons.org/licenses/by-nc/4.0/>).

Nordic Journal of Language Teaching and Learning, Vol. 10, No. 2, 2022. ISSN: 2703-8629
<https://doi.org/10.46364/njltl.v10i2.1079>

1. Introduction

In a study of L2 English complexity development (Dirdal, 2022), positive cross-linguistic influence was found in the frequency with which Norwegian learners used finite adnominal relative clauses, such as (1), in their L2 English.

- (1) A global language is a language *that is spoken many places in the world* (student P01015, year 10)

Whereas Dirdal (2022) looked at overall frequencies, this study aims to investigate the cross-linguistic influence in more detail, considering aspects such as the use of different relativizers, the nature of the head nominal that is being modified, the syntactic function of the relativized item, relativization out of embedded clauses, and the use of relative clauses within clefts and existential constructions.

The study is grounded in a usage-based framework for the understanding of second language (L2) acquisition, where a central concept is ‘constructions’, understood as “form–meaning mappings, conventionalized in the speech community and entrenched as language knowledge in the learner’s mind” (Ellis, 2007, p. 78). Forms are paired with meanings, so that differences in form will signal differences in semantic function or discourse function (Goldberg, 2006, p. 9). Constructions are found at all levels of grammar, from morphemes, words and idioms to more abstract forms, such as argument structure patterns, the passive and indeed relative clauses (Goldberg, 2006, p. 5; Goldberg & Suttle, 2010, pp. 468–469). Speakers/writers can combine constructions freely as long as they do not conflict with each other, and the same expression will therefore usually represent several constructions at the same time (Goldberg, 2006, p. 10). Relative clauses will thus also represent for example particular transitivity patterns. Furthermore, they will contain within them constructions at lower levels, such as particular relativizers, and they may be used within other constructions, such as clefts and existentials.

Constructions are learnt through language use and emerge from experience of actual exemplars. This means that frequencies are important, and that more frequent and consistent patterns will be learnt faster and more easily. However, when learners encounter a second language, L1 patternings of forms and meanings are already entrenched in their minds and will interact with the new input, resulting in various types of cross-linguistic influence (see Ellis, 2007, pp. 80–83; Wulff & Ellis, 2018, pp. 47–50).

The article starts with a definition of the clause type in focus (Section 2) and a review of studies of second language acquisition of relative clauses (Section 3), followed by an outline of relevant contrastive differences between English and Norwegian (Section 4). The contrastive

differences form the basis for expectations of cross-linguistic influence, which are presented together with the method used in the study (Section 5). The results are presented and discussed in Section 6, before Section 7 concludes the article.

2. The relative clauses in focus in the present study

Before proceeding, it is necessary to clarify what kinds of clauses are in focus in this study. This is particularly important because the term *relative clause* has been used in different ways in the literature, denoting various sets of constructions.

Some linguists operate with primarily semantic definitions, e.g. Andrews (2007, p. 206): “A relative clause (RC) is a subordinate clause which delimits the reference of an NP by specifying the role of the referent of that NP in the situation described by the RC”. Such definitions are particularly useful in typological work because they allow the comparison of syntactically different structures in various languages (Keenan & Comrie, 1977, p. 63). This means that a range of formally different clauses within the same language will also fall under the definition, such as infinitive clauses, *-ing* clauses and *-ed* clauses in English, illustrated in (2 a-c).

- (2) a. the language *to speak at the conference*
- b. people *speaking the language*
- c. the language *spoken at the conference*

At the same time as they open up for different clause forms, definitions such as Andrews’s limit the scope to restrictive clauses, excluding a clause like (3a), which has traditionally been considered a type of relative clause. Reference grammars and other work on English relative clauses often include non-restrictive (or appositive) clauses such as (3a), as well as sentential and nominal (or free) clauses such as (3b) and (3c) (Quirk et al., 1985; Sag, 1997; Biber et al., 1999).

- (3) a. our own language, *which we speak fluently*
- b. He wanted to remain *who he was*.
- c. He wanted to remain who he was, *which he did*.

In descriptions of English and Scandinavian, relative clauses have traditionally been defined on the basis of more formal criteria. Defining characteristics found in reference grammars are an antecedent (usually a head noun) and an anaphoric element in the relative clause which links to the antecedent – a relative pronoun or a gap (e.g. Quirk et al., 1985, pp. 1244–1245; Biber et al.,

1999, p. 608; Huddleston et al., 2002, p. 1034; Faarlund et al., 1997, pp. 1047–1050). Nominal relative clauses pose a problem for this definition, however, as they do not have an antecedent for the relative pronoun to link to. Faarlund et al. (1997, p. 1058) call them “unbound relative clauses”. Quirk et al. (1985, p. 1244) say that they are “unique among relative clauses” in this respect, and Huddleston et al. (2002, p. 1036) concede that it makes them so different from other relative clauses that they treat them separately. Sentential relative clauses do have an antecedent, but the antecedent is the whole preceding clause, rather than a noun/pronoun.

The clauses in (2a-c) do have a nominal antecedent and can be considered as containing a gap that is linked to this antecedent. However, there are good reasons for investigating the acquisition of finite relative clauses separately from these. Recent research has shown that structurally different types of clauses serve different functions, are connected to different styles, and have different trajectories in language acquisition (see e.g. Biber et al., 2016; Biber et al., 2020; Durrant et al., 2020). Norwegian learners of English acquire *-ing* clauses from scratch in a very gradual fashion, whereas they use finite adnominal relative clauses earlier and much more frequently (Dirdal, 2021, 2022). The importance of specific form–function patterns in acquisition is also emphasized in usage-based and emergentist theories of language acquisition (see Section 1).

This article will thus focus on a restricted type of clause, namely finite adnominal relative clauses. These are structurally and functionally quite similar in English and Norwegian, as will be described in Section 4. The many similarities make cross-linguistic influence likely. From quite early on in second language research, it has been recognized that learners’ perceptions (conscious or subconscious) that languages are similar is important for their tendency to transfer properties from their L1 (e.g. Kellerman, 1983; Andersen, 1983), something which has received further support from more recent research (see Jarvis & Pavlenko, 2008, pp. 176–182 for an overview). Such transfer helps learners to acquire equivalent constructions in the L2, but may also lead to transfer of properties that the L2 constructions do not share.

3. Previous research on cross-linguistic influence in the acquisition of relative clauses

A large proportion of the studies of relative clause acquisition have been primarily concerned with testing proposed universals, such as the Noun Phrase Accessibility Hypothesis (e.g. Pavesi, 1986; Eckman et al., 1988; Hawkins, 1989; Doughty, 1991; Eckman, 2007; Yabuki-Soh, 2007; Jeon & Kim, 2007; Ozeki & Shirai, 2007), the Subject-Object Hierarchy Hypothesis (Hamilton, 1994), the Linear Distance Hypothesis (Tarallo & Myhill, 1983) and the Structural Distance

Hypothesis (O'Grady et al., 2003). However, there are also studies that report on cross-linguistic influence.

