The main aim of this special issue of *Instructed Second Language Acquisition* (ISLA) is to address and illustrate the relationship between second-language instruction, inspired by processability theory, and second-language learning, as a contribution to disclosing, however partially, the complex relationship between theories of SLA and classroom practice. Instructed SLA, according to Long (2017), is a subfield of SLA, and its research findings are ‘often relevant for LT and classroom processes, certainly, but are distinguishable from them’ (p. 8).

Long’s assertion echoes calls from the late sixties and early seventies, when SLA was not yet called SLA, and when there was a feeling, with Corder (1967) at the forefront, that looking at what language learners did, focusing especially on errors, would be of interest to researchers. Corder assumed learners possessed a kind of in-built syllabus and believed that such research might turn out to be beneficial for teachers of languages. Ever since, however, the relationship between research and teaching has been a rather elusive one. Reacting to the behaviourist approaches to language teaching prevalent at the time Dulay and Burt (1973) responded in the negative to their own question whether children should be taught syntax. These and other researchers, most notably Krashen (Krashen and Terrell 1983) came to assume the existence of a ‘natural order’ of language development, regardless of the learner’s age or first-language background, then the role of the teacher was that of providing comprehensible input.
just a little beyond the current level of the learner, in what they called
the ‘natural approach.’ This resonates well with L1 acquisition: given the
largely implicit nature of language learning, it should be enough to provide
natural input, and the learner will inevitably learn. However, children
acquiring their mother tongue receive many thousand hours of exposure
(in context) by the time they reach five years of age. On the other hand, a
primary-school child learning an additional language through instruction
(e.g. through a two-hours-per-week programme), would barely obtain 500
hours of exposure over five years. Besides, one of the most evident differ-
ces between first and later language acquisition is that all children with
normal faculties and given normal circumstances achieve full mastery of
their L1, whereas the rate of success in acquiring an additional language,
whether in natural or instructed conditions, is reported in SLA literature
as highly variable (see e.g. Larsen-Freeman and Long 1991:153; Lightbown
and Spada 2013:75).

In a recent article discussing the relationship between SLA theories and
language instruction, VanPatten (2020) candidly declares ‘that most L2
theory and research is irrelevant to language teaching, [and] that most of
what is relevant to language teaching we’ve known for some thirty years’
(p. 271, original emphases). This position finds support in a current paper
of Lydia White (2022) who explains that ‘the assumption that theories must
have applications involves a fundamental misconception: linguistic theo-
ries explore the nature of grammar; GenSLA theories explore the nature of
language learning. No such theory entails that language must be taught in
a particular way’.

True enough, SLA theory and research are about learning and not about
teaching. Nevertheless, there is room for finding some common ground.
First of all, VanPatten does not exclude that at least some SLA research
may have some relevance for teachers, even though the research itself is
distinct from classroom processes. At its most general, ‘teaching involves
helping someone else to learn’ (VanPatten 2020:274), so one needs to have
some notion of what learning might look like over time and what is it that
is being learned. In other words, teachers need to know not so much about
theories but rather some basic facts regarding L2 acquisition, facts which
exist beyond theories. Indeed, theories are called upon to account for those
inter-subjectively observable phenomena based on a set of widely accepted
principles and, so far, no SLA theory would claim to fully account for the
complexities of acquisition. However, some of the facts themselves are clear
enough and commonly acknowledged across several theories. For instance,
the graduality and stage-like progression of L2 learning; the fact that learn-
ers appear to follow a similar path in acquiring L2 regardless of their L1
background; the fact that these stages cannot be skipped and cannot be altered by teaching, because language learning is a largely learner-internal, implicit process; and that there is a range of variation in the way learners go about acquiring these stages. The systematic but at the same time variable nature of language acquisition is one of the inter-subjectively observable phenomena that relate to development but which do not, of course, exhaust the complexities of the language acquisition process. Nevertheless, they are an important chunk and a useful set of facts for teachers to be able to 'help someone to learn' an additional language. Yet, these facts of acquisition do need explanation: how can we know whether learning is occurring? When can we say a learner has achieved a particular level? what comes next? Are those stages predictable? And so on.

The SLA theory that has most sharply focused its descriptive, explanatory and predictive capacities on the developmental aspects of L2 learning is, arguably, processability theory (Pienemann 1998). In its two and a half decades of activity, this theory has continuously evolved to account for a wider range of developmental phenomena, as can be appreciated, for instance, from one of the papers in this volume of ISLA (i.e. Nicholas, Pienemann and Lenzing). Processability theory (PT), as we know it today, did not happen overnight either and had its own developmental trajectory that can be traced back to the multidimensional model elaborated on in the late seventies (see e.g. Meisel, Clahsen and Pienemann 1981) and continued with Pienemann’s experimental work that propelled the teachability hypothesis and his work on learnability and syllabus construction (Pienemann 1984 and 1985, respectively), followed by a rich article with Johnston on factors influencing L2 development (Pienemann and Johnston 1987). We could go on, but, of course, this is not the place and space to summarise such history nor to detail the theory itself (interested readers can consult the given references). However, for the purpose of these introductory remarks, it may be appropriate to offer a brief definition from a contemporary presentation by the author:

