

BUCLD 35 Proceedings
To be published in 2011 by Cascadilla Press
Rights forms signed by all authors

Production and Processing of Determiners in Turkish-Dutch child L2 learners*

Nada Vasić and Elma Blom

1. Introduction

The acquisition of determiners has extensively been studied in adults learning a second language (L2). The majority of these studies focus on the acquisition of the English determiner system (Robertson, 2000, Lardiere, 2004, White, 2003, Ionin, 2003, Ionin et al. 2004, among others) and show that adult L2 learners have great difficulties in acquiring determiners in English. These problems persist well into the later stages of their development; they rarely reach native-like levels of performance. Adult L2 learners both omit and substitute and, in general, learners whose L1s are devoid of determiners have more difficulties acquiring these in their L2 than the learners whose L1s contain determiners.

Zdorenko and Paradis (2008) have examined the acquisition of determiners by child L2 learners. In their study, Zdorenko and Paradis report longitudinal data from children with [+determiner] and [-determiner] L1s learning English as L2. In the early stages of acquisition, children with [-determiner] L1s omitted more determiners in English than children with [+determiner] L1s. In child L2 acquisition of determiners, L1 transfer thus plays a role but only in early stages. Regardless of L1, L2 children were more accurate in the use of a definite determiner as opposed to the use of an indefinite determiner. In addition, both children with [-determiner] L1 and [+determiner] L1 substituted the definite determiner 'the' for the indefinite determiner 'a'.

It has also been shown that in adult L2 learners, determiner drop in production can coincide with good knowledge of determiner use (White, 2003; Lardiere, 2004). Similarly, child L2 learners drop tense/agreement markers in

* Nada Vasić, University of Amsterdam, n.vasic@uva.nl, Elma Blom, University of Amsterdam/University of Alberta. This research is part of the project 'Cross-linguistic study on the production and processing of grammatical morphemes in L2 children compared to children with Specific Language Impairment' funded by the Netherlands Organisation for Scientific Research (NWO) (#254-70-121). We would like to thank the Anne Frank School in Bunnik, Johanneschool in Utrecht, De Wiekslag School in Amersfoort for participating in our research.

production but also show a good knowledge of these markers in an off-line grammaticality judgement task (Ionin & Wexler, 2002; Paradis et al. 2008). These studies refer to the Missing Surface Inflection Hypothesis (MSIH) (Haznedar & Schwartz, 1997; White & Prévost, 2000; Prévost, 2003) in order to explain the discrepancy between the findings from speech production and judgment data. According to the MSIH, the omission errors are the result of a mapping problem at the lexicon-syntax interface. L2 children do not lack knowledge of functional categories neither at the syntactic nor at the lexical level, but they occasionally insert an underspecified default morpheme due to communication pressures. In the case of determiners this is a zero morpheme, which is inserted in a fully specified syntactic position.

On the basis of the above-mentioned findings we conclude that omissions of functional morphemes in L2 child production do not necessarily indicate a lack of knowledge. Therefore, the main aim of our study is to investigate whether knowledge of determiners is intact in L2 children who omit these elements in speech production. We examined children of Turkish immigrants learning Dutch as their L2 and focused primarily on errors of omission. We did so by comparing production to processing in the same cohort of children. If the omission errors in production reflect a lack of grammatical knowledge of these features, then we expect L2 children to fail in distinguishing between ungrammatical contexts with a determiner omitted versus a grammatical context with a determiner realised. Our secondary goal is to take a closer look at errors in production. Given the MSIH, it is expected that omission errors should occur only occasionally and that substitution errors should hardly ever occur.

2. Determiners in Dutch and Turkish

Dutch has a two-way determiner system as it has both definite (*de/het*) and indefinite (*een*) determiners: definite *de* is used with common gender nouns and definite *het* with neuter gender nouns. Similar to English, Dutch nouns can appear in an argument position both bare and preceded by a determiner (Nominal Mapping Parameter, Chierchia, 1998a, 1998b). When a singular count noun is used, the determiner is obligatory in order to turn the noun into an argument. There are, however, contexts in which bare nouns are grammatical in Dutch; these are mass nouns and plural indefinites. We focus on determiners preceding a singular count noun precisely because they appear in the obligatory contexts and their omission results in ungrammaticality (but see Avrutin (1999, 2004) for an analysis of determiner use in terms of discourse constraints).¹

In contrast to Dutch, Turkish does not have definite determiners but marks definiteness with the accusative case (Lewis, 2000). The numeral *bir* may be used as an indefinite determiner. Because Turkish can, in principle, be treated as

¹ For the purpose of this paper we do not discuss the discourse/semantic properties of the contexts determiners are realised in. We do however control the contexts of our experimental sentences.