Languages may be so different in the way they use clauses to modify nouns that learners are led to avoid relative clauses in their L2. This was Schachter's (1974) conclusion in an early study comparing Chinese, Japanese, Arabic and Persian learners of English. The Chinese and Japanese learners, whose L1s have prenominal relative clauses, produced far fewer English relative clauses in their free compositions than the Arabic and Persian learners, whose languages have relative clauses to the right of the noun, like English. The order of relative clause and noun may also be transferred into another language. Matthews and Yip (2003) found transfer of the prenominal positions of Cantonese relative clauses into the English of bilingual children whose Cantonese was dominant.

An effect has also been found of the existence of resumptive pronouns in the relative clauses of learners' L1s. These are pronouns situated in the syntactic position of the relativized item (e.g. the man that I heard the news from *him*). Learners from languages with resumptive pronouns produce more of them in their L2 than learners from languages without such pronouns (Gass, 1979; Hyltenstam, 1984).

Most of the cross-linguistic influence reviewed so far has been found when the language pairs are quite different in their instantiation of relative clauses. In contrast to the negative transfer described above, similarities between relative clauses in the L1 and L2 may lead to quicker acquisition, and the frequencies with which relative clauses are used may have an effect on L2 production. Dirdal (2022) found that Norwegian schoolchildren in school year 10 (ages 14-15) used the various types of English subordinate clauses with lower frequencies than L1 English writers of a similar age, except for one type, namely relative clauses. As this was the only clause type which was more frequent in the learners' L1 Norwegian writing than in their peers' L1 English writing, cross-linguistic influence was seen as responsible for the high rates in the L2 English.

Although Norwegian and English relative clauses are similar in many respects, there are also differences (see Section 4). One of these is the possibility of relativizing out of embedded *wh*-clauses, i.e. indirect questions and relative clauses (see examples in Section 4.4). Recent acceptability studies have shown that Norwegian learners of English sometimes accept (ungrammatical) English sentences with such structures (Kush & Dahl, 2022), indicating that features of the Norwegian system are influencing their L2 English. In the present study, I will explore whether such L1 influence can be found even in the other areas where Norwegian and

English relative clauses differ, and whether effects on relativization out of embedded clauses can be found in production data as well.

4. Contrastive differences between English and Norwegian in the use of relative clauses

The structure and use of relative clauses are similar in English and Norwegian. Both languages have postnominal relative clauses without resumptive pronouns and with a similar range of relativizers. Relative clauses can be restrictive or non-restrictive and can be used in presentatives and clefts. However, there are differences in a number of areas: the preference for and stylistic value of different relativizers, restrictions on the use of relative clauses with certain types of antecedents/head nominals, whether certain syntactic functions are relativized, the types of embedded clauses out of which it is possible to relativize, and the frequency with which relative clauses are used in clefts and existentials. These differences will be described in turn below. All the examples in this section except example (15) are taken from the English–Norwegian Parallel Corpus (1994–1997), a corpus containing English and Norwegian original fiction and prose, as well as their translation into the other language (the glosses added to some of the examples are my own).

4.1 Relativizers

Both English and Norwegian have a relativizer that cannot be inflected – *som* in Norwegian and *that* in English. These are arguably subordinators rather than relative pronouns (Faarlund et al., 1997, p. 866; Huddleston et al., 2002, pp. 1056–1057). The relative subordinators can be omitted in certain syntactic positions, in which case we may talk of a zero relativizer. In addition, both languages have relative pronouns that are similar to interrogatives – *who(m)*, *which* and *whose* in English and *hvem* (‘who(m)’), *hvilken/hvilket/hvilke* (‘which’ in feminine/masculine, neuter and plural form) and *hvis* (‘whose’) in Norwegian¹ (see Biber et al., 1999, p. 608; Quirk et al., 1985, p. 366; Faarlund et al., 1997, pp. 1056–1057). Finally, we may add relative adverbs – *where*, *when* and *why* in English (Biber et al., 1999, p. 608) and *hvor* (‘where’) and *da* (‘when’) in Norwegian, when used in examples such as (4)–(6).² Examples (4) and (5) show original

¹ Such relative pronouns only exist in one of the written standards of Norwegian: Bokmål. Only Bokmål is considered here because it is the written standard of choice for the students contributing data to the study.

² Note that Faarlund et al. (1997, p. 1065) object to analysing such constructions as adnominal relative clauses, as the antecedent is not of the same category as the relativizer. They argue for treating them as headless relative clauses with a logical correlate.

Norwegian uses of *hvor* and *da*. In these cases, the published translations use similar constructions with *where* and *when*. The original use of *why* in example (6) does not have a Norwegian equivalent.

- (4) Vi hadde kommet til et sted **hvor** stien delte seg. (BV2N.2.1.s315)
Translation: We had reached a place **where** the path forked.
- (5) ... helt fra den tid **da** de første immigranter slo seg ned på disse kanter.
 (TG1N.5.6.s11)
Translation: ... from the time **when** the first immigrants settled in this area.
- (6) ... and another reason **why** the BDA chose his farm as a showcase.
 (LT1E.2.s112)
Translation: ... og nok en grunn til at BDA ville vise fram gården hans.
Gloss: ‘... and further a reason for that BDA would show forth farm his’

Norwegian also has compounds consisting of *hvor* (‘where’) and a preposition (Faarlund et al., 1997, p. 1057), which may correspond to the use of preposition + *which* in English when the antecedent is non-human, as in (7).

- (7) Full seilføring teller 27 seil, **hvorav** 15 skværsail og resten stagsail.
 (KT1N.1.s28)
Translation: Fully rigged, she carries twenty-seven sails, fifteen **of which** are square sails and the rest staysails.

The main difference between English and Norwegian with respect to relativizers pertains to which of them are preferred and thus more frequent, but also to some extent the stylistic meaning they express. The subordinator *som* (and the zero variant) is much more strongly preferred in Norwegian than *that*/zero is in English. Of the four text types investigated by Biber et al. (1999), it is only conversation that has a higher frequency of *that*/zero compared to *wh*- relativizers. In fiction, the balance is more even, and in news and academic prose, *wh*- relativizers outnumber *that*/zero, reflecting stylistic associations: *wh*- relativizers are considered more literate and *that* more colloquial (1999, pp. 610–612). The Norwegian *hv*- relativizers are also associated with a written style (Faarlund, 1997, p. 1056), but in addition they are felt to be conservative and old-fashioned. This leads to a clear dominance of the relativizer *som*, whose frequency is further boosted by the fact that it can freely be used in non-restrictive relative clauses, as illustrated in example (8).

