

Reconnecting to Second Language Acquisition for Innovative Language Pedagogy

Alessandro Benati^{a,*}

^a University College Dublin, Ireland

ABSTRACT

This paper makes a strong connection between the need for innovation in second language pedagogy and the need for language teachers to develop a good understanding of how language develops in our minds/brains. The future for innovative language pedagogy requires that language teachers fully develop the following: (i) a working definition of the nature of language; (ii) a working definition of communication; and (iii) a good knowledge of how language acquisition happens. In the field of both language teaching and language research, there is a need for teachers and researchers to reconnect to second language acquisition theories to ensure that any decisions about language pedagogy are informed and evidence-based. The main question which must be addressed by the experts is: How do we make the knowledge outlined above, commonplace in language teaching?

Keywords: second language acquisition; language pedagogy; language; communication

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* Corresponding author: University College Dublin, Ireland Email address: alessandro.benati@ucd.ie © Urmia University Press

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Common beliefs

Language teachers make several decisions when they begin to teach a language course. They decide, for example, on the language teaching approach to use. In making such a decision, they are constrained by a variety of factors: (i) their knowledge; (ii) their experience; and(iii) the existing curriculum standards, assessment rules, and guidelines provided by institutions and professional organizations. In addition, their decisions are driven and informed by elements such as the age and proficiency level of the students, the curriculum they need to cover, and the availability of the teaching materials.

Language teachers do not often fully understand what language is and how language acquisition grows in our minds (VanPatten, Smith & Benati, 2019). This limitation in their knowledge means that they might develop a limited and inaccurate understanding of language and language development. They might form the idea that people learn languages by studying, memorizing, practising, and taking tests. They might end up believing that language is acquired like any other skill such as playing tennis or driving a car. In terms of communication, language teachers might believe that people develop communicative skills through Question/Answer (Q/A) activities or through the use of open-ended questions which engage students in speaking.

In addition to these common beliefs, language textbooks tend to provide activities following a traditional approach to language teaching particularly when it comes to the teaching of grammar. For example, in traditional language teaching, explanations about rules are normally followed by mechanical and drill practice about the grammatical forms of the language. Vocabulary learning is separated from grammar learning. Vocabulary is largely taught and acquired through repetition and memorization and errors made by L2 learners are immediately corrected as it is believed that they cause bad habits. These beliefs and these practices are in most cases reinforced by existing teacher education curricula as the nature and role of language and language acquisition are largely absent from teachers' formal education. In this scenario, language becomes a subject matter similar to history, mathematics, or science. The language teacher only needs general principles of education and learning to make decisions about language pedagogy. In this way, language teachers tend to pursue a non-evidence-based and non-cognitive-based approach to language pedagogy, largely driven by their experience and limited knowledge (Benati, 2021).

Broken expectations

Instructed second language acquisition is a branch of research investigating how different types of pedagogical interventions might influence language development. This type of research has generated several expectations from language instructors. The first expectation is the possibility that instructional interventions can support and foster language learning. The second expectation is the fact that research in this field should always be relevant to language instructors and instructors. Have these expectations been fulfilled? The straight answer to this question is no, and manly for three main reasons.

Firstly, research on the effects of instruction has lost its way as it has dismissed several key facts about the special characteristics of language and how people learn languages (Benati, 2020).

Secondly, research on the effects of instruction has very often proceeded in a very atheoretical way not considering and defining important constructs such as language and explicit vs. implicit knowledge.

Thirdly, research on the effects of instruction has not consistently investigated implicit knowledge and the long-term effects of instruction. Instead, it has been limited to measuring mainly explicit knowledge using explicit types of tests, and overall short-term effects of instruction.

What do we need to do to overcome these shortcomings? We need to reconnect to research and theory in second language acquisition. We need to know language and language acquisition (VanPatten, 2017). We need to develop a cognitive and evidence-based approach to language teaching (Benati, 2024).

Basic facts

Second language acquisition is a field of inquiry that investigates how L2 learners acquire a language that is not their first language. In investigating and understanding how L2 learners process and produce linguistic forms in another language, scholars (e.g., VanPatten, Smith & Benati, 2019) in second language acquisition have raised some specific questions:

- How do L2 learners process these forms in the input?
- How are these forms represented in L2 learners' language systems?
- How does this representation affect the new language system?
- How do L2 learners put their competence about the new forms to use?

