The development of L2 Italian morphosyntax in adult learners with limited literacy

Egle Mocciaro

Masaryk University, Brno University of Palermo

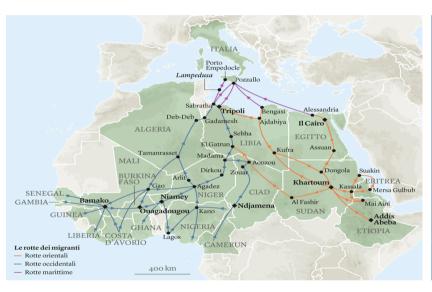


Structures formelles du langage Séminaire Acquisition & Psycholinguistique 19 avril 2021

Part 1 Research and its context

- ☐ Palermo, Sicily
 - About 34,000 immigrants in Palermo in 2021 (3% of the local population)
 - Long/medium-term residents
 - Bangladesh, Sri Lanka, Romania, Ghana, Philippines, Morocco, Tunisia, China, Mauritius, Ivory Coast
 - Newcomers
 - Sub-Saharan Africa and Bangladesh
 - Individual mobility
 - Adults and unaccompanied foreign minors
 - Other destinations (more transient population)



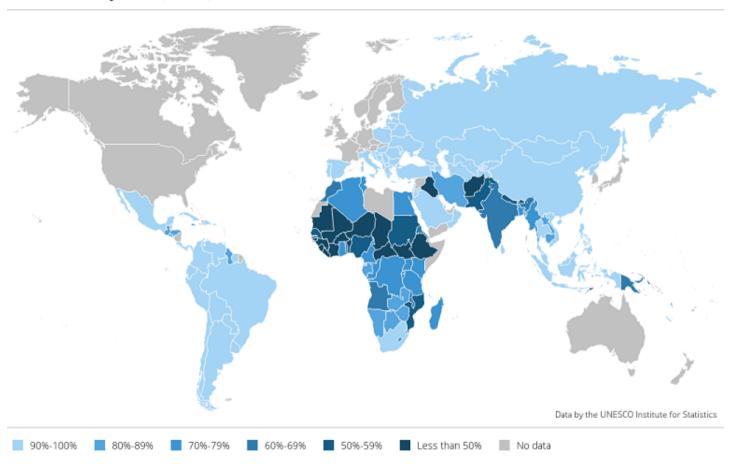




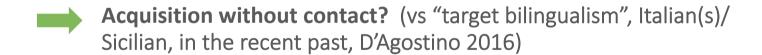
Internazionale 13/9/2016 https://www.internazionale.it/notizie/2016/09/13/rotte-migranti-africa-italia

Dialoghi mediterranei 2018 http://www.istitutoeuroarabo.it/DM/dal-bangladesh-al-bidesh/

Adult literacy rate (2017)



- ☐ Reception system (hubs, hosting centres)
 - Segregation
 - Plurilingual speakers, multilingual contexts, multi/polylinguistic interaction
 - Low/no interaction with the local population
 - Low/no exposure to the local language(s) (varieties of Italian, Sicilian)



- ☐ ItaStra Scuola di Lingua italiana per Stranieri, Università di Palermo
 - 2017-2018, large-scale survey (D'Agostino 2018)
 - Literacy and language tests to 774 migrants (531 newcomers)
 - 58.5% of the sample showed competence levels lower that CEFR A2
 - 31% of the sample proved not fully literate in any home language
 - How to interpret (and manage) these data?

Studies

- ☐ Peripherality of research on L2 acquisition in migration contexts
 - Biased samples and non-representativeness (Andringa & Godfroid 2020; Henrich et al. 2010; Tarone & Bigelow 2005)
- ☐ Previous large-scale studies on (im)migrants' L2 acquisition
 - European studies (Heidelberger Pidgin Projekt, Becker et al. 1977; ZISA, Clahsen et al. 1983; ESF, Klein & Perdue 1992; Perdue 1993; LexLern, Clahsen et al. 1991)
 - Low exposure, low-schooling, *no* attention to literacy
 - Italian functionalist studies (*Pavia project*, Giacalone Ramat 2003)
 - Naturalistic acquisition, no attention to schooling and literacy

Studies

- ☐ Studies on the role of L1 (alphabetic) literacy
 - Cognitive perspective (cf. Tarone and colleagues since early 2000s)
 - Alphabetic literacy determines the ability to segment speech into non-semantic units (phonemes) and to consciously manipulate these units (Castro-Caldas 2004; Huettig & Mishra 2014 inter al.)
 - "If we, as normal adult readers, are asked to spell a word, we evoke a visual image of its written form. The **awareness of phonology** also allows us to play with written symbols (...) to form pseudo-plausible words, independently of semantics. Therefore, learning to read and write introduces into the system qualitatively new strategies for dealing with oral language; that is, conscious phonological processing, visual formal lexical representation, and all the associations that these strategies allow." (Reis & Castro-Caldas 1997: 445)
 - Conscious processing of oral input is crucial to acquire the L2 (Schimdt 1990)
 - Learners with limited literacy struggle more than literate ones to acquire functional units smaller than words such as morphemes (e.g., Eng. 3rd ps sing. -s, pl. -s, past tense -ed, cf. Tarone et al.'s 2006 cross-sectional studies on Somali adolescent and adult learners of English in Minnesota)

Studies

- ☐ Studies on the role of L1 (alphabetic) literacy
 - Linguistic perspective (Organic Grammar by Vainikka & Young-Scholten 1998)
 - Literacy affects the acquisition of L2 phonological competence, which may results in incomplete analysis of sub-foot morphological constituents in the learners' L2 (Vainikka & Young-Scholten 2007; Young-Scholten & Strom's 2006 cross-sectional study on Somali and Vietnamese learners of English in Seatlle)
 - Free morphemes are more easily perceived (and acquired) because they are at least one phonological foot vs bound morphemes typically involve units smaller than a foot.
 - Lack of phonological attainement may results in a fossilised non-target grammar if a parameter setting can only be triggered by a bound morpheme.
 - This can result from little exposure to the target language, which frequently happens in adult migration contexts.
 - Exposure is even poorer for low/non-literate learners who cannot access written texts and hence have fewer opportunities to experience the target language morphosyntax in a *visible* form, and only rely on aural input.

Part 2 Constructing data

Questions (and methodological choices)

- 1 What influence (if any) does literacy and other sociolinguistic variables have on the development of the second language, with particular reference to L2 Italian?
 - Keeping variables distinct (literacy vs. schooling vs. exposure)
- 2 Do the existing descriptions of L2 Italian morphosyntax development also allow us to describe the route, the rate and the endstate of the acquisition process followed by low/non-literate learners?
 - Adopting a longitudinal perspective
 - Focus on verbal morphosyntax

Data collection

- □ 20 newcomers recruited during the literacy tests at ItaStra in 2017
 - 3 levels of literacy
 - early or late
 - any language or writing system

Group 1 (4)	No literacy	The participants is not able to perform any reading and writing task
Group 2 (6)	Limited literacy	(a) recognises individual letters/characters; (b) spells words into syllables; (c) links two or more syllables and/or more complex syllables; (d) deciphers individual words; (e) writes his own name; (f) writes individual letters/ characters; (g) writes incomplete words; (h)writes individual words
Group 3 (10)	Literacy	is partially to fully fluent in (a) reading simple to complex sentences and texts; (b) writing simple to complex sentences or texts.

Data collection

LEARNER	AGE	COUNTRY OF ORIGIN	L1 /OTHER LANGUAGES	SCHOOLING	EARLY LITERACY (L1 / SCHOOL LS)	RESIDENC E	COURSES IN ITALY	L2 ITALIAN	LATE LITERACY IN ROMAN ALPHABET
AC	20	Nigeria	Ika; English, Pidgin Eng.	12 years	Group 3 English	18 months	6 months	pre-basic	-
AL	27	Nigeria	Urhobo; Bini, English, Pidgin	10 years	Group 3 English	18 months	5 months	basic	-
AO	24	Nigeria	Esan; English, Pidgin Eng.	12 years	Group 3 English	12 months	2 months	basic	-
BD	18	Guinea	Pulaar; Wolof, French	2 years (Q)	Group 1	11 months	5 months	post-basic	Group 2
СО	26	Nigeria	Ika; Igbo, English, Pidgin E.	12 years	Group 3 English	12 months	10 months	post-basic	12
GO	27	Nigeria	Esan; Yoruba; English, Pidgin Eng.	16 years	Group 3 English	16 months	9 months	post-basic	_
HL	25	Nigeria	Esan; English, Pidgin Eng.	-	Group 1	11 months	3 months	none	Group 1
ID LO	25 25	Ivory Coast Nigeria	French, Kojaka; Bambara Malinki Igbo; English, Pidgin Eng.	12 years	Group 3 French Group 1	11 months 11 months	8 months none	post-basic pre-basic	- Group 1
MC	18	Gambia	Mandinka; Krio	3 years	Group 1	21 months	10 months	basic	Group 2
MD MF	30 28	Senegal Mali	Mandinka; French, English Bambara; French	10 years (Q)	Group 2 Arabic Group 1	11 months 12 months	10 months 7 months	post-basic basic	Group 2 French Group 2
MJ	24	Nigeria	Igbo; English, Pidgin Eng.	11 years	Group 3 English	11 months	11 months	post-basic	(-)
MLG	25	Burkina Faso	Bissa; Mòoré, French	5 years (Q)	Group 1	11 months	6 months	post-basic	Group 2
MT	23	Mali	Bambara; French	14	Group 1	11 months	6 months	post-basic	Group 2
MTR	25	Ivory Coast	Bambara; Senufo, Wolof, French	2 years (Q)	Group 1	11 months	9 months	post-basic	Group 2
OT	23	Gambia	Mandinka; Wolof, English	12 years	Group 3 English	16 months	4 months	basic	(2)
RC	18	Bangladesh	Bengali	8 years	Group 3 Bengali/English	13 months	9 months	post-basic	-
SM	27	Bangladesh	Bengali; English	12 years	Group 3 Bengali/English	12 months	none	basic	-
YS	30	Senegal	Pulaar; Wolof, French	2 years (Q)	Group 1	10 months	5 months	post-basic	Group 1

Data collection

Session	ACTIVITIES	DATA ELICITED	TIME	SUPPORT
1	Preliminary	Bio-data and	After 7 to 13	Paper
	interview	sociolinguistic	months from	template
		background	arrival	
2	Narrative tasks	Nouns and verbs	After one day	Audio
		Inflection (tense,		recording
		aspect, person)		
3	Guided	Inflection (tense,	After a further	Audio
	conversation	aspect, person)	6 months	recording
	(literacy test)			
4	Interview	Inflection (tense,	After a further	Audio
	Narrative task	aspect, person)	4 months	recording
	(literacy test)			
5	Interview	Inflection (tense,	After a further	Audio
	Narrative tasks	aspect, person)	4 months	recording
	(literacy test)			

- ☐ The Basic variety (Klein & Perdue 1997, based on ESF project):
 - "all 40 learners investigated developed a relatively stable system to express themselves which
 - seemed to be determined by the interaction of a small number of organizational principles,
 - was largely (though not totally) independent of the specifics of source and target language organization,
 - was simple, versatile and highly efficient for most communicative purposes."
 - "(...) it represents a particularly natural and transparent interplay between function and form in human language." (pp. 303-304)

- ☐ Structural properties of the basic variety
 - Lexicon

A set of open-class items and a handful of closed class items. These include noun-like and verb-like items, some adjectives and adverbs, a minimal system of pronominal means to refer to the speech act participants and third person referents, a few quantifiers, negation and a few (typically overgeneralised) prepositions.

Non-finite utterance organisation (basic forms)

"There is **no inflection** in the BV, hence no marking of case, number, gender, tense, aspect, agreement by morphology. Thus, lexical items typically occur in one invariant form. It corresponds to the stem, the infinitive or the nominative in the target language; but it can also be a form which would be an inflected form in the target language. Occasionally, a word shows up in more than one form, but this (rare) variation does not seem to have any functional value: the learners simply try different phonological variants." (pp. 311-312)

Categories such as tense, aspect, modality etc. are lexicalised (e.g. adverbs)

		Variety	
	Pre-basic	Basic	Post-basic
LEXICAL	None	Verb/Noun	Verb/Noun
CATEGORIES			
Morphology	None	Basic forms (uninflected)	Inflected nouns
			and verbs
ORGANIZATION OF	Pragmatic	Semantic-syntactic	Syntactic
THE UTTERANCE	(information	(argument structure)	
	structure)		
DEPENDENCY ON	High	4	Low
THE CONTEXT		~ = = = /	

phase	PRESENT	PERFECTIVE	IMPERFECTIVE	FUTURE	NON-
		PAST	PAST		FACTUAL
1	Present/ Infinitive	Present/ Infinitive	Present/ Infinitive	Present/ Infinitive	Present/ Infinitive
2	Present	Past participle	Present	Present	Present
3	Present	(Aux.) Past part.	Imperfect	Present	Present
4	Present	(Aux.) Past part.	Imperfect	Future	Future

□ Sequence of acquisition of the Italian verb (Banfi & Bernini 2003: 90) present (infinitive) \rightarrow (auxiliary) past participle \rightarrow imperfect \rightarrow future \rightarrow conditional \rightarrow subjunctive

Part 3 Data analysis

Prebasic interlanguages

- Words with unspecified lexical category
- ☐ Utterance pragmatic organisation (topic-comment)

(1) [AC_3]

064 INT dove hai studiato italiano?

065 AC taliano/: scola

Italian school TOP FOC

'Where did you study Italian?' 'Italian, [at] school.'

☐ The verb is an autonomous lexical category (argument structure), but lacks finiteness and is morphologically unanalysable (basic form)

```
[AL_2_b]

35 AL notte io va a lavoro night I go:PRS.3SG to work 'At night I go to work.'
```

```
(3) [AL_4_b]

024 AL lui guardə /: guardare a ragaza he look-Ø look:INF to girl 'He looks at the girl.'
```

- ☐ Temporal, aspectual and person information can be lexicalised (notte, io, lui)
 - [AL_2_b]

 35 AL notte io va a lavoro night I go:PRS.3SG to work 'At night I go to work.'
 - (3) [AL_4_b]

 024 AL lui guardə /: guardare a ragaza he look-Ø look:INF to girl 'He looks at the girl.'

☐ Specific lexical strategies to express temporal-aspectual information

```
(4) [MF_2_a]
07 MF lavare dente finito /:
clean:INF tooth finish:PST.PTCP
08 MF andare cuzina
go:INF kitchen
```

'They brushed their teeth and went to the kitchen.'

☐ Discourse and lexical boundaries for temporal-aspectual information

(7) [AO_2_b]

^{&#}x27;I slept; once slept, I went to the market.'

☐ Emergence of past participle to express perfective aspect

'When he sees the eggs, he wants to take them.'

'We always went there to read.'

- ☐ Analytical stage → grammaticalisation of auxiliaries
 - Emergence of finiteness

"It is not just a matter of inflectional morphology: the acquisition of finiteness also leads to a major restructuring of learner language." (Klein 2006: 249).