- (8) Og Jenny, som heller ikke hadde glemt suppeterrinen, lovet å komme på onsdag som vanlig. (BV1N.3.s134)

Translation: And Jenny, who had not forgotten about the soup tureen either, had promised to come on Wednesday as usual.

That, on the other hand, very rarely occurs in non-restrictive clauses (Biber et al., 1999, p. 615).

4.2 Restrictions on head nominals

In Norwegian, relative clauses can follow personal pronouns (Faarlund et al., 1997, p. 339). This use is illustrated in (9)–(11).

- (9) Mogens Klint, sa han som kalte seg Joseph Frost (FC1N.2.s115)

Gloss: Mogens Klint, said he that called himself Joseph Frost

Translation: Mogens Klint, said the man who called himself Joseph Frost

- (10) Hånden hans var varm og hard og sterk og ganske ulik den som hadde trykket min i hastig velvilje for noen timer siden. (KF2N.1.2.s8)

Gloss: The.hand his was warm and hard and strong and quite different it/that that had pressed mine in hasty well-will for some hours ago.

Translation: His handshake was warm and hard and firm, quite unlike the one I had received in a hasty goodbye a few hours before.

- (11) Nå stopper en herre med paraply ved avisgutten; han er blitt interessert i det som ropes, denne umulige lyden. (EFH1N.2.s150)

Gloss: Now stops a gentleman with umbrella by the.newsboy; he is become interested in it/that that is.shouted, this impossible sound.

Translation: Then a man with an umbrella stopped by the newsboy, apparently interested in what was being shouted so incomprehensibly.

In English, relative clauses cannot attach to *they* or *it*, and the use with other personal or demonstrative pronouns is archaic or very formal (Quirk et al., 1985, p. 1247). As illustrated above, the equivalent to a Norwegian pronoun + relative clause can have a full noun phrase (9) or the prop-word *one* (10) as antecedent, or a nominal relative clause may be used (11). Nominal relative clauses with *hv-* words still exist in Norwegian too, although personal reference with *hvem* is no longer possible, the construction with *den som* having taken over completely (Faarlund et al., 1997, p. 1060).

Interestingly, Norwegian uses the relative subordinator *som* even after the *hv*- word when it has a subject function in the relative clause, as shown in (12).

(12) ... og ellers utføre hva som måtte være nødvendig. (EFH1N.3.s93)

Gloss: ... and otherwise do what that must be necessary.

Translation: ... and otherwise do whatever was necessary.

This parallels the situation in indirect questions, where *som* is used after question words with subject function, as in (13).

(13) ... da han ble spurt om hvem som ringte, la han bare på røret. (FC1N.2.s245)

Gloss: ... when he was asked about who that rang, laid he just on the receiver.

Translation: ... when he was asked who was ringing, he just put the receiver down.

This makes it look as if Norwegian adnominal relative clauses can have interrogative pronouns as antecedents. However, Faarlund et al. treat constructions such as the one in (12) as nominal/headless relative clauses and constructions such as the one in (13) as indirect questions. They can be distinguished by the potential for the first type to be paraphrased with *den/det som*, and the second to be clefted (1997, p. 990): *da han ble spurt om hvem det var som ringte* (gloss: when he was asked about who it was that rang).

4.3 Syntactic positions of the relativized entity in the relative clause

The *wh*- relativizer or the gap can have a number of different syntactic positions in the relative clause. In an influential article, Keenan and Comrie (1977) suggest that there is a hierarchy of syntactic positions that can be relativized in the world's languages. Subjects can always be relativized, but otherwise languages vary in how many functions are relativizable. The hierarchy is implicational, so that if it is possible to relativize a particular position, all positions to the left in the hierarchy in (14) are also relativizable.

(14) Subject > direct object > indirect object > oblique (complement of preposition) > genitive > object of comparison

All of these positions can be relativized in both English and Norwegian, but relativized objects of comparison, like in (15), seem to be objectionable to some speakers of both languages (Berggreen & Tenfjord, 1999, p. 97; Izumi, 2003, p. 287).

- (15) Han tapte til en gutt han var bedre enn.
He lost to a boy he was better than.

As we saw in examples (4)–(6) in 4.1, both Norwegian and English also have the possibility of relativizing adverbials, although Norwegian can only relativize place and time adverbials, not reason adverbials (see also Hagen, 2002, p. 253).

Apart from the lack of relativized reason adverbials, the main difference in this area seems to be the actual use of relativized genitives, which are becoming increasingly rare in Norwegian (Berggreen & Tenfjord, 1999, p. 79). This is connected to the infrequent use of most *hv*-relativizers, with their marked stylistic associations, as explained in 4.1, and the fact that the subordinator *som* cannot be used to relativize this position (see example 16).

- (16) Hovedloven her var lov av 10. april 1915 nr 3 om barn hvis foreldre ikke har
«indgaat egteskap med hverandre». (LSPL1N.1.5.s29)

Translation: The main statute was the Act of 10 April 1915 No. 3 on children whose parents “have not entered into marriage with each other”.

*... barn som foreldre ikke har «indgaat egteskap med hverandre»

4.4 Relativization out of embedded clauses

Relativization from embedded questions and from embedded relative clauses is ungrammatical in English, but is possible in Norwegian (Hawkins, 1999; Kush et al., 2021; Kush & Dahl, 2022, see also Allwood, 1982 for Swedish). Example (17) from the ENPC shows relativization out of an indirect question in Norwegian.

- (17) Hun ser på mosen og konglene og bregnene og alle plantene som hun ikke vet hva
heter (BV2N.1.2.s72)

Gloss: She looks at the.moss and the.pine.cones and the.bracken and all the.plants that she not knows what are.called

Translation: She looks at the moss and the pine cones and the bracken and all the plants she doesn't know the name of

Not all such constructions are equally acceptable. Hawkins (1999, pp. 269–273) argues that they are more difficult to process than relativization out of other types of subordinate clauses even in the languages that allow them, and that they are more acceptable in contexts where additional syntactic or semantic processing is reduced. Hawkins also notes that resumptive pronouns may

make such structures (which include relativization out of other complex NPs than those with relative clauses) more acceptable even in English, so that “*I met the man_i who_i I had almost forgotten the fact that he_i was our prime minister is not too bad*” (1999, p. 265). The details of the factors that make such structures more or less acceptable is outside the scope of this paper, however, and the main contrastive point to note is the existence of relativization out of embedded questions and relative clauses in Norwegian compared to its ungrammaticality in standard English.