In addressing these questions, they have provided some important insights into what language is and how language is acquired by L2 learners, which have clear implications for language pedagogy (Benati, 2020, 2021):

- the key element for language acquisition is input
- language acquisition is processing-dependent
- language is an abstract, implicit, and complex system
- explicit and implicit knowledge is qualitatively different
- instruction has a limited role
- output plays a secondary role in language acquisition
- output processing is constrained

Comprehensible and message-oriented input is the key element for language acquisition

Input is the language we hear and read and carries a message which needs to be comprehended by L2 learners. Exposure to comprehensible and meaningful input is the key ingredient and basic element for successful language acquisition. For input to be fully processed and effectively comprehended it must be simplified by language teachers so that it is easy to process by L2 learners. Input can be simplified linguistically by using highly frequent words or using simple and clear sentences. Using drawings and pictures can also make input easier to process and comprehend.

Negotiation of meaning through conversational interactions made by both native speakers (teachers for example) and non-native speakers you need a verb (language students for instance) to clarify meaning facilitates comprehension. Comprehension (e.g., *Did you get it?*) and confirmation checks (e.g., *Did you mean...?*) provide a form of negotiation to ensure there is clear communication and understanding between two speakers.

Comprehending the message embedded in the input is necessary for language acquisition (Lichtman & VanPatten, 2021). Features of language make their way to the system if a formmeaning connection is achieved. For instance, the word 'dog' must be tagged with its meaning (four-legged canine that barks), and the connection is a candidate for integration of data into learners' language system. Further meaningful exposure to the form will facilitate integration in the system, and once integrated this connection should map with other words which are lexically and semantically connectable. Language acquisition involves linking meaning/function to linguistic forms in the input during comprehension and strengthening these links through language use.

Language acquisition is processing-dependent

Empirical research (Hawkins, 2019) has demonstrated the existence of natural orders and stages in language acquisition. For example, L2 learners with different L1 backgrounds acquire specific language morphemes in a particular order (e.g., in English, progressive morpheme *-ing* is learned before the third person singular *-s*).

L2 learners also tend to follow particular stages in the acquisition and use of language structures such as English negation. Regarding this structure, L2 learners tend to use *No drink* before they can use, *I don't drink* as they follow certain internal and natural developments before they can use this structure correctly. Language acquisition seems to be constrained by both natural orders and acquisition stages and language instruction might have a limited influence on natural language development (Sharwood Smith & Truscott, 2014).

The development of a language system is also processing-constrained. L2 learners are only able to process a small proportion of the language they are exposed to in the input. Intake is called the actual input processed. L2 learners have internal mechanisms responsible for how input is processed and stored in working memory. These mechanisms help L2 learners to cope with the amount of language input to be processed (Robinson, 2003) so that they are not overloaded with information. Two main internal processing mechanisms have been identified that help L2 learners to deal with the language they need to process: (i) language is processed for meaning before it is processed for form; (ii) the first element encountered in a sentence is processed as the subject of that sentence. The first internal processing mechanism indicates that L2 learners will process content words (e.g., nouns) first before they process forms (e.g., verb endings). This might cause a delay for L2 learners in making appropriate form-meaning connections while processing language. The second processing mechanism asserts that L2 learners rely on the first noun they encounter when processing syntactic structures in the input. This reliance can lead to misprocessing and delay in the acquisition of the particular structure. For example, in the case of a sentence such as Paul had his car washed last Monday, L2 learners would misprocess Paul as the person who washed the car. Misunderstanding the meaning of the sentence would cause a so-called failure and a delay (wrong processing of a syntactic structure) in the acquisition of causative forms and the word order pattern in English. In addition, language development is universally constrained. Some aspects of language are universal and are available to learners from the start. For instance, in the case of English contractions (e.g., I'm, I've), English native speakers know without receiving any instruction when the use of the linguistic feature is allowed or not.

Language is not a skill

The language system is a complex, implicit, and abstract system consisting of features and operations. It is complex because it is multi-componential. It involves the acquisition of syntax, morphology, phonology, and other components of language. It is implicit as it involves implicit processes which affect the system over time. Formal elements of language are acquired implicitly and through outside awareness. It is abstract as it is difficult to describe and does not look like the rules and charts found in language textbooks. Our language system instead, resembles a network of connections between words/forms and their specific meaning/s. L2 learners access the necessary information to string elements of a sentence together in stages and comprehensible/meaningful input triggers these processes. Language cannot be considered a skill. People have special internal mechanisms which deal with language acquisition.

Language is not the same thing as communication. Language is a mental representation and consists of structures, abstract features, and a variety of components that interact with each other to form sentences. Communication instead is influenced by social context and manifests itself in different ways depending on who is communicating with whom and for what purpose.