[-determiner] language, the children tested in our study may have dropped determiners in early stages of acquisition due to effects of L1 transfer (Zdorenko & Paradis, 2008). However, at the time of testing, the participating children were well beyond this stage (see section 4.1), hence, effects of transfer, if any, are expected to be minimal.

3. Research questions

First, we address the issue of (a)symmetry between production and processing in order to identify the underlying cause of errors in production. Do L2 children omit determiners in obligatory contexts in speech production? Consequently, do the same children notice that determiners are omitted in obligatory contexts while listening to these contexts? Second, we look more closely at the error patterns of L2 children in production: do children who omit determiners do so only occasionally and do they only omit or also substitute determiners in obligatory contexts? To investigate whether any patterns in the data may arise from factors related to L2 acquisition, we compare the L2 group with L1 children in order to check for between-group differences.

4. Experiment

4.1. Participants

We tested 21 bilingual Turkish-Dutch children with ages between 6;3 to 9;0 months (mean age 7;7) and 17 monolingual Dutch children with ages between 5;0 and 5;11 months (mean age 5;5). All participants came from the western part of the Netherlands (Randstad); the L2 children predominantly use Turkish at home, however, they have also been exposed to Dutch at home with variable intensity. The L1 and L2 groups were comparable in length of exposure to Dutch and had similar scores on standardized tests for Dutch receptive grammar and vocabulary (*Taaltoets Alle Kinderen*, Verhoeven & Vermeer, 2001). Almost all L2 children (N=18 for receptive grammar; N=17 for receptive vocabulary) scored below monolingual norms for their age group but we found no between-group differences when we compared L2 children with younger L1 group (receptive grammar: $t=1.079$, $df=37$, $p=0.287$; receptive vocabulary: $t=1.444$, $df=37$, $p=0.156$).

4.2. Materials and procedure

4.2.1 Processing task

In order to test children's sensitivity to grammaticality we used an online non-demanding self-paced listening procedure. In this task children listen to grammatical and ungrammatical sentences in an incremental fashion; they hear a segment and are instructed to press a button each time they are ready to hear the following segment of particular sentence. The time that elapses from the moment a segment begins to the moment a child presses a button to hear the

next segment is recorded and is taken to reflect the speed of processing. Children are expected to take longer to press, i.e. exhibit longer reaction times (RTs) when what they are hearing is in conflict with their internal grammatical representation of the structure that is being processed (Marinis, 2010).

The experiment was programmed and administered using the E-prime software (Schneider, Eschmann & Zuccolotto, 2002). The experimental materials were stories about animals and individuals engaging in different activities. At the beginning of each trial, children heard a context setting lead-in sentence as a whole and saw a picture supporting this context introducing the participants (animals or a persons) or objects, and the critical sentence. This was followed by the critical sentence, which was segmented into phrases. Children were instructed to press the response button of the E-prime box as fast as possible in order to move from one sound segment to another and hear the complete experimental sentence.

Examples in (1) illustrate the grammatical and ungrammatical sentences in the two experimental conditions. In the definite condition the critical noun was in the object position of the second sentence and it was already introduced in the discourse. In the indefinite condition it was an entity new to discourse, again in the object position of the second sentence. All nouns were selected on the basis of familiarity, which, in turn, was based on age of acquisition (Schlichting & Lutje Spelberg, 2002; Damhuis, de Glopper, Boers & , Kienstra, 1992). We also controlled the gender of the nouns used; these were all common gender nouns, which require the definite determiner 'de'. Common gender is acquired early in both child L1 and child L2 Dutch, in contrast to neuter gender (Blom, Poliřenská & Weerman, 2008; Cornips & Hulk, 2008; among others), and was chosen to avoid task difficulties due to problems with grammatical gender.