4.5 The use of relative clauses in existential constructions and clefts

Both English and Norwegian use relative clauses in existentials and clefts, as shown in (18) and (19).

- (18) Det er vel kanskje få i dag som er klar over hvordan det står til med Leonardos skriftspråk. (ANR1N.1.2.s86)

Translation: Even today there may be only a few persons who are aware of Leonardo’s peculiar orthography and handwriting.

- (19) Det er først og fremst denne familien som har skapt Knutslykkja slik vi møter den på Maihaugen. (AOH1N.4.4.s20)

Translation: ... it was really this family who made Knutslykkja what it is today at Maihaugen.

However, comparative studies have shown great differences in the frequencies of such constructions in the two languages. In a selection of original works from the English–Norwegian Parallel Corpus, Ebeling (2000) found 1214 English v. 2067 Norwegian existentials in material of equal sizes, i.e. 509,972 v. 487,918 words.³ The difference is related to the use of a much larger range of verbs in the Norwegian existentials (2000, p. 131, 263). In addition to the core existential verbs *bli* (‘become’), *finnes* (‘exist’) and *være* (‘be’), Ebeling found verbs of appearance, motion and stance.⁴ Some of the existentials contained relative clauses in both

³ A few of the texts currently included in the English–Norwegian Parallel Corpus were not used in Ebeling’s study as the corpus was not finalized when he started his doctoral research (Ebeling, 2000, p. 29).

⁴ The range of possible verbs is even larger than this. Sveen argues that the crucial feature is perceptibility (in addition to intransitivity): “an essential requirement is that the verb denotes a perceptible event or activity” (1996, p. 104). This means that unergative verbs (e.g. *arbeide* or *spise*) may appear in this construction in Norwegian as long as the context is right. Although he did not find unergative verbs in his material, Ebeling (2002) acknowledges that Sveen’s examples sound idiomatic.

languages, but the percentage was somewhat higher in Norwegian, and the difference was greater in absolute numbers since Norwegian had more existentials overall. English, on the other hand, also used *-ing* and *-ed* clauses in existentials, whereas non-finite clauses were rare in the Norwegian material. Norwegian translators often used relative clauses when translating English existentials with such clauses, and, as might be expected, this was also the main strategy in the translation of English existentials with relative clauses. Although the same applied when going in the other direction, English translators more often than Norwegian ones opted for a non-existential construction, as exemplified in (20) (Ebeling's example 5.52). This happened particularly with relativized subjects (42.9% of all cases), and Ebeling suggests that it may be related to a greater acceptance for new information in initial/preverbal position in English (Ebeling, 2000, pp. 148–151).

(20) Men det var noen som så på henne. (THA1.27.s15)

Gloss: But there was someone who looked at her.

Translation: But someone was looking at her.

A similar suggestion is made by Gundel (2002) to account for her findings that only 28% of the 32 clefts in the first 78 pages of *Sofies Verden* by Jostein Gaarder had been rendered with an equivalent construction in the English translation *Sophie's World* by Paulette Møller. She suggests that it is related to Norwegian having “a stronger general preference for mapping information structure directly onto syntactic structure” and that clefts make it possible to keep the focus/comment material, which is relationally new, in a postverbal position (2002, pp. 125–126).

5. Methods

The overarching research question for this exploratory study is the following: Do we find cross-linguistic influence on the relative clauses produced by Norwegian learners of English, reflecting properties of Norwegian relative clauses? In order to answer such a question, it is important to compare the learners' L2 English to L1 English by students of a similar age, to establish whether the features of their relative clauses are due to general developmental processes or are particular to the L2 learners. It is also important to compare the learners' L2 English to their own L1 Norwegian production, to see whether similarities between the two can explain the ways in which their L2 English diverges from L1 English. It is only their own internalized L1 system (not an ideal norm) that can influence the learners' other languages, and children do not necessarily produce language of exactly the same nature as that described in reference grammars.

Based on the differences in the systems described in Section 4, we might expect learners to rely more on the invariant *that*/zero than on *wh*- relativizers, to extend the use of *that*/zero to non-restrictive clauses, and to have problems with the choice between *wh*- relativizers. Compared to their L1 English peers, they might more frequently use personal pronouns as heads of relative clauses, avoid relativizing genitives/possessives, relativize out of *wh*- clauses, and more frequently use relative clauses in existentials and clefts.

To investigate these issues, the present study takes a closer look at finite adnominal relative clauses identified in the material used for the study on complexity development referred to in Section 3 above (Dirdal, 2022), a case study of five focal students who have contributed texts to the TRAWL (Tracking Written Learner Language) Corpus. The TRAWL Corpus is a longitudinal corpus containing texts of various genres written by Norwegian schoolchildren as part of normal schoolwork (homework, school writing or tests) in L1 Norwegian, L2 English and L3 French, German and Spanish (see Dirdal et al., 2022). All the five focal students have contributed English texts to the corpus, and three of them also Norwegian texts. All of them have Norwegian as their L1 and none of them have lived abroad. Where appropriate, the individual students will be referred to using the unique student codes they have received in the TRAWL Corpus: P01002, P01007, P01015, P01029 and P01032 respectively. Relative clauses produced by these five students in year 10 (only from non-narrative texts⁵) will be investigated and compared with the relative clauses found in the L1 English writing by 14 British students from the GiG (Growth in Grammar) Corpus (Durrant and Brenchley, 2018). The GiG Corpus is a pseudo-longitudinal corpus that contains text written by British schoolchildren in years 2, 4, 6, 9 and 11, and the students chosen for comparison with the L2 learners are from year 9.⁶ Just like the TRAWL Corpus, the GiG corpus contains texts written at/for school rather than elicited by the corpus builders. Table 1 shows the size of the material and the number of relative clauses identified.

⁵ This limitation was imposed in the previous longitudinal study of complexity development (Dirdal 2022) because of substantial differences in the subordination rates between narrative and non-narrative texts and the uneven production of these two text types over time.

⁶ In Dirdal (2022, p. 92), I debated the question of whether to compare the Norwegian year 10 students with British students from year 9 or year 11. British children start school a year earlier than Norwegian children, so that the British students in year 11 would be of the same age as the Norwegian learners. However, they would have one more year of schooling. In addition, it was found that the overall subordination rates of the students in year 9 were more similar to those of the Norwegian students.

Table 1: The size of the material used for the present study

	L1 Norwegian	L2 English	L1 English
Number of words	4,074	14,590	4,983
Number of relative clauses	99 ⁷	154	41 ⁸
Relative clauses per 100 words	2.4	1.1	0.8

The relative clauses were coded for animacy (human/non-human) and syntactic function of the relativized item and for type of relative clause (restrictive, non-restrictive, existential, cleft), and the head nominals were divided into the categories proper nouns, common nouns, personal pronouns and other pronouns, in order to investigate the issues described above.