In traditional language teaching, language instructors provide L2 learners with explicit information about language rules and this is followed by mechanical drill practice. This practice does not foster language acquisition as it does not correspond to the way language information is processed in our mind/brain. Language is not acquired like any other skill. Humans develop an internal, abstract, and implicit system as a result of exposure to language input. Language textbooks treat language like any other mental phenomenon. However, what winds up in our mind has no resemblance to anything found in language textbooks. Rules only describe the surface parts of a sentence but not the underlying information which they carry and are inside our heads. Complex interactions of principles, constraints and internal/implicit mechanisms are responsible for language development. This implicit system is not affected by explicit learning as explicit and implicit knowledge is qualitatively different.

Implicit and explicit knowledge is qualitatively different

Our so-called 'mental representation' of language is shaped by implicit processes as we are exposed to comprehensible and meaningful language input. Explicit knowledge plays no role in this process as it contributes to the development of metalinguistic knowledge (VanPatten & Smith, 2022). Explicit knowledge is associated with conscious knowledge of the language, whereas implicit knowledge is unconscious in nature. They are two separate and different systems, and there is no real empirical evidence available to show the interface between the two. Explicit knowledge is verbalizable knowledge about the language such as 'to talk about someone else in the present, we need to add the *-s-* sound to the end of the verb such as *sees* versus *see*'. Implicit knowledge is instead considered unconscious knowledge and it is not verbalizable. It is the ability to understand or supply '*sees* and *not see*' when required and without any conscious knowledge. There are no mechanisms that might turn explicit knowledge into implicit knowledge (VanPatten & Smith, 2022). Language acquisition is implicit in nature and explicit rules taught by language teachers do not have any influence on the development of the language system (VanPatten, 2016). Instruction might affect the development of explicit knowledge, at least in the short term, and this practice fosters the development of a learning-like behaviour (DeKeyser, 2020).

Instruction has a limited role

Traditional instruction does not lead to the development of language as a mental representation, and L2 learners develop their internal language systems without the influence of instruction and corrective feedback. The way L2 learners develop their language system is similar to how L1 learners develop their first language. Empirical research (Benati, 2022) measuring the effects of instruction in second language acquisition has demonstrated the following:

- Instruction does not affect the route of acquisition;
- Instruction does not affect ultimate attainment (although this is difficult to measure);
- Instruction might have a limited effect on the rate of acquisition under certain conditions.

The main condition for instruction to affect language acquisition is that it should provide L2 learners with opportunities to focus on form (e.g., enhancement of the form in the input) and a focus on meaning while exposed to good quality and meaningful input.

Output plays a different role from the input

Output is the language that L2 learners need to produce to express meaning in spoken, written, or signed forms. When learners produce output, they are not engaged in comprehension as they are with input. The output does not have the same role as the input as it does not provide the language system with the basic data for its development. The output does not have a direct impact on how the language system grows in our mind/brain; however, it might help L2 learners develop particular skills such as using language correctly and fluently in real-time. No evidence is available to demonstrate that output might contribute to the acquisition of syntax or play any significant role in language acquisition. In short, interaction may have a facilitative role in the acquisition of lexical items (words) and promote the acquisition of transparent features which expresses only one meaning. However, interaction cannot lead to the development of language as a mental representation. The mechanical output practice used by language teachers in the language classroom is not the same language that L2 learners would normally use in communicative exchanges. Output communicative activities should be designed to help L2 learners to use the target language in a specific context and for a specific purpose.

Output processing is constrained

L2 learners have access to language for language production and draw the necessary information to string together linguistic elements in a sentence in predictable stages and procedures. Initially, they have access to simple words such as *no* (no procedure). Subsequently, they can add a feature (category procedure) such as a verb ending to certain words and do not have to match anything else in a sentence. The noun phrase procedure is the stage where L2 learners can then add endings to words that have to match within a noun phrase such as plural -*s* which has to match with *two* as in *two cars*. The verb phrase procedure consists of moving an adverb out of the verb phrase to the front of a sentence as in *I went to the cinema last night/Last night I went to the cinema*). After this stage, L2 learners can access information to be able to add endings to words that have to match across phrases in a sentence such as subject-verb agreement. If a learner is at stage 3 (noun phrase procedure), he/she cannot produce grammatical structures that require the procedures at stage 4 and above. Language teaching is therefore constrained as L2 learners cannot skip stages and their internal procedures must build up over time.