Processability theory (PT) (see e.g. Pienemann 1998) is a theory of second language development. The logic underlying PT is as follows: At any stage of development the learner can produce and comprehend only those second language (L2) linguistic forms which the current state of the language processor can handle. It is therefore crucial to understand the architecture of the language processor and the way in which it handles an L2. This enables one to predict the course of development of L2 linguistic forms in language production and comprehension across languages (Pienemann and Lenzing 2020:162, emphasis added).
Processability, like other SLA theories, is not able to look inside learners’ heads and directly observe the internal learning process. PT works essentially on inferences drawn from analysing, as Corder suggested, data from actual learners. PT privileges oral production data (but the complete learner’s production, not only the errors) occurring in natural interaction around; for instance, a task, interview, etc. The data is looked at from the vantage point of psycholinguistics, particularly Levelt (1989), from where PT derives its hierarchy of processing procedures which potentially have a universal application. The task facing the learner, then, is to assemble, step by step, stage by stage, the language-specific procedures needed to handle L2. Naturally, the linguistic outcomes of these procedures will be different for different languages but will always follow the same sequence. For PT to be able to predict across languages, it adopted a formal grammar, such as Lexical Functional Grammar (see e.g. Bresnan 2001) for a consistent and coherent description of structures encountered in the course of researching the learning of any language. The hierarchies proposed by PT have been positively tested empirically on about thirty second languages (Kawaguchi et al. in press) arguably over the widest typological range examined by a single L2 theory. The predictions for English L2, in particular, have been borne out with learners from a great variety of L1 background, ages and environments, including various bilingual constellations. Works on PT applications for L2 teaching, including those in combination with Long’s (1991) focus on form, (e.g. Hardini et al. 2020, Mohamed Salleh et al. 2020), would make a long list. The interested reader may be referred to Baten and Kessler (2019) for a historical overview of the extensive relationship of PT with instructed SLA works. The points of reference emerging from approximately three decades of PT’s work for potential guidance in L2 teaching are, then, empirically well supported, in and out of classrooms, and turn out to be remarkably robust. So, while PT does not say that an additional language should be taught in any particular way (but Long’s (2015) handbook on SLA and task-based language teaching may be very useful in this connection), teachers can look with confidence at the clear points of reference offered by PT on how learners are likely to proceed in their L2 learning, and what to expect and what to offer at what point to help them learn.

Turning now to the works presented in this special issue, it may be said that they cover a wide area: (i) an empirical study inspired by PT and focus on form, (ii) an application of PT principles to textbook creation, (iii) an engaging theoretical leap into dynamical systems and their tangible application to a scientific explanation of variation in SLA and how teachers can benefit from these understandings. This is followed by (iv) a short

Kawaguchi and Hardini open the substantive part of this issue of ISLA with an empirical study of an EFL programme involving two groups of ten children each in an Indonesian kindergarten. The novelty is that this communicative (meaning-based) EFL programme (3 hours \( \times 5 \) days) included, experimentally, a segment inspired by PT (Pienemann 1998) and FonF (Long 1991, 1998), called ‘Developmentally Moderated Focus-on-Form’ (DM FonF) (Di Biase 2002, 2008). Fitting this sort of programme into R. Ellis’ (2022) dichotomy of either focus-on-form or form-focused instruction may turn out to be rather problematic though, as this alternative points towards a continuum between the two rather than categorical types. The DM FonF segment focusing on lexical and phrasal plural marking of nouns accounted for less than 4% of the programme. Prior to this study, all the children had been learning English for 6–18 months, but none could mark plural at pre-test. At the end of the three-month experiment, all the children had acquired lexical plural (PT stage 2), and most of them had also acquired plural agreement (PT stage 3). The study explored the reasons for this result. To explain this outcome, the authors perform a comparison of the linguistic environment created in the classroom by the DM FonF segments and purely communicative segments. Apart from the developmentally moderated choice of the type of structure to focus on, it reveals nothing particularly arcane or miraculous: the linguistic environment in the classroom (input, interaction, feedback instances, feedback types) was much richer during the DM FonF segment. The researcher also advised the teacher on how to implement DM FonF. This type of instruction could, then, begin to address the main problems Shirai (2012) identifies for EFL, as opposed to ESL, programmes such as the insufficient quantity of input and quality of interaction in the target language, insufficient teacher training and failures in the appropriate implementation of SLA research. DM FonF appears to offer the potential to solve all three problems.