6. Results

Sections 6.1–6.5 below present the results relating to each of the areas for which differences were reviewed in Sections 4.1–4.5. The various findings are then related to each other and to the overall research question in the discussion in Section 6.6.

6.1 Choice of relativizers

In their L1, the Norwegian students used *som* and zero exclusively, *som* in 67% and zero in 33% of their relative clauses, confirming the dominance of the relative subordinator in Norwegian. The age of the students also makes it unlikely that they would write in a style warranting the use of *hv-* relativizers.

Since the input that students of English are exposed to contains several different relativizers, they would be unlikely to completely ignore *wh-* relativizers. There was only one student (P01032) who did not use *wh-* relativizers at all. Still, *that/zero* was the most frequently used relativizer in the L2 material. However, it was equally frequent in the L1 English data. The Norwegian students had a very similar distribution of choices as their British peers (Table 2), with about two thirds of their relative clauses containing *that/zero* and about a third containing

⁷ In addition, the L1 Norwegian material contained a relative clause that might be adnominal, but is more likely sentential: *Forfatteren har også tatt i bruk noen slangord, som gjør teksten blir lettere å like.* ('The author has also taken in use some slang words, which make(s) the text becomes easier to like').

⁸ The L1 English material also contained a clause that might be an adnominal relative clause with the non-standard *what* as relativizer, but might alternatively be a nominal relative clause even though it is coordinated to an adnominal relative clause: *That they shouldn't be out at a low pay job but at home revising for school exams which will help them go to college then university to then be qualified to a higher paid job which they can enjoy and what they've studied for.*

wh- relativizers. *Who* was the most common *wh-* relativizer for both groups and none of them used *whom* or *whose*.

Table 2: Choice of relativizers in L2 and L1 English

	L2 English	L1 English
<i>That</i>	55 (36%)	12 (29%)
<i>Zero</i>	45 (29%)	14 (34%)
<i>Who</i>	28 (18%)	7 (17%)
<i>Whom</i>	-	-
<i>Which</i>	6 (4%)	4 (10%)
<i>Whose</i>	-	-
<i>Where</i>	13 (8%)	3 (7%)
<i>When</i>	1 (1%)	1 (2%)
<i>Why</i>	6 (4%)	-
Total	154 (100%)	41 (100%)

The L2 learners were also quite accurate in their choices, although they would be helped by the fact that most of their relative clauses were restrictive, allowing the use of *that/zero*. The rule that the relativizer can be omitted only in non-subject positions is the same for Norwegian and English, and none of the learners used zero when the relativized entity was the subject of the relative clause.

Whereas *som* can be used in non-restrictive relative clauses in Norwegian (see 4.1), this does not pertain to *that* in English. The L2 material contained only nine relative clauses that were clearly non-restrictive, all produced by two of the students. In one of these, example (21), the student had chosen *that*; the rest contained *wh-* relativizers as required in English, as in example (22).

(21) British invasion [invaders] that now are the most powerful people in Australia celebrate this day, to celebrate their land. (P01002)

(22) ... because in the period of 17th to the 19th century, Great Britain who spoke English become such a big colonial power. (P01002)

In the L1 English material, the two clearly non-restrictive relative clauses had *wh-* relativizers, and so did the two clauses that could be either restrictive or non-restrictive.

The human/non-human distinction is also relevant for the choice between relativizers in English. Table 3 shows the distribution of relativizers for human and non-human referents, (leaving aside the adverbial uses of *where*, *when* and *why*, which were only used with non-human referents in both groups). Both L2 and L1 writers showed a stronger tendency to use *that*/zero with non-human than with human referents. Furthermore, the L2 learners had the same distribution for human referents as the L1 writers, using *who* half of the time, and they never overused *which* with human referents. However, they did sometimes use *who* with non-human referents, in contrast to the L1 users.

Table 3: Relativizers with human v. non-human referents

	Human referents		Non-human referents	
	L2 English	L1 English	L2 English	L1 English
<i>That</i> /zero	21 (51%)	6 (46%)	79 (85%)	20 (83%)
<i>Who</i>	20 (49%)	7 (54%)	8 (9%)	-
<i>Which</i>	-	-	6 (6%)	4 (17%)
Total	41 (100%)	13 (100%)	93 (100%)	24 (100%)

Half of the cases where *who* has been used with non-human referents have head nouns that can be seen as referring indirectly to human beings: *countries* (twice), *NATO member* and *Great Britain*. One example can be seen in (22) above, and a further one in (23) below.

- (23) The Commonwealth of nations is a group of countries who didn't reject the british influence entirely, and are still having many british laws and traditions. (P01029)

In the rest of the cases, shown in (24 a-d), there is a greater clash between referents and choice of relativizer, as the nouns cannot be seen as indirectly or notionally referring to human beings.

- (24) a. The nationalism is an ideology who is about that every country should have their own geographical area. (P01029)
 b. Some examples of words who were coming from Danish and Norwegian, are law and murder. (P01029)
 c. Mandarin Chinese who is the second most spoken language for example is much harder to learn. (P01002)
 d. It is important to manage earning money in a good job, so you can get a family and all the needs who follow with a family. (P01002)

6.2 The nature of the nominal head

The main difference between English and Norwegian with respect to the head nominals of relative clauses is the acceptance and frequency of personal pronouns as heads in Norwegian. The difference was confirmed in the L1 material, where 13% of Norwegian heads consisted of personal pronouns, compared to the absence of this pattern in L1 English (see Table 4).

Table 4: Head nominals

	L1 Norwegian	L2 English	L1 English
Proper noun	-	3 (2%)	-
Common noun	68 (69%)	135 (88%)	35 (85%)
Personal pronoun	13 (13%)	1 (1%)	-
Other pronoun	10 (10%)	15 (10%)	6 (15%)
Nominalized adjective	6 (6%)	-	-
Mentioned item	2 (2%)	-	-
Total	99 (100%)	154 (100%)	41 (100%)

The material gives scant evidence that learners transfer the tendency to use personal pronouns with relative clauses. Only one item was found (example (25)).

- (25) ... it is pretty hard for us who lives in a rich country with free education, sick money, health insurance and much more to understand the circumstances these people are living in. (P01002)

The other pronouns used are indefinite pronouns and quantifiers – *noe* ('something'), *noen andre* ('someone else'), *alt* ('all') and *ingen* ('nobody') in Norwegian; *something*, *everything*, *anybody*, *anyone*, *one*, *no one* and *many* in L2 English; and *someone*, *anyone* and *all* in L1 English.