Main implications for language pedagogy: Back to basics

What emerges from an analysis of the role and nature of language is that it is a special and mental phenomenon, and it is not acquired in the same way as any other skill in life. The motto 'practice does not make perfect' is used in this context to emphasize that humans possess mechanisms specifically designed to deal with language. Language is complex, abstract, and implicit, but skill learning is not the same as the creation of an implicit system. Language acquisition involves the development of an implicit, abstract, and complex language system and there are no mechanisms (no evidence for this) that turn explicit into implicit. Language acquisition involves the formation and strengthening of form-meaning connections. Grammar is concerned with the relation among words in the language. There is no separation between vocabulary and grammar. Small units of language (morphemes) are acquired as part of words and not in isolation (Nation, 2022).

Language acquisition grows through exposure to comprehensible and meaningful input. There is no evidence that output practice affects our language development system.

Language acquisition is constrained (processing, linguistic and universal constraints). The development of the language system is slow, order-like (e.g., *-ing* is learned before *-s*), and stage-like (e.g., *No drink* emerges before *I don't drink*). It consists of different processes. It is constrained by learner-internal processing strategies and mechanisms (e.g., learners process words before forms in the input they are exposed to) which are universal.

Considering these givens in second language acquisition, the main implications for language pedagogy are:

- Comprehensible and meaningful input is the main ingredient for successful language acquisition. L2 learners must process and comprehend language effectively and attach meaning to it. Providing explicit information about features of language is not necessary and it is not considered input for acquisition. Instead, L2 learners must be exposed to simplified input which is easy to process. If it is not simplified, input runs the risk of not being processed and comprehended at all. Examples of good language input are when L2 learners have the opportunities to be exposed to meaningful language which needs to be processed for its meaning. Negotiation of meaning can facilitate comprehension and communication among speakers;
- Good input language for acquisition is not about providing explicit information on the linguistic properties of a language which is followed by mechanical practice about those linguistic properties. Drill practice does not lead to language development and is simply mere mechanical practice about particular grammatical features. L2 learners do not acquire languages through imitation, repetition, and mechanical practice. The implicit, abstract and complex language system grows through the interaction of several internal factors and it is not affected by explicit rules and formal explanations. Drills do not foster language acquisition;
- A focus on grammar should be provided through input enhancement and with opportunities (structured input activities) for L2 learners to make accurate formmeaning connections. Pedagogical interventions such as textual enhancement (e.g., boldfacing specific forms in the text) can be effective for L2 learners to notice and process grammar. Structured input activities (Benati, 2022) can help L2 learners to make appropriate form-meaning connections in the input they are exposed to. If we need to focus on form in the language classroom, pedagogical interventions should focus on both form and meaning and output practice should follow input practice. A

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grammar component in language teaching should involve the use of pedagogical interventions which aim at drawing L2 learners' attention to linguistic features in the input and facilitating language processing (Long, 2018);

- Vocabulary is acquired through exposure to meaningful input and is not learned by heart or by memorizing and mechanically learning words. To acquire vocabulary, all words need to be embedded in comprehensible and meaningful input frequently and repeatedly to facilitate word-meaning connections. Non-linguistic means such as pictures and drawings can be used to make vocabulary comprehensible to L2 learners. As in the case of grammatical forms, individual words might be enhanced in the input to facilitate comprehension and processing (Wong & Barcroft, 2020);
- Implicit error correction (corrective feedback) might play a facilitative role in helping L2 learners process linguistic items of the target language through the language input they receive. Corrective feedback is more effective when L2 learners are actively engaged in negotiating a form, or when they have to think about and respond to the language instructor's feedback in some way. The opportunity of negotiating forms is better achieved when the language instructor does not provide the correct form but instead, he/she provides cues in the input to help the learner consider how to reformulate his or her incorrect language;
- Communication is not simply Q/A, language practice or just speaking in the target language. Communication is defined as the expression, interpretation, and negotiation of meaning for a specific purpose in a given context. It is crucial that we fully understand the nature and role of communication to provide meaningful opportunities to exchange information in the language classroom. Exchange information tasks are a good example of communication tasks and should substitute traditional oral practice (Benati, 2021);
- Output practice must have a communicative purpose and be linked to specific intents, and the meaning of the language. L2 learners produce language to make a grocery list, plan a holiday, or attend an interview for example. The kind of traditional output practice used by language teachers in the classroom is not communicative. In traditional practice, L2 learners are asked to transform a sentence with the correct linguistic form, and/or engage in practice where the focus is grammar. In output as part of meaningful interaction, L2 learners engage in real communication exchanging previously unknown information (Lee, 2000).

