Alessandro Benati* and James F. Lee Introduction to the Special Issue

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The Applied Linguistics Group, lead by Professor Alessandro Benati in the School of Humanities and Social Science at the University of Greenwich organized a one day symposium in September of 2013. The symposium celebrated "Processing Instruction: Twenty Years of Theory, Research and Application". The event acknowledged that the publication of VanPatten and Cadierno's 1993 study gave rise to a very, very productive research program. The idea for this special edition evolved from that symposium and all the symposium plenary speakers have contributed to this volume. This special edition also acknowledges their ground-breaking work.

We begin this volume, fittingly, with Bill VanPatten's contribution, *Foundations of Processing Instruction*. He addresses six issues that are key to understanding processing instruction: (1) the distinction between processing and noticing; (2) the nature of input processing; (3) the nature of language (i.e., what gets acquired); (4) the distinction between knowledge and skill; (5) the explicit/implicit "debate"; and (6) the distinction between method and intervention. He aims to clarify misconceptions about the nature of PI and what it purports to effect, thus distinguishing it from other pedagogical interventions such as text enhancement, recasts, and dictoglosses. He presents six summary statements that, together, form the foundations of PI.

The next contribution is James Lee's, *Milestones in twenty years of processing instruction research*. He identifies particular studies in the database that can be considered milestones, significant developments in the PI research program. He considers a study a milestone if it is the first to address a particular issue, if it changed they way PI research was carried out, and/or if it has inspired further examination. The questions addressed are: (1) Which studies are foundational,

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opening new lines of investigation?; (2) Which studies changed the way we carried out PI research?; (3) Which studies have inspired more research?

Alessandro Benati's study, The effects of re-exposure to instruction and the use of discourse-level interpretation tasks on processing instruction and the Japanese *passive*, questions whether you can get even better results with processing instruction. He explores immediate and re-exposure effects of processing instruction on the acquisition of Japanese passive forms as measured by sentence-level and discourse-level tasks. The passive construction in Japanese is affected by learners' use of the First Noun Strategy. Participants were English native speakers and were randomly assigned to one of three groups (processing instruction, processing instruction and re-exposure, and one control group). Two sentence-level tasks (interpretation and production), and one discourse level-task (interpretation) were used in this experiment. The main findings from the study show that L2 learners receiving processing instruction not only improved in interpreting and producing the target feature at sentence level, but they can also use the target forms to interpret discourse. Learners receiving re-exposure to the processing instruction treatment further improved their performance on both sentence-level and discourse-level tasks in an immediate and delayed post-tests battery.

Justin White continues his line of work on *Primary and secondary effects of processing instruction on Spanish clitic pronouns*. His study investigates the effects of token item frequency in Structured Input activities on both a primary target form (Spanish accusative clitics) and a secondary target form (Spanish dative clitics). Participants were exposed to either 40, 60, 80, 100, 120, or 140 target form tokens. This study included a pretest, immediate posttest, and a delayed posttest measuring interpretation and production of both primary and secondary target forms. Findings reveal that primary form interpretation effects across all frequencies, however, production findings present themselves with the 60 and 80 token groups only. Secondary form interpretation findings reveal themselves across all frequency levels with the exception of the lowest frequency investigated (40 tokens) and secondary form production mirror those found in previous studies on the same forms. As such, he discusses the theoretical and methodological ramifications of these findings as well as offers directions for future research.

Wynne Wong continues to work with discourse-level input in *Input, input processing, and output: A study with discourse-level input and the French causative.* Her study examines the effects of input-oriented instruction and instruction that involves cycles of input plus output via three learning conditions with discourse-level input: (1) an input-oriented task in the form of a structured input reading activity, (2) a reading activity with comprehension questions, and (3) an input plus output-oriented task in the form of a text reconstruction activity, on the

learning of the French causative structure. Results revealed that participants who engaged in the structured input reading activity performed significantly better than those in the other two learning conditions on both an interpretation and a production task.

James Lee investigates transfer-of-training effects in Processing instruction on the Spanish passive with transfer-of-training effects to anaphoric and cataphoric reference contexts. Transfer-of-training occurs when L2 learners receive processing instruction on one particular linguistic item and, as a consequence of instruction, their performance improves not only on the particular linguistic item but on other linguistic items as well. Lee's study examines processing instruction on the Spanish passive, the word order of which places the patient in the grammatical role of subject in sentence initial position and the agent as the object of a preposition in sentence final position. The purpose of the study is to determine whether learners transfer the training they receive on processing the word order of passive sentences to their processing of sentences with anaphoric reference, specifically, accusative case pronouns for which the word order is OnroVS and to sentences with gender-cued, null subject cataphoric reference. Results show that all learners benefitted from instruction on processing the passive but that only some learners transferred the training to anaphoric and cataphoric reference contexts.

Jessica Cox and Cristina Sanz investigate whether individual differences play a role in the effects of processing instruction. Their study, *Deconstructing PI for* the ages: Explicit instruction vs. practice in young and older adult bilinguals. Their study considered the effects of PI (explicit information and practice) in two populations: older (age 60+) and young adults (age 19–27), all of whom were late English/Spanish bilinguals. The participants completed a computer-based lesson on Latin morphosyntax, namely the assignment of the thematic roles *agent* and patient. Interpretation, production, and grammaticality judgment tests were used as pre, immediate post, and delayed posttests. Additionally, a grammar test was administered immediately following the grammar lesson (but before practice). Results show that young adults benefit more than older adults from explicit instruction alone and maintain this advantage in interpretation tasks after practice. Crucially, though, practice eliminated some age effects, as the young adults' original advantage was not present on immediate posttests of grammaticality judgment or production, nor was it maintained on any delayed posttest, largely due to a decrease in young adults' accuracy from immediate to delayed posttest. Results are discussed in terms of pedagogical implications of PI practice for different populations and the idea of the *flipped classroom*.

Alessandro Benati and Tanja Angelovska's study, The Effects of Processing Instruction on the Acquisition of English Simple Past Tense: Age and Cognitive Task *Demands*, investigates the effects of Processing Instruction on two different age groups and the role that cognitive task demands might play in the results generated by Processing Instruction. This study includes school-age children and adult native speakers of German learning English as a foreign language – a language combination not previously investigated within the Processing Instruction and individual differences research paradigm. The ability for learners to interpret and produce English past simple tense marking was measured. The main findings from this study indicate that Processing Instruction is an effective instructional treatment in helping school-age children and adult L2 learners to make accurate form-meaning connections. The positive effects of instruction were maintained over the delayed post-test for both age groups who made similar gains on the immediate post-test (first interpretation and production task). The results from the second (cognitively more complex) sentence-level interpretation task indicated that the adults made greater gains than school-age learners. However, both groups retained the positive effects of instruction over time. The difference in gains between the two age groups on the second sentence-level interpretation task can be explained in terms of cognitive processing load.

Each paper in this special edition was first reviewed by the guest editors. We sent the works out for double blind review once the authors incorporated our comments and feedback. We would like to thank the reviewers for their time, insights, and attention to detail.

Joe Collentine Andrew Demil Claudia Fernadez Pedro Guijarro Fuentes Greg Keating Cecile Laval Michael Leeser Paul Malrovh Erin McNulty Kara Morgan-Short Peter Skehan Andrea Revesz John Schweiter Parvaneh Tavakoli

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