- An assertion is made and it has a specific timespan of validity.
- Scalar character and intermediate stages from non-finite to finite utterances
 - Stade analytique. Tense and aspect are expressed analytically, either by auxiliaries or specialised lexical markers; the lexical verb conveys essentially its lexical value
 - Stade du fusionnement. Tense/aspect merge with the lexical content of the verb (more opaque expression of tense and aspect) (Benazzo & Starren 2007: 151)

- essere 'be' constructions (Bernini 1989, 2003; "protoauxiliary", cf. Starren 2001)
 - Grammatical meaning and lexical meaning are encoded separately
 - Temporary strategies before morphology emerges
- (10) [YS_4_a]
 034 YS ora sono fermare
 now be:PRS.1SG stop:INF
 FIN STOP
 'Now I stopped.'
- (11) [MLG_5_c]
 10 MLG allora lui era dormo
 thus he be:PST.IPFV.3SG sleep:PRS.1SG
 FIN SLEEP
 'Thus, he was sleeping.'

- ☐ fare 'do' constructions
 - Very transition from the basic to the postbasic variety (before essere-constructions)
 - Light V construction (≈ fare ricerca) → ACT(ion/activity) (and aspect?) + lexical predicate
- (12) [BD2_b]
 11 BD ieri /:: io mmh: poi /:: fatto lavare /:
 yesterday | then do:PST.PTCP wash:INF

'At five, I brushed my teeth.'

^{&#}x27;Yesterday I washed and went to school.'

- ☐ Progressive construction *stare* 'stay' + gerund (Giacalone Ramat 2003b)
 - Pressure of present-day local variety of Italian (≈ present tense, Amenta 2020)

'He's looking at this woman.'

'I'm working, though not always.'

- ☐ The morphological encoding of finiteness
 - From functional words (ess. 10-11) to lexical verbs (not stable)
 - Aspectual opposition in the past → imperfective ('be' > lexical verbs) vs perfective
- (16) MLG_5_b
 16 MLG_5 arrivano un altri bambini
 arrive:PRS.3PL a other children
 'Other children arrive.'
- (17) [ID_4_a]
 40 ID mentre andavo a scuola lavoravo
 while go:PST.IPFV.1SG to school work:PST.IPFV.1SG
 'While I was at school, I was working.'

■ Modality

Lexical expression (no moods)

```
(18)
         [MLG_5_a]
         68 MLG
                                         c'è
                     di qua::
                                                                    parle
                                  non
                                                       nessuno
                                         EXS.3SG
                                                                    speak-Ø
                     here
                                  not
                                                       none
                     Ιə
                                  mia
                                         lingua [...]
                     the
                                         language
                                  my
         70 MLG
                                  obbligatorio
                                                   dove+
                                                                    parlare
                     a me /:
                                  compulsory
                                                   must-Ø
                                                                    speak:INF
                     to me
                     francese /:
                     French
```

'There's no one here who speaks my language. I need to speak French.'

Part 3 Discussion and conclusions

The continuum of morphosyntax

GROUPS 1-2	PRESENT/INFINITIVE	PP	COPULA/AUX	PROGRESSIVE	IMPERFECT	FUTURE	CONDITIONAL	SUBJUNCTIVE
BD	+	+	+	+	2	127	121	12
HL	+	2	=	2	2	_	323	~
LO	-	-	~	-	+:	(=))	(4)	-
MC	+	+	+	+	-	(-)	(+)	
MD	+	+	+	=	-	(-	(-)	-
MF	+	+	5	-	72	171	574	
MLG	+	+	+	+	+	2	121	2
MT	+	+	+	+	+	-	-	_
MTR	+	+	+	-	-	-	-	14
YS	+	+	+	+	-	-	-	; -
GROUP 3							129	2
AC	+	~	~	2	2	_	823	~
AL	+	-	~	-	-21	(-)	(4)	14
AO	+	+	-	-	-	(-)	(+)	17
CO	+	+		-	Ξ.	7	9.73	-
GO	+	+	+	70	72	1.71	878	
ID	+	+	+	+	+	2.1	121	2
MJ	+	+	+	+	-	121	-	~
OT	+	+	+	+	-	-	-	-
RC	+	+	+	+	-	-	-	1-
SM	+	+		73	73	-	9.58	