Overall, an acquisition-driven approach to language pedagogy should have the following characteristics:

- Exposure to comprehensible and meaningful language input;
- Exposure to simplified language input through linguistic and non-linguistic means;
- Provision of opportunities for interaction and negotiation of meaning;
- Language production to express meaning;
- Provision of focus on form that is meaning-based and tied to input and communication;
- Provision of implicit corrective feedback;

- Use of language tasks where L2 learners are taking a more active role in interpreting and eventually producing the target language;
- Exposure to meaningful activities in which L2 learners need to exchange previously unknown information.

Language instructors should move from input to output practice based on the language development model displayed below.

Input → Intake → Developing Language System → Output

↑ Instruction

Answers to key questions

Do L2 learners acquire language via comprehensible and meaningful input? YES

Comprehensible input remains the foundation of language acquisition. Acquisition of a linguistic system is input dependent, meaning that L2 learners must comprehend the language they are exposed to constructing that system (Piske & Young-Scholten, 2009).

Can we change the order of acquisition? NO

Acquiring a language is constrained by particular orders and stages. Forms and structures are processed by learners following particular sequences (Pienneman & Kessler, 2011).

Does explicit knowledge turn into implicit knowledge? NO

What we call grammar rules are not the way language is represented in the mind/brain. Rules are not the starting point for acquisition (VanPatten & Rothman, 2014). Acquisition of a linguistic system is largely implicit (Jackendoff, 2002).

Can Q&A be equated to communication? NO

Communication is not answering questions or merely engaging in speaking. Communication is the interpretation, negotiation of meaning, and expression of language in a given context for a specific context. Meaning refers to the need to convey a message. Interpretation and expression are linked as while we are trying to express a particular meaning through language someone else is expected to understand our message and intent (VanPatten, 2018).

Should we teach and practice specific grammar points? NO, but input manipulations to facilitate form-meaning connections has a facilitating role.

No meaningful support has been provided for the position that grammar rules should be taught. There should be no separation between vocabulary and grammar in language teaching. Features like person-number endings on verbs must be learned from the input like anything else as they cannot be taught and practised to build a mental representation of them. An explanation of grammar and mechanical practice (use of drills) are not conducive to language acquisition. L2 learners do not acquire languages through imitation and repetition. The language's internal developing system is not affected by learning the explicit rules of a target language. Drills do not foster language acquisition. The focus should be to provide a focus on form through input

manipulations. Learners should be encouraged to make accurate form-meaning mappings. Pedagogical interventions should focus on both form and meaning and output practice should follow input practice (Benati, 2021).

Can we learn vocabulary by memorizing words? NO

L2 learners should be given opportunities to process new words. Vocabulary learning and teaching should consider the following: (i) present new words frequently and repeatedly in the input; (ii) use meaning-bearing comprehensible input when presenting new words; (iii) limit forced output during the initial stages of learning new words; (iv) limit forced semantic elaboration during the initial stages of learning *new* words; and (v) progress from less demanding to more demanding vocabulary-related activities (Barcroft, 2018).

Does corrective feedback affect language acquisition? YES and NO

Explicit corrective feedback provides learners with a meta-linguistic explanation or explicit error correction. This kind of direct error correction might have a temporary effect (improve performance) on L2 learners but does little good in the long run (it does not cause a change in L2 learners' implicit system). Corrective feedback should be indirect and implicit and should result in uptake. Implicit corrective feedback indirectly and incidentally informs learners of their non-target-like use of certain linguistic features. Recasts, confirmation checks, clarification requests, and even paralinguistic signs such as facial expressions can all constitute implicit corrective feedback and might have a facilitative effect (Nassaji, 2015).

Does explicit information help acquisition? NO

Explicit and paradigmatic information about grammar does not help language development (Benati, 2021). Elaborated grammatical explanations do not correspond to the way L2 learners internalize the language.

Does output practice make a difference? YES and NO

Mechanical output practice makes no difference and it does not lead to language acquisition. Output in the form of interaction is the language produced by learners that has a communicative purpose and is produced for a specific meaning. Communicative and interactive tasks (e.g., exchange-information tasks, process-oriented written tasks) can facilitative acquisition. L2 learners benefit a great deal from exposure to comprehensible input, conversational interaction, and opportunities for negotiation of meaning (Lee, 2000).

The way forward

Second language acquisition is input-dependent (comprehensible and meaningful input) and it is affected by internal and universal mechanisms of language. Second language acquisition involves the development of an implicit, abstract, complex, universal, and constrained language system. Features of language are processed through form-meaning connections and there is no separation between grammar and vocabulary. Explicit knowledge does not turn into implicit knowledge and skill acquisition is different from the creation of an implicit system. Learners must tap into the implicit system to create and produce language.

Any consideration for language pedagogy should, minimally, account for these observations. To move forward, to bring real innovation and fulfