Linguistic complexity and instruction in second language acquisition: introduction

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This special issue investigates the interaction between the development of linguistic complexity, referring to the degree of elaboration, size, breadth, width, or richness of the learner's L2 system, and pedagogical instruction in a second language (L2). The rationale behind the volume is to contribute towards bridging the gap between research and classroom practice. The issue draws on the conviction that theory and research findings may offer teachers deeper ways of understanding L2 learning and their own classrooms, and may encourage them to explore alternative pedagogical approaches. Conversely, teachers' reflections on what works in the classroom – and what does not and why – may give researchers more insight into language learning 'in the wild', leading to new research questions.

The contributions contained in this volume (five research papers and one final commentary) all aim to identify, from different theoretical and empirical perspectives, the effects of various types of pedagogical intervention on the development of syntactic, morphological, and lexical complexity. The following issues are addressed: (a) the impact of different types of instruction on complexity; (b) developmental trajectories of complexity; (c) differential effects of task, genre and modality on complexity; (d) measurement and assessment practices of complexity in L2 instruction; e) teachers' perceptions of complexity.¹

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In the five empirical studies presented in this special issue, focusing on either oral or written data or on both, various methods and approaches have been used, such as meta-analytic and corpus techniques, experimental approaches, Natural Language Processing (NLP), Accelerative Integrated Method (AIM) and Content and Language Integrated Learning (CLIL). In order to gauge complexity (and accuracy) in different target languages and source languages, a wide variety of global complexity measures (e.g. subordinate clauses per T-unit, mean length of T-unit, subclause ratio, Guiraud's index of lexical richness) and more fine-grained measures (e.g. number of modal verbs, n-grams, verb tenses) have been employed. In the articles the following questions are discussed:

- 1 What is the influence of different types of L2 instruction on the acquisition of simple or more complex language features?
- 2 How do different levels of L2 proficiency relate to the development of linguistic complexity?
- 3 What global and fine-grained complexity measures may differentiate performance at lower, intermediate and higher levels of proficiency?
- 4 What effect do language mode, task type and genre have on linguistic complexity?
- 5 How do teachers perceive linguistic complexity in L2 performance and what are the implications for classroom practice and teacher training?

The first question regarding the impact on linguistic complexity of different instructional approaches is addressed in three contributions (Bulté and Housen; Michel, Murakami, Alexopoulou and Meurers; Rousse-Malpat, Steinkrauss and Verspoor). The influence of overall L2 proficiency (question 2) is investigated by all the contributors (Bulté and Housen; Kuiken and Vedder; Michel *et al.*; Rousse-Malpat, Steinkrauss and Verspoor; Vasylets, Gilabert and Manchón). All the contributions devote some attention to complexity assessment and employment of performance measures in relation to L2 proficiency (question 3), particularly in the work by Michel *et al.*, Bulté and Housen, and Rousse-Malpat, Steinkrauss and Verspoor. The influence of language mode, task type and genre (question 4) is explored by Michel and colleagues and by Vasylets, Gilabert and Manchón. The pedagogical implications of complexity research and teachers' reflections (question 5) are discussed by Kuiken and Vedder, and in the final commentary by de Graaff.

We now give an overview of each contribution. The first article by Michel *et al.* investigates the impact of instruction, operationalised as task type effects across proficiency levels on (morpho)syntactic complexity in L2 writing. The analysis is based on a large learner corpus from an online foreign language learning platform, the EF-Cambridge Open Language Database (EFCAMDAT). EFCAMDAT consists of 83 million words based on 128 writing tasks submitted by approximately 174,000 learners worldwide with varying first languages covering all the Common European Framework of Reference for Languages (CEFR) levels from A1 to C2. The 128 task prompts were first categorised for task type (e.g. argumentation, description). Developmental trajectories of syntactic complexity from A1 to C2 were then established using a variety of global and specific performance measures using natural language processing techniques. The paper discusses what measures typically align with certain task types or are good indicators of L2 development. Furthermore, the authors highlight how instruction might relate to L2 developmental trajectories over time.