Literacy and non-target constructions

		GROUPS 1/2	GROUP 3			
SESSION	PRE-BASIC	BASIC	POST-BASIC	PRE-BASIC	BASIC	POST-BASIC
-1	STAGE	STAGE	STAGE	STAGE	STAGE	STAGE
1-2	=	fare (2)	fare (7) essere (2)	-	fare (1)	essere (2)
3	-	-	fare (2) essere (6)	-		=
4		-	fare (9) essere (4)	-	fare (1)	<i>fare</i> (1)
5	-	avere (3)	fare (9) essere (6)	-	-	essere (1) avere (1)

Conclusions

- Learners with limited literacy lack visual exposure provided by the written language
 - They only or mainly rely on auditory memory (Cintrón-Valentín & Ellis 2016; Tarone et al. 2009)
 - Bound morphemes are less accessible, as they are low salient
 - at the phonological level (typycally less than a foot, Vainikka et al. 2017: 248)
 - at the physical level (frequent phenomena of reduction in the speech)
 - at the contextual level (redundancy, e.g. <u>yesterday I</u> walk<u>ed</u>)
 - Learners with limited literacy prefer and maintain over time "heavier" constructions, made of material more easily perceived in the input.
 - Limited literacy favours the emergence and the use of specific morphosyntactic patterns that do not alter the path of development of verbal morhosyntax.
 - Literacy does not affect the route and the rate of acquisition: it is the type and amount of exposure that affects the rate (but not the route) of acquisition.

- Amenta, L. (2020). Strutture tempo-aspettuali nel siciliano e nell'italiano regionale di Sicilia. Palermo: CSFLS.
- Andringa, S. & Godfroid, A. (2020). Sampling bias and the problem of generalizability in applied linguistics. *Annual Review of Applied Linguistics* 40: 134-142.
- Banfi, E. & Bernini, G. (2003). Il verbo. In A. Giacalone Ramat (a cura di), *Verso l'italiano,* 75-115. Roma: Carocci.
- Becker, A. et al. (1977). *Heidelberger Forschungsprojekt 'Pidgin-Deutsch Spanischer Und Italienischer Arbeiter in Der Bundesrepublik'*. Osnabrück: Universität Osnabrück.
- Benazzo, S. & Starren, M. (2007). L'émergence de moyens grammaticaux pour exprimer les relations temporelles en L2. *Aile* 25: 129-157.
- Bernini, G. (2003). The copula in learner Italian. Finiteness and verbal inflection. In C. Dimroth & M. Starren (eds.), *Information structure, linguistic structure and the dynamics of language acquisition*, 159-185.

 Amsterdam & Philadelphia: John Benjamins.
- Bernini, G. (1989). Strategie di costruzione dei paradigmi verbali in italiano lingua seconda. *Quaderni del Dipartimento di Linguistica e letterature comparate dell'Università di Bergamo* 5: 195-207.

- Castro-Caldas, A. (2004). Targeting regions of interest for the study of the illiterate brain. *International Journal of Psychology* 39: 5-17.
- Cintrón-Valentín, Myrna C. and Nick C. Ellis. 2016. Salience in second language acquisition: Physical form, learner attention, and instructional focus. Frontiers in Psychology 7/1284. https://www.frontiersin.org/articles/10.3389/fpsyg.2016.01284/full
- Clahsen, H., Meisel J. & Pienemann, M. (1983). *Deutsch als Zweitsprache. Der Spracherwerb ausländischer Arbeiter.* Tübingen: Narr.
- Clahsen, H., Vainikka, A. & Young-Scholten, M. (1991). Lernbarkeitstheorie und lexikalisches Lernen. *Linguistische Berichte* 130: 466-477.
- D'Agostino, M. (2018). *La forza delle lingue*. Palermo: Scuola di Lingua italiana per Stranieri. https://www.unipa.it/strutture/scuolaitalianastranieri/Ricerca-/pubblicazioni/collana-strumenti-e-ricerche/
- D'Agostino (2016). Le lingue, ponti o frontiere? Appunti sulla Sicilia linguistica. In F. Feliu & J. M. Nadal (eds.), Constructing languages. Norms, myths and emotions, 57-81. Amsterdam & Philadelphia: John Benjamins.
- Giacalone Ramat, A. (eds.) (2003a). *Verso l'italiano*. Roma: Carocci.