- (1) a. Definite determiners:
Peter heeft een krant gekocht. Peter / leest / (**de**) krant / in zijn tuin / 's ochtends vroeg.
'Peter has bought a newspaper. Peter / is reading / (the) newspaper / in his garden / early in the morning.'
- b. Indefinite determiner:
Dit is een voetballer. Een voetballer / heeft / (**een**) voetbal / in zijn sporttas/ na de training.
'This is a football player. A football player / has / (a) ball / in his sport bag / after the training.'

We recorded the grammatical version of each sentence and then spliced the determiner out of the sentence to create the ungrammatical sentence without the determiner. We did so in order to make sure that there was no acoustic difference between the critical segments with and without the determiner.

The experiment comprised 64 experimental trials (16 items per condition and each in grammatical and ungrammatical form) and 16 fillers, half of which were sentences with bare determiners in the object position and half with

subject-verb agreement errors. We used a single-case design, which means that each participant heard a grammatical and ungrammatical version of each sentence. The two versions were presented in separate sessions with a weekly interval between the sessions. The participants were all tested in a quiet room at their school. Each experimental session was preceded by a practice session, which could be repeated twice if necessary. None of the children failed to complete the practice session.

4.2.2 Production task

The test used to examine production was based on the subpart of the Diagnostic Evaluation of Language Variation (DELV) test battery (Seymour, Roeper, & de Villiers, 2003) tapping into the production of determiners in English. We adjusted the DELV test by adding more experimental items, by using sentence completion instead of asking a question and by eliciting a Prepositional Phrase (PP) as the response instead of a Determiner Phrase (DP). The full PPs were elicited in order to ensure that children would produce a determiner.²

Each experimental item consisted of two sentences. The first sentence was a context setting sentence and the second one was the critical sentence with the determiner in the object position in both definite and indefinite conditions. There were 16 items per experimental condition and a total of 32 experimental trials. The contexts and the nouns that were used in the production task were also used in the processing task in order to have comparable materials across the two modalities.

The two experimental conditions are exemplified in (2a) and (2b). Similar to the processing task, in the definite condition the elicited noun was an entity already introduced in the discourse and in the indefinite condition it was an entity new to discourse.

- (1) a. Definite determiners:
Peter heeft een krant en een hoed gekocht. In één ding kan hij lezen.
Peter kan lezen.... [in de krant].
*'Peter bought a newspaper and a hat. In one of those he can read.
Peter can read... [in the newspaper.]'*
- b. Indefinite determiners:
Denk eens aan een voetballer. Die voetbalt... [met een voetbal].
'Think of a football player. He plays... [with a ball].'

² A set of materials eliciting DPs was pre-tested; children resorted to a strategy of giving the correct answer in the form of a noun only, i.e. they would omit determiners in all experimental items after successfully producing them in the training sessions. Therefore, we decided to adjust the materials so that full PPs containing the definite or indefinite determiner would be the expected response.

4.3. Results

4.3.1. Processing

In order to control for length differences between critical segments in the grammatical versus ungrammatical conditions we calculated the residual RTs by subtracting the actual length of the critical segments from the raw RTs.

We excluded all negative residual reaction times to make sure that children heard and processed the entire critical segment. Extreme values were calculated in SPSS statistics programme using the Analyze/Descriptives/Explore function; these were consequently removed from all conditions.

In order to obtain normality, the outliers were calculated per condition by adding up the mean residual time plus two times Standard Deviation (SD). These were then removed and replaced by the mean residual RT per condition. The total number of extreme values and outliers was 5% for L2 children and 4% for L1 children.

We also asked comprehension questions in order to make sure that children were attending to the task. We excluded children who scored less than 75% correct on comprehension questions assuming that these children were not listening to experimental sentences carefully enough. In the L2 group two children were excluded and in the L1 group one child was excluded on the basis of this criterion and another child was excluded because the output file created by the E-prime program was faulty.

In order to check whether L1 and L2 children were sensitive to omissions of definite and indefinite determiners residual RTs for the critical segment and the segment following the critical segment were entered into a repeated-measure ANOVA for each group separately with Grammaticality as the within-subjects factor in the analysis.

The analyses of segments prior and following the critical segment did not exhibit any significant difference, which is why we only report the results of the critical segment.

For both L1 and L2 groups a main effect of Grammaticality (L1 children emerged: $F(2,7) = 11.404$, $p < 0.003$; L2 children: $F(2,9) = 64.939$, $p < 0.001$). The residual RTs for the critical segment are exemplified in Table 1.

Table 1 – mean residual RTs (SD)

	L2 group	L1 group
Definite grammatical	446 (81)	525 (105)
Definite ungrammatical	522 (76)	589 (110)
Indefinite grammatical	441 (81)	537 (97)
Indefinite ungrammatical	507 (96)	553 (123)

4.3.2. Production

Missing responses and excluded responses (pronoun, demonstrative) comprised 25% of the data. Occasionally, children used a different noun than

the noun that was targeted; such responses were included, because they did not affect definiteness. Correct responses were responses in which children used definite and indefinite determiners in obligatory contexts. Incorrect responses consisted of omissions of determiners and substitutions of the determiner (i.e. ‘de’ instead of ‘een’ and vice versa).

There were more omission errors than substitution errors in both the L1 (omissions =23.6%; substitutions=6.5%) and L2 group (omissions=29.5%; substitutions =15%) when all data were taken together. Omissions were significantly more frequent than substitutions in the L1 group ($t=-2.532$, $df=16$, $p<0.05$; $d=1.27$), but not in the L2 group ($t=-1.787$, $df=20$, $p=0.089$). Recall that in processing children’s sensitivity to omissions was tested. Therefore, in the first analysis, we did not take substitutions into account.³

The mean proportions of omissions (and standard deviations) in the L2 and L1 group overall and for each separate experimental condition are presented in Table 2. The statistical analysis indicated no between-group differences in overall omissions or in either of the conditions. The definite and indefinite determiners were dropped equally often in both experimental groups. The correlation between the drop of definite and indefinite determiners was significant in L2 children ($r=0.59$, $p<0.01$) but not in L1 children.

Table 2 – mean proportions of omissions (SD)

	L2 group	L1 group
Overall	0.35 (0.30)	0.25 (0.23)
Definite	0.41 (0.37)	0.28 (0.29)
Indefinite	0.31 (0.32)	0.20 (0.25)

In a secondary analysis, we looked at omission errors in relation to substitutions. We found a trade off between the types of errors - children who dropped frequently were less likely to substitute in the L1 group ($r=-0.721$, $p=0.001$) and in the L2 group ($r=-0.639$, $p<0.01$). We also find that L2 children substituted more often than L1 children ($t=-3.121$, $df=36$, $p<0.01$; $d=1.04$). The relatively high number of substitutions in the child L2 group led to an overall lower accuracy, omissions and substitutions taken together, in the L2 group as opposed to the L1 group ($t=2.344$, $df=36$, $p<0.05$; $d=0.78$).

5. Discussion

The present study explored the production and on-line processing of Dutch determiners in Turkish-Dutch children learning Dutch as their second language.

³ Including substitutions as errors results in a between-group difference in accuracy where L1 children are more accurate with a relatively small effect size; including them in the denominator did not alter the outcomes of the statistical analyses.

This was done in order to investigate whether children who make errors with determiners in speech production are capable of noticing ungrammaticality induced by the omission of determiners in sentences that they had to process (listen to). Our secondary aim was to look more closely at the error patterns in the L1 and L2 production data.

The results indicate that both L1 and L2 children are sensitive to ungrammaticality of omissions in processing. Turning to the production data, we find that children in both groups frequently omit determiners, and that they omit definite and indefinite determiners equally frequently. Children in both groups also substitute determiners, with no difference in how often definite and indefinite determiners are substituted. There is a trade-off between the two types of errors: children who omit more substitute less and vice versa. When we compare the two groups of children we find in both groups the same asymmetry between the ability to process ungrammaticality in determiner use, on the one hand, and production problems with determiners, on the other. Focusing on determiner production, we observe three differences between the groups. First, L1 children omit significantly more than that they substitute. In the L2 group no statistically significant difference emerged between omissions and substitutions. Second, the L2 children substitute more than the L1 children. Third, L1 children are overall more accurate than the L2 children.

On the basis of these results we conclude that there is an asymmetry between the production and processing data in both groups tested. Both L1 and L2 children made a substantial number of omission errors in speech production; nevertheless, they were capable of noticing that determiners were omitted in obligatory contexts while they listened to sentences. This finding is in concordance with the MSIH, which predicts the asymmetry by assuming that the grammatical knowledge of determiners in both L1 and L2 children is intact and that the errors in production are related to spelling-out of the surface form.

According to the MSIH, errors of omission represent insertions of a default morpheme. In the case of determiners the default morpheme is a zero morpheme. By the same token, the MSIH predicts that there should be only one type of error in production, because there is one default rule. The errors of omission are expected to occur occasionally under communication, i.e. time, pressure. Taking a closer look at the frequency of omission errors, we cannot but conclude that these occurred more than just occasionally in L2 children: in 29,5% of all the data taken together. This rather frequent omission seems difficult to reconcile with the MSIH, but one could potentially argue that our production task was very demanding for the children. They had to remember the information from the first sentence introducing the context in order to fill in the PP containing the DP in the second sentence. This could subsequently have led to the more frequent application of the default rule - insertion of a zero morpheme observed as omission errors.

There is evidence from psycholinguistic studies indicating that bilinguals (younger and older adults) retrieve lexical items in a slower fashion than monolingual individuals. Some claim that this is due to a bigger lexicon

comprising items from both languages that are being acquired (e.g. Gollan et al., 2005, Gollan et al., 2008) and others that it is related to interference between the two languages (see Bialystok et al., 2008). It could, thus, be the case that the L2 children we tested could not access the definite determiner 'de' and the indefinite determiner 'een' on time. Without the appropriate form available children were forced to rely on the default rule and insert a zero morpheme. The delayed access does not contradict the MSIH but provides potential insight into why L2 children would be forced to use a default rule in communicatively demanding situations. Note that in our study L2 children did not omit more often than the L1 children did. Possibly, their younger age might have delayed lexical access in the L1 group, cancelling out between-group differences in omission errors. .

Finally, the substitution errors in the L2 group (15%) are not negligible. The MSIH does not predict this type of error; nevertheless, they must be accounted for. In their study on L2 English children, Zdorenko and Paradis (2008) also found substitution errors. Their experiment was designed in order to test the Fluctuation Hypothesis (FH) (Ionin, 2003; Ionin et al., 2004) which has originally been proposed in order to explain adult L2 findings on determiner use. The FH assumes that definiteness and specificity are semantic contrasts that can be encoded in two-way determiner systems. Briefly, if a DP consisting of determiner and NP is [+definite], then the speaker and hearer presuppose the existence of a unique individual in the set denoted by the NP. If this DP is [+specific] then the speaker intends to refer to a unique individual in the set denoted by the NP and considers this individual to possess some noteworthy property. English marks definiteness in its determiner system. Other languages, such as Samoan, mark specificity in their determiner system. The FH predicts that a language learner will fluctuate between two parameter settings – one relying on specificity (Samoan) and the other relying on definiteness (English). In English, this fluctuation may show in two contexts: [+definite, -specific] and [-definite, +specific]. In the former context, misuse of 'a/an' is expected because the child is assuming the Samoan setting and categorising according to specificity. In the latter context, substitution of 'the' for 'a/an' is predicted, again because the 'Samoan' parameter-setting is applied. Notice that this hypothesis predicts substitution errors only and no omission errors. Zdorenko and Paradis tested only the [-definite, +specific] contexts and, as expected, find 'the' misuse in indefinite contexts as the most frequent error. Omissions were observed in children whose L1 was of the [-determiner] type.

In our experiment we tested the following contexts: [+definite, +specific] and [-definite, -specific], see examples in (1) and (2). These contexts are not ambiguous in terms of the FH and no substitution errors (fluctuation behaviour) are predicted. We did, however, find errors of substitution, which thus cannot be accounted for by the FH. In addition, we observe even more omission errors, which are not predicted for the contexts tested in our experiment nor for the ambiguous contexts tested by Zdorenko and Paradis.

The substitution errors in our study may be related to lexical learning and the strength of the associations between 'de' and definiteness, on the one hand, and 'een' and indefiniteness, on the other. The stronger these associations, the fewer substitution errors we may expect and the weaker the associations, the more substitution errors we may expect. Given that in word learning frequency is a determining factor (Ellis, 2002, Lieven, 2010) it is expected that the more instances of use a learner has heard, the stronger the association between form and (semantic) features in the lexicon will be. Hence, we would expect that the substitution errors, in contrast to omissions, are not related to communication pressure, but will gradually decrease in frequency after more exposure to the target language. Another prediction may be that children do not notice substitution errors while listening, in contrast to omission errors.

The L2 children in our study made more substitution errors than the L1 children. Previous studies indicated that bilingual children have smaller vocabularies in one of their languages in comparison to monolingual children learning this language (Pearson, Fernández & Oller, 1993). Given that vocabulary size is related to the amount of input children receive (Hoff & Naigles, 2002; Pearson, Fernández, Lewedeg, & Oller, 1997) and that bilingual children will generally receive less input in one language than monolingual children, we could hypothesize that the unstable lexical representations in the L2 children are due to the amount of Dutch input they receive. However, this hypothesis would predict that the L2 children in this study also had smaller vocabularies than the L1 children, which was not the case.

To what extent could transfer of cross-linguistic influence explain why the L2 children substituted so often? Suppose that the L2 children still showed effects of L1 transfer - which is improbable given their length of exposure to Dutch - then this would affect the amount of omission errors (Zdorenko & Paradis, 2008), and not the substitutions. Hulk and Müller's (2000) theory of cross-linguistic influence posits that bilingual children may show a delayed development for phenomena at the syntax-discourse interface that superficially overlap between the two languages. This overlap would occur for bare nouns; Turkish can be considered a [-determiner] language and Dutch has contexts where bare nouns are grammatical (e.g., with mass nouns and indefinite plural nouns). Therefore, Turkish-Dutch bilinguals may go through a longer phase of determiner drop, but again no specific predictions are made for substitutions.

Taken together, we conclude that currently no straightforward explanation exists for the substitution errors found in our study. In particular it is unclear why Turkish-Dutch L2 children substitute determiners more frequently than L1 Dutch children do and do this in [+definite, +specific] and [-definite, -specific] contexts.

6. Conclusion

The omissions of determiners observed in L1 and L2 Dutch children are related to spell-out problems and not to a lack of grammatical knowledge, in

accordance with the MSIH. This conclusion is confirmed by the asymmetry in production versus processing of definite and indefinite determiners in both L1 and L2 children. The error profiles we found in production were not fully compliant with the MSIH: the children omitted determiners relatively frequently and children who omitted determiners also substituted them. These results indicate that additional analyses are needed. An explanation that combines the MSIH with hypotheses about lexical access and lexical development may account for both the errors of omission and substitution in these populations. However, the fact that L2 children substitute more than the L1 children remains unexplained and leaves us with a question for the future research of why this would be the case.

References

- Avrutin, Sergey. 1999. *Development of the Syntax-Discourse Interface*. Dordrecht: Kluwer Academic Publishers.
- Avrutin, Sergey. 2004. Beyond Narrow Syntax. In L.Jenkins (Ed.), *Variation and Universals in Biolinguistics*. Elsevier.
- Blom, Elma, Poliřenská, Daniela & Fred Weerman. 2008. Determiners, adjectives and age of onset: the acquisition of Dutch grammatical gender. *Second Language Research* 24(3): 289-323.
- Bialystok, Ellen, Craik, Ferguson, & Gigi Luk. 2008. Cognitive control and lexical access in younger and older bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 34: 859-873.
- Chierchia, Gennaro. 1998a. Reference to kinds across languages. *Natural Language Semantics*, 6: 339-405.
- Chierchia, Gennaro. 1998b. Plurality of mass nouns and the notion of 'semantic parameter'. In S. Rothstein (ed.), *Events and grammar*: 53-103. Amsterdam: Kluwer.
- Cornips, Leonie & Aafke Hulk. 2008. Factors of success and failure in the acquisition of grammatical gender in Dutch. *Second Language Research* 24(3): 267-296.
- Damhuis, Resi, de Glopper, Kees, Boers, Marieke & Marijke Kienstra. 1992. *Woordenlijst voor 4- tot 6-jarigen: Een streeflijst voor kleuters*. Rotterdam: CED Groep - Het Projectbureau OVB.
- Ellis, Nick. 2002. Frequency effects in language acquisition: A review with implications for theories of implicit and explicit language acquisition. (Target article). *Studies in Second Language Acquisition*, 24, 143-188.
- Gollan, Tamar H., Montoya, Rosa I., Cera, Cynthia M., & Tiffany C. Sandoval. 2008. More use almost always means smaller a frequency effect: Aging, bilingualism, and the weaker links hypothesis. *Journal of Memory and Language*, 58: 787-814.
- Gollan, Tamar H., Montoya, Rosa I., Fennema-Notestine, Christine, & Shaunna K. Morris. 2005. Bilingualism affects picture naming but not picture classification. *Memory & Cognition*, 33, 1220-1234.
- Haznedar, Belma & Bonnie D. Schwartz. 1997. Are there optional infinitives in child L2 acquisition? In Hughes, E., Hughes, M. & Greenhill, A., (Eds.), *Proceedings of the 21st Annual Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press: 257-268.
- Hoff, Erica & Letitia Naigles. 2002. How children use input to acquire a lexicon. *Child Development*, 73, 2: 418-433.