6.3 Syntactic position of the relativized item in the relative clause

As predicted, the L2 learners did not relativize genitives. However, neither did the L1 English users. It might be that the use of *whose* belongs to a style acquired later by L2 and L1 users alike.

6.4 Relativization out of embedded clauses

There were no examples of relativization out of *wh*- clauses in the material. However, relativized items that came from another type of clause embedded in the relative clause only occurred in the

Norwegian and L2 English data. This may point to cross-linguistic influence, if such constructions are more frequent in Norwegian than in English. Engdahl and Ejerhed (1982, p. 10) write that extraction from embedded clauses “is pervasive enough to have received indigenous grammatical terms” in the Scandinavian languages. In the Norwegian reference grammar the phenomenon is called “setningsknote” (‘sentence knot’), and a section of the chapter on subordinate clauses is devoted to such constructions (Faarlund et al., 1997, pp. 1095–1106). Although “setningsknuter” involve other types of extractions in addition to relativization, it might be that the general frequency of such constructions leads to more complex relatives too. Contrastive studies are needed to establish whether this is the case.

In any case, the numbers of such complex relatives found in the present material are extremely low (three instances in the Norwegian and four in the L2 English material), so conclusions about cross-linguistic influence have to be very tentative. In the Norwegian examples, shown in (26), there are two cases of the relativization of the subject of an embedded *that*-clause and one example of the relativization of the direct object of an infinitive clause.

- (26) a. En annen sak [jeg syns [__ bør få litt oppmerksomhet og bør debatteres]] er den sterke befolkningsveksten på jorden. (P01002)
Gloss: An other thing [I think [__ should get a.little attention and should be.debated]] is the strong population.growth on the.earth.
- b. Ganske alvorlige saker [som er viktig [at __ får oppmerksomhet og blir omtalt slik at det kan engasjere folk til å gjøre en innsats for eventuelle endringer i samfunnet]]. (P01002)
Gloss: Quite serious things [that are important [that __ get attention and are discussed so that it can engage people to to do an effort for eventual changes in the.society]]
- c. ... du kan også skrive hvilke språk du snakker og andre ting [du er god til [å gjøre __.]] (P01007)
Gloss: ... you can also write which languages you speak and other things [you are good to [to do __]

The relativized entities in the L2 English examples are also mainly the subjects of *that*-clauses, in one case the subject predicative (27a).

- (27) a. They checked all my id and asked me a lot of questions about myself so they could make sure I was the person [I said [I was __]]. (P01015)
- b. How would it go with the countries [we didn't know [__ exist]]? (P01029)
- c. I think it is a good thing that the countries can meet countries [they didn't know [__ exist]] and get to know each other's countries and cultures. (P01029)
- d. We walked through four or five forests, and along a desolate road [that I felt [__ never got to the end]]. (P01032)

6.5 Types of relative clauses

Restrictive relative clauses dominate in all the groups. In some cases, it is difficult to tell whether a clause is supposed to be restrictive or non-restrictive, especially since young writers often have erratic punctuation. Table 5 has a separate row for the uncertain cases (“Restr./non-restr.”).

Table 5: Types of relative clauses

	L1 Norwegian	L2 English	L1 English
Restrictive	72 (73%)	127 (82%)	36 (88%)
Non-restrictive	5 (5%)	9 (6%)	2 (5%)
Restr./non-restr.	1 (1%)	11 (7%)	2 (5%)
Existential	11 (11%)	5 (3%)	1 (2%)
Cleft	10 (10%)	2 (1%)	-
Total	99 (100%)	154 (100%)	41 (100%)

There were several examples of relative clauses belonging to existentials and clefts in the Norwegian material, amounting to 21% of all the Norwegian relative clauses. Only one example was found in the L1 English material (28).

- (28) Shakespeare may have done this to show the audience that there is going to be a rival that may cause a life or death situation.

The percentage of relative clauses from existentials and clefts was only slightly higher in the L2 material than in the L1 material: seven examples among 154 clauses. Some of them are illustrated in (29).

- (29) a. It wasn't the walking that was the most exhausting ... (P01032)
- b. ... so there are many that cannot afford to educate themselves. (P01002)

c. But in a big country like England I think that if the military service is optional it⁹ will be enough people that want to go to the army. (P01015)

When the numbers are as low as this and the total material limited, conclusions will, again, have to be tentative. The slightly higher percentage in the L2 material may mean that cross-linguistic influence is at work, but more data would need to be checked before this can be said with any certainty.

6.6 Discussion

The overarching research question for this study was whether we find cross-linguistic influence on the relative clauses produced by Norwegian learners of English, reflecting properties of Norwegian relative clauses. Overall, the students are very successful in their acquisition of relative clauses. This success is probably in itself a result of cross-linguistic influence, since relative clauses share so many features in the two languages. With such a construction already established in their L1, the learners have a head start with respect to learning a similar construction in the L2. But if the learners have made a cross-linguistic identification between the Norwegian and English relative clauses, we might also expect to see influence of the features that are different.

Real mistakes were few and there was little over- or underuse of particular forms and structures compared to the L1 English users. However, there were traces of Norwegian usage in several areas, which together may point to cross-linguistic influence, especially in light of the fact that such influence has been found in a recent study of Norwegian learners of English focusing on acceptability ratings of relativization out of *wh*- clauses (Kush & Dahl, 2022). The learners in the present study had slightly higher frequencies of relative clauses used in existentials and clefts, and extraction of the relativized entity from an embedded clause seemed to be a pattern used only in L1 Norwegian and L2 English. There were examples of the over-extension of *that* to non-restrictive clauses and the use of a pronominal head, although these were single examples only. In a small-scale study like this, it is difficult to tell whether that is because of the low number of relative clauses (especially non-restrictive ones) or whether these examples are simply very unusual.

⁹ Norwegian learners of English sometimes confuse *it* and *there*. The formal subjects of both existentials and clefts (as well as other anticipatory subjects) can have the same form (*det*) in Norwegian.

The clearest difference from L1 English users was found in the choice between *wh*-relativizers, the L2 learners using *who* as often as *which* with non-human referents. The difficulty with *wh*-relativizers might be connected to the rarity of the Norwegian equivalents, which the learners in fact never used in their Norwegian. It is interesting to note that there were no examples of *which* used with human referents. Future research should investigate whether this is a real asymmetry, and what the reason for it might be. *Who* is slightly more frequent than *which* in conversation and news, but the opposite is the case for fiction and academic prose (Biber et al., 1999, pp. 610–612). It could be that the learners are more exposed to the two former genres. Both the L2 learners and the L1 users of English used relativizers with a frequency distribution that was very similar to the one reported for conversation in Biber et al. (1999), with *that* and zero making up about two thirds of the instances, and *who* being more frequent than *which*, followed by *where*. *Whom*, *whose*, *when* and *why* are all very infrequent in conversation, and were infrequent or absent in the students' writing.