- Giacalone Ramat, A. (2003b). Gerunds as optional categories in second language acquisition. In A. Giacalone Ramat (ed.), *Typology and second language acquisition*, 181-220. Berlin: Mouton de Gruyter.
- Henrich, J., Heine, S. J. & Norenzayan, A. (2010). The weirdest people in the world? Behavioral and Brain Sciences 33(2-3): 61-83.
- Huettig, F. & Mishra, R. K. (2014). How literacy affects the illiterate mind. A critical examination of theories and evidence. Language and Linguistic Compass 8(10): 401-427.
- Klein, W. (2006). On finiteness. In V. Van Geenhoven (ed.), Semantics in acquisition, 245-272. Dordrecht: Springer.
- Klein, W. & Perdue, C. (1997). The Basic Variety (or: Couldn't natural languages be much simpler?). Second Language Research 13(4): 301-347.
- Mocciaro, E. (2020). *The development of L2 Italian morphosyntax in adult learners with limited literacy.*Palermo: UniPa Press.
- Perdue, C. (1993). *Adult language acquisition: Cross-linguistic perspectives. 2 voll.* Cambridge: Cambridge University Press.
- Reis, A. & Castro-Caldas, A. (1997). Illiteracy: A cause for biased cognitive development. *Journal of the International Neuropsychological Society* 3: 444-450.

- Schmidt, R. (1990). The role of consciousness in second language learning. Applied Linguistics 11: 129-158.
- Starren, M. (2001). The second time: The acquisition of temporality in Dutch and French as a second language. Utrecht: LOT.
- Tarone, E. & Bigelow, M. (2005). Impact of literacy on oral language processing: Implication for SLA research. *Annual Review of Applied Linguistics* 25: 77-97.
- Tarone, Elaine, Martha Bigelow and Kit Hansen. (2009). *Literacy and second language oracy*. Oxford: Oxford University Press.
- Tarone, E., Swierzbin, B. & Bigelow, M. (2006). The impact of literacy level on features of interlanguage in oral narratives. In T. D. Baldwin & L. Selinker (eds.), Interlanguage: Current thought and practices. *Rivista di Psicolinguistica Applicata* 6: 65-77.
- Vainikka, A. & Young-Scholten, M. (2007). The role of literacy in the development of L2 morpho-syntax from an Organic Grammar perspective. In Nancy Faux (ed.), Low-educated adult second language and literacy acquisition (LESLLA): Research, policy, and practice. Proceedings of the second annual forum, 123-148. Richmond: The Literacy Institute at Virginia Commonwealth University.

- Vainikka, A. & Young-Scholten, M. (1998). Morphosyntactic triggers in adult SLA. In Marie-Louise Beck (ed.), *Morphology and its interfaces*, 89-113. Amsterdam & Philadelphia: John Benjamins.
- Vainikka, A. et al. (2017). Literacy in the development of L2 English morphosyntax. In M. Sosiński (ed.), Language and Literacy teaching LESLLA students, 239-250. Granada: Universidad de Granada.
- Young-Scholten, M. & Strom, N. (2006). First-time L2 readers: Is there a critical period? In I. van der Craats, J. Kurvers & M. Young-Scholten (eds.), Low educated adult second language and literacy acquisition (LESLLA): Proceedings of the inaugural symposium, Tilburg University, August 2005, 45-68. Utrecht: LOT.