This special issue next addresses the creation of a research-based textbook for learning L2. It may be difficult to imagine instructed SLA without some kind of textbook, yet textbooks for L2 have often come under fire for purportedly ignoring SLA research. In her recent evaluation of several English L2 textbooks used in Chinese primary schools, for one example, Tang (2019:236) encapsulates a common and telling criticism levelled at L2 textbooks: ‘It appears that concerns with the utility of grammatical structures in a given context take precedence over concerns for L2 development.’ The author of the second paper in this publication, Flyman Mattsson,
having herself examined more than twenty Swedish L2 textbooks designed for immigrants to Sweden, found, unsurprisingly, inconsistencies between the order of presentation of structures and what research revealed two decades earlier about learners’ developmental sequences. She could neither find consensus among the textbooks about what to teach or when (Flyman Mattsson 2016). However, even for someone who has already selected which theoretical framework to follow, such as PT, as Flyman Mattsson (this volume) shows, the task is not an easy or straightforward one. Having examined the SLA literature and found sufficiently robust evidence that stages of development cannot be skipped, she identifies some of the obstinate problems textbook constructors will have to battle with within a PT framework, such as the inevitably heterogenous classroom (Lightbown 1985), and the purportedly limited number of structures treated in PT. Indeed, no SLA theory can claim to cover more than partial ground. This last problem, though, has become smaller in light of the extensions to the framework (e.g. Pienemann et al. 2005; Bettoni and Di Biase 2015). The central issue, in any case, is keeping track of learners’ development at all times. Guided by Pienemann’s (1985) work on learnability and syllabus construction, as well as later developments on focusing and tasks, Flyman Mattsson takes the reader gently through the bumpy road of constructing a developmentally meaningful textbook and shows that, although difficult, the task is not impossible.

Next in this special issue of ISLA, Nicholas, Pienemann and Lenzing take us for an exciting excursion into dynamical systems theory (DST) proper from a processability viewpoint, and show how it turns out to be useful not only for the development of PT at a theoretical level but also in practice. ‘Proper’ is meant here in the sense that the authors use the scientific and mathematical core of the theory to approach genuine concerns in PT and, more broadly, SLA, such as variability, and simplification (an aspect of stabilisation) in second-language learners. This constructive application of DST to SLA is fundamentally different from the ‘postmodern DST metaphors’ currently popular among some applied linguists (see e.g. Larsen-Freeman 2006 and De Bot et al. 2007) in what has been referred to as ‘the dynamic approach’ (Pienemann et al. 2022). Rather than stopping short at a critique of the metaphorical use of DST propounded by Larsen-Freeman and others, Pienemann and colleagues, following Long’s (2003:512f.) call for an operationalisable and testable concept, propose a cognitive mechanism to deal with linguistic simplification and variability. Pienemann and colleagues actually found that ‘the formal, mathematical architecture of DST is particularly well suited for a simulation of the cognitive stabilisation mechanism that Mike Long asked for’ (Pienemann et al.
So, far from the universal unpredictability of dynamical systems expounded by the users of the ‘chaos’ metaphor, Nicholas et al. (this issue) demonstrate that predictability, as for every scientific theory, is an essential characteristic of DST, and that it is possible to integrate what is predictable in learners’ behaviour with the intra-personal and inter-personal dimensions of language use. These scholars also offer an outline of empirical findings that can serve to test the connectedness of variation and developmental pathways, which shows, significantly, that some pathways lead to stabilisation and others to the target language. Their proposal suggests that it is possible to integrate these insights with a pedagogic approach that supports teachers in their management of learner and situational variation by offering, as PT does, some steady points of reference and predictable, scientifically based outcomes (which are always falsifiable), rather than the uncertainties of chaos narrative.

The final paper is a short report by Kessler that can be motivated by issues concerning the relationship between teaching and research recently raised by VanPatten (2020), who asks: ‘Where do teacher education students of language get any background in the nature of language, the nature of communication, and the nature of language acquisition, for example? The answer is that they tend not to. And yet it is precisely a background in these areas that would help to shape the teacher education student’s ideas about both what to teach (or what not to teach) and how to teach’ (p. 276). Kessler’s work (this issue) reports precisely on such an enterprise in a German university of education, where he recently organised a course for future teachers of language precisely around the linguistic development of learners over time through the framework of PT. The reader will soon realise that this course is definitely not about methods of teaching or syllabus organisation but rather about raising a sort of, let’s call it, developmental awareness or learner-internal sensitivity in future teachers of language. This may not be regarded as ‘relevant’ by future teachers or even by teacher trainers (some of us in SLA have had to bear this sort of ‘evaluation’), but Kessler’s report shows how it can be an illuminating and stimulating experience for both students and teachers.

Those interested in finding out more about what PT can offer to fill the gap between SLA theory and additional-language teaching practice can whet their appetites by reading Yamaguchi’s review at the tail end of this ISLA special issue of a recent volume by Arntzen et al. (2019), dedicated by several PT scholars precisely to achieving, though their research in and out of classrooms, a fuller understanding for the relationship between SLA theory and language learning/teaching practice and how it all cycles back to prompt further theoretical developments.
References


Processability Approaches to Second Language Instruction