In addition to the tentative evidence of cross-linguistic influence, this study also offers additional support from young writers for the contrastive differences found when comparing reference grammars or pointed out in studies using data from published sources of expert L1 writing, such as the data contained in the English–Norwegian Parallel Corpus. The contrastive differences were clearly visible in the comparison of L1 Norwegian and L1 English: the overall dominance of the relative subordinator in Norwegian, but not English; the use of personal pronouns as heads of 13% of the Norwegian relative clauses and none of the English ones; and 21% of the Norwegian relative clauses stemming from existentials and clefts, compared to 1% of the English relative clauses.

The L2 learners considered in this study were from year 10 and had had English classes since they started school. It might be worth looking at the development at earlier stages, which data from the TRAWL Corpus would indeed allow us to do. The small amount of data from each student in the present study did not allow consideration of individual differences, but this may also be something that it is worth looking at – P01032 used only *that* and zero, and it would be interesting to find out whether this is indeed representative of her language and whether other students show a similar preference. Jarvis (2000) argues that intra-group homogeneity is one of the signs that something is due to L1 influence, since learners with the same L1 should evidence the same patterns if the L1 is responsible. There must, of course, be common trends between learners from the same L1 for us to assume that cross-linguistic influence is at work, but research has concluded that it is the subjective recognition of similarities between languages that matters (Jarvis & Pavlenko, 2008, p. 179). This opens up the possibility that some learners (consciously

or subconsciously) recognize or assume slightly different similarities, and that cross-linguistic influence may evidence individual differences. Furthermore, it may be that some learners avoid difficult structures, as suggested by Schachter (1974).

Jarvis (2000) also mentions inter-group heterogeneity as evidence pointing to L1 influence. Such heterogeneity may strengthen evidence from intra-group homogeneity coupled with similarities between the L1 and the interlanguage of the learners. This study has not compared the Norwegian learners with learners whose L1 differs with respect to the features investigated. This dimension is worth including in future studies in order to more carefully distinguish between effects due to the L1 and effects common to all L2 learners.

7. Conclusion

This small-scale exploratory study offers evidence of a slightly different type of cross-linguistic influence in the acquisition of relative clauses than what has been reported before, influence from subtle differences in frequency and choice between languages that are very similar. Norwegian learners of English seem to struggle with English *wh*- relativizers although they master most aspects of the use of *that*/zero, which is similar to the dominant relativizer in Norwegian. They also show a slightly higher tendency to use relative clauses in existentials and clefts and to relativize entities from clauses further embedded in relative clauses.

However, the material used is limited and the study should be followed up by larger-scale studies in order to confirm (or disconfirm) the findings. Future studies should also look at younger learners to find out whether cross-linguistic influence in this area is more visible at earlier stages.

References

- Allwood, J. (1982). The Complex NP Constraint in Swedish. In E. Engdahl & E. Ejerhed (Eds.), *Readings on unbounded dependencies in Scandinavian languages* (pp. 15–32). Universitetet i Umeå.
- Andersen, R. (1983). Transfer to somewhere. In S. Gass & L. Selinker (Eds.), *Language transfer in language learning* (pp. 177–201). Newbury House.
- Andrews, A. D. (2007). Relative clauses. In T. Shopen (Ed.), *Language typology and syntactic description, vol. II: Complex constructions* (2nd ed., pp. 206–236). Cambridge University Press.
- Berggreen H., & Tenfjord, K. (1999). *Andrespråkslæring*. Gyldendal.
- Biber, D., Gray, B., & Staples, S. (2016). Predicting patterns of grammatical complexity across language exam task types and proficiency levels. *Applied Linguistics*, 37(5), 639–668. <https://doi.org/10.1093/applin/amu059>

- Biber, D., Gray, B., Staples, S., & Egbert, J. (2020). Investigating grammatical complexity in L2 English writing research: Linguistic description versus predictive measurement. *Journal of English for Academic Purposes*, 46, 100869. <https://doi.org/10.1016/j.jeap.2020.100869>
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman grammar of spoken and written English*. Longman.
- Dirdal, H. (2021). L2 development of *-ing* clauses: A longitudinal study of Norwegian learners. In P. Pérez-Paredes & G. Mark (Eds.), *Beyond concordance lines: Corpora in language education* (pp. 75–96). John Benjamins.
- Dirdal, H. (2022). Development of L2 writing complexity: Clause types, L1 influence and individual differences. In A. Leńko-Szymańska & S. Götz (Eds.), *Complexity, accuracy and fluency in learner corpus research* (pp. 81–114). John Benjamins.
- Dirdal, H., Hasund, I. K., Drange, E.-M., Vold, E. T., & Berg, E. M. (2022). Design and construction of the Tracking Written Learner Language (TRAWL) corpus: A longitudinal and multilingual young learner corpus. *Nordic Journal of Language Teaching and Learning*, 10(2), 115–135. <https://doi.org/10.46364/njltl.v10i2.1005>
- Doughty, C. J. (1991). Second language instruction does make a difference: Evidence from an empirical study of SL relativization. *Studies in Second Language Acquisition*, 13(4), 431–469. <https://www.jstor.org/stable/44488390>
- Durrant, P., & Brenchley, M. (2018). *Growth in Grammar Corpus*. Available from gigcorpus.com (registration required – contact Philip Durrant for access details: p.l.durrant@exeter.ac.uk).
- Durrant, P., Brenchley, M., & Clarkson, R. (2020). Syntactic development across genres in children’s writing: The case of adverbial clauses. *Journal of Writing Research*, 12(2), 419–452. <https://doi.org/10.17239/jowr-2020.12.02.04>
- Ebeling, J. (2000). *Presentative constructions in English and Norwegian: A corpus-based contrastive study*. Acta Humaniora.
- Eckman, F. R. (2007). Hypotheses and methods in second language acquisition: testing the noun phrase accessibility hierarchy on relative clauses. *Studies in Second Language Acquisition*, 29(2), 321–327. <https://www.jstor.org/stable/44487154>
- Eckman, F. R., Bell, L., & Nelson, D. (1988). On the generalization of relative clause instruction on the acquisition of English as a second language. *Applied Linguistics*, 9(1), 1–20. <https://doi.org/10.1093/applin/9.1.1>
- The English-Norwegian Parallel Corpus* (1994–1997), Dept. of British and American Studies, University of Oslo. Compiled by Stig Johansson (project leader), Knut Hofland (project leader), Jarle Ebeling (research assistant), and Signe Oksefjell (research assistant). <http://www.hf.uio.no/ilos/english/services/omc/enpc/>
- Ellis, N. C. (2007). The associative-cognitive CREED. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition: An introduction* (pp. 77–95). Erlbaum.
- Engdahl, E., & Ejerhed, E. (1982). Introduction. In E. Engdahl & E. Ejerhed (Eds.), *Readings on unbounded dependencies in Scandinavian languages* (pp. 7-13). Universitetet i Umeå.