The paper by Bulté and Housen analyses the effects of a bilingual CLIL programme vis-à-vis a regular monolingual programme on the development of different aspects of L2 learners' lexical and grammatical complexity. Five pupils who enrolled in a Dutch–English CLIL programme in a secondary school in the Netherlands were compared with five peers following the mainstream programme with English as a Foreign Language (EFL) teaching. The longitudinal development of their linguistic complexity in L2-English was investigated by means of six complexity measures calculated for each of eleven writing tasks collected over a period spanning their first two secondary school years. Linear mixed models were used to estimate the effects of time and programme type on the pupils' L2 complexity. The results indicate that both groups of learners significantly increased the complexity of their L2 writing over the course of the study, but also that there was a high degree of intra- and inter-learner variability. Only limited effects of programme type (CLIL vs non-CLIL) were found, suggesting that increased and more varied instructional exposure to the L2 in the CLIL programme did not lead to significantly different L2 productions in terms of linguistic complexity.

The study by Rouse-Malpat, Steinkrauss and Verspoor, conducted among secondary school students in the Netherlands, explores the effects of explicit and implicit instruction in L2-French on linguistic complexity measures. The authors investigated the written data from 43 beginner learners of L2-French with Dutch as their native language, who had had three years of instruction with similar amounts of L2 exposure. The explicit group was given a traditional focus on explicit grammar; the implicit group

was taught by means of AIM. The data from the two groups were compared by means of global and specific measures of (morpho)syntactic and lexical complexity, and by measures of phrasal complexity. Results after three years clearly showed that implicit instruction with AIM led to better writing complexity at various morphosyntactic levels, but also to increases in text length and use of short formulaic routines. No differences were found for lexical complexity.

Vasylets, Gilabert and Manchón conducted a study among instructed L2 learners of English. The aim of the research was to investigate how the manifestation of lexical, syntactic and propositional L2 complexity was moderated by the mode in which the task was performed. The participants, 290 instructed L2 learners of English with Spanish and/or Catalan as their native language, undertook an oral and written narrative video-retelling task. The analysis revealed moderating task-modality effects on L2 complexity. In the written texts, higher scores were found in all the sub-dimensions of syntactic and lexical complexity. Differences were also observed in the way speakers and writers conveyed the propositional content of the task. The findings of the study were interpreted as evidence of the facilitating conditions for restructuring during written production in instructed settings and, accordingly, of the language learning potential of L2 writing tasks.

The paper by Kuiken and Vedder focuses on L2 teachers' reflections on syntactic complexity in academic writing, in two different target languages (Dutch and Italian). The study examines how teachers perceive syntactic complexity in L2 writing, if and how their perceptions differ in different target languages, and how teachers' judgements are related to the development of syntactic complexity as hypothesised in the second language acquisition literature. Two groups of language teachers (eleven of L2-Dutch and sixteen of L2-Italian) were asked to evaluate individually the syntactic complexity of a sample of argumentative texts written by L2 university students of Dutch and Italian of various proficiency levels (A2–B2). The results revealed that teachers tended to focus primarily on accuracy and comprehensibility. When they did focus on syntactic complexity, there were both similarities and differences between the comments of the teachers of Dutch and Italian, possibly related to the target language. Teachers' reflections appeared to be only partly related to the hypothesised development of syntactic complexity in the literature, where the development of syntactic complexity, in relation to the global increase of L2 proficiency, is described in three stages (i.e. co-ordination, subordination, phrasal complexity).

In his final commentary on the five studies, de Graaff, from a pedagogical perspective of classroom practice and teacher training, stresses the necessity to understand the interaction between linguistic complexity and learning challenges, and the implications this may have for language pedagogy and the role of the teacher. As often observed in the literature on complexity growth in L2, linguistic complexity has been found to be affected by task type, genre and modality. Rather than being regarded as a challenge, this may be considered an opportunity for language teaching: using a diversity of tasks, modes and text types may evoke and stretch lexically and syntactically complex language use. It is thus crucial for teachers to understand that complexity development should also be an important pedagogical goal. Syntactic and lexical errors are part of the process of L2 acquisition: more complex tasks lead to linguistically more complex language, and 'errors' are thus a necessary prerequisite for L2 development.

Note

- 1 Each contribution has first been revised by the three guest editors of this special issue, and subsequently by external reviewers and the series editors of ISLA. The guest editors wish to thank all authors for their valuable contributions. We are also grateful to the reviewers for their precious comments and careful reading.