- Hulk, Aafke, & Natascha Müller. 2000. Bilingual first language acquisition at the interface between syntax and pragmatics. *Bilingualism: Language and Cognition*, 3(3), 227–244.
- Ionin, Tanya (2003). *Determiner semantics in second language acquisition*. Unpublished PhD dissertation, MIT.
- Ionin, Tanya & Ken Wexler. 2002. Why is 'is' easier than 's'? Acquisition of tense/agreement morphology by child L2-English learners. *Second Language Research* 18(2): 95-136.
- Ionin, Tanya, Ko, Heejeong & Ken Wexler. 2004. Determiner semantics in L2 acquisition: the role of specificity. *Language Acquisition* 12, 3-69.
- Lardiere, Donna. 2004. *Knowledge of definiteness despite variable determiner omission in SLA*. In Brugos et al., (Eds). Proceedings of Boston University Conference on Language Development (BUCLD 28). Somerville MA: Cascadilla Press.
- Lewis, Geoffrey. 2000. *Turkish grammar*. Second edition. Oxford: Oxford University Press.
- Lieven, Elena. 2010. Input and first language acquisition: Evaluating the role of frequency. *Lingua* 120, 2456-2556.
- Marinis, Theo. 2010. Using on-line processing methods in language acquisition research. In Blom, E. & Unsworth, S. (Eds). *Experimental methods in language acquisition research*. Amsterdam/Philadelphia: Benjamins.
- Paradis, Johanne, Rice, Mable, Crago, Martha & Janet Marquis. 2008. The acquisition of tense in English: Distinguishing child L2 from L1 and SLI. *Applied Psycholinguistics*, 29: 1-34.
- Pearson, Zurer, Fernández, Sylvia & Kimbrough Oller. 1993. Lexical development in bilingual infants and toddlers: Comparison to monolingual norms. *Language Learning*, 43, 1: 93-120.
- Pearson, Zurer, Fernández, Sylvia, Ledeweg, V. & Kimbrough Oller. 1997. The relation of input factors to lexical learning by bilingual infants. *Applied Psycholinguistics*, 18: 41–58.
- Prévost, Phillipe. 2003. Truncation and missing surface inflection in initial L2 German. *Studies in Second Language Acquisition* 25: 65-97.
- Prévost, Phillipe & Lydia White (2000). Missing Surface Inflection or Impairment in second language acquisition? Evidence from tense and agreement. *Second Language Research* 16(2): 103-133.
- Robertson, Daniel. 2000. Variability in the use of the English determiner system by Chinese learners of English. *Second Language Research* 16: 135-172.
- Schneider, Walter, Eschman, Amy & Anthony Zuccolotto (2002). *E-Prime user's guide*. Pittsburgh PA: Psychology Software Tools, Inc.
- Schlichting, Liesbeth & Henk Lutje Spelberg. 2002. *Lexilijst NL*. Amsterdam: Pearson Assessment and Information BV.
- Seymour, Harry, Roeper, Tom, & Jill de Villiers. 2003. *Diagnostic Evaluation of Language Variation- Screening Test (DELV-ST)*. San Antonio, TX: The Psychological Corporation.
- Verhoeven, Ludo & Anne Vermeer. 2001. *Taaltest Alle Kinderen (TAK)*. [Language assessment all children]. Arnhem, The Netherlands: CITO.
- Zdorenko, Tanya & Johanne Paradis. 2008. The acquisition of determiners in child second language English: fluctuation, transfer or both? *Second Language Research*, 24(2): 227-250.
- White, Lydia. 2003. *Second language acquisition and Universal Grammar*. Cambridge University Press.