- Faarlund, J. T., Lie, S., & Vannebo, K. I. (1997). *Norsk referansegrammatikk*. Universitetsforlaget.
- Gass, S. (1979). Language transfer and universal grammatical relations. *Language Learning*, 29(2), 327–344. <https://doi.org/10.1111/j.1467-1770.1979.tb01073.x>
- Goldberg, A. (2006) *Constructions at work: The nature of generalization in language*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199268511.001.0001>
- Goldberg, A., & Suttle, L. (2010). Construction grammar. *WIREs Cognitive Science*, 1(4), 468–477. <https://doi.org/10.1002/wcs.22>
- Gundel, J. K. (2002). Information structure and the use of cleft sentences in English and Norwegian. In H. Hasselgård, S. Johansson, B. Behrens & C. Fabricius-Hansen (Eds.), *Information structure in a cross-linguistic perspective* (pp. 113–128). Rodopi.
- Hagen, J. E. (2002). *Norsk grammatikk for andrespråkslærere*. Gyldendal.
- Hamilton, R. (1994). Is implicational generalization unidirectional and maximal? Evidence from relativization instruction in a second language. *Language Learning*, 44(1), 123–157. <https://doi.org/10.1111/j.1467-1770.1994.tb01451.x>
- Hawkins, J. A. (1999). Processing complexity and filler-gap dependencies across grammars. *Language*, 75(2), 244–285. <https://www.jstor.org/stable/417261>
- Hawkins, R. (1989). Do second language learners acquire restrictive relative clauses on the basis of relational or configurational information? The acquisition of French subject, direct object and genitive restrictive relative clauses by second language learners. *Second Language Research*, 5(2), 156–188. <https://www.jstor.org/stable/43104399>
- Huddleston, R., Pullum, G. K., & Peterson, P. 2002. Relative constructions and unbounded dependencies. In R. Huddleston & G. K. Pullum (Eds.), *The Cambridge grammar of the English language* (pp. 1171–1271). Cambridge University Press.
- Hyltenstam, K. (1984). The use of typological markedness conditions as predictors in second language acquisition: The case of pronominal copies in relative clauses. In R. Andersen (Ed.), *Second language: A crosslinguistic perspective* (pp. 39–58). Newbury House.
- Izumi, S. (2003). Processing difficulty in comprehension and production of relative clauses by learners of English as a second language. *Language Learning*, 53(2), 285–323. <https://doi.org/10.1111/1467-9922.00218>
- Jarvis, S. (2000). Methodological rigor in the study of transfer: Identifying L1 influence in the interlanguage lexicon. *Language Learning*, 50(2), 245–309. <https://doi.org/10.1111/0023-8333.00118>
- Jarvis, S., & Pavlenko, A. (2008) *Crosslinguistic influence in language and cognition*. Routledge.
- Jeon, K. S., & Kim, H.-Y. (2007). Development of relativization in Korean as a foreign language: The noun phrase accessibility hierarchy in head-internal and head-external relative clauses. *Studies in Second Language Acquisition*, 29(2), 253–276. <https://www.jstor.org/stable/44487150>
- Keenan, E. L., & Comrie, B. (1977). Noun phrase accessibility and Universal Grammar. *Linguistic Inquiry*, 8(1), 63–99. <https://www.jstor.org/stable/4177973>

- Kellerman, E. (1983). Now you see it, now you don't. In S. Gass & L. Selinker (Eds.), *Language transfer in language learning* (pp. 112–134). Newbury House.
- Kush, D., & Dahl, A. (2022). L2 transfer of L1 island-insensitivity: The case of Norwegian. *Second Language Research*, 38(2), 315–346. <https://doi.org/10.1177/0267658320956704>
- Kush, D., Sant, C., & Strætkevorn, S. B. (2021). Learning island-insensitivity from the input: A corpus analysis of child- and youth-directed text in Norwegian. *Glossa: a journal of general linguistics*, 6(1), 105. <https://doi.org/10.16995/glossa.5774>
- Matthews, S., & Yip V. (2003). Relative clauses in early bilingual development: Transfer and universals. In A. Ramat (Ed.), *Typology and second language acquisition* (pp. 39–82). Mouton de Gruyter.
- O'Grady, W., Lee, M., & Choo, M. (2003). A subject-object asymmetry in the acquisition of relative clauses in Korean as a second language. *Studies in Second Language Acquisition*, 25(3), 433–448. <https://doi.org/10.1017/S0272263103000172>
- Sag, I. A. (1997). English relative clause constructions. *Journal of Linguistics*, 33(2), 431–483. <https://doi.org/10.1017/S002222679700652X>
- Ozeki, H., & Shirai, Y. (2007). Does the noun phrase accessibility hierarchy predict the difficulty order in the acquisition of Japanese relative clauses? *Studies in Second Language Acquisition*, 29(2), 169–196. <https://www.jstor.org/stable/44487147>
- Pavesi, M. (1986). Markedness, discursal modes, and relative clause formation in a formal and an informal context. *Studies in Second Language Acquisition*, 8(1), 38–55. <https://www.jstor.org/stable/44486850>
- Schachter, J. (1974). An error in error analysis. *Language Learning*, 24(2), 205–214. <https://doi.org/10.1111/j.1467-1770.1974.tb00502.x>
- Sveen, A. (1996). Norwegian impersonal actives and the unaccusative hypothesis. [Unpublished doctoral dissertation]. University of Oslo.
- Tarallo, F., & Myhill, J. (1983). Interference and natural language processing in second language acquisition. *Language Learning*, 33(1), 55–76. <https://doi.org/10.1111/j.1467-1770.1983.tb00986.x>
- Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). *A comprehensive grammar of the English language*. Longman.
- Wulff, S., & Ellis, N. C. (2018). Usage-based approaches to SLA. In D. Miller, F. Bayram, J. Rothman & L. Serratrice (Eds.), *Bilingual cognition and language: The state of the science across its subfields* (pp. 37-56). John Benjamins.
- Yabuki-Soh, N. (2007). Teaching relative clauses in Japanese: Exploring different types of instruction and the projection effect. *Studies in Second Language Acquisition*, 29(2), 119–152. <https://www.jstor.org/stable/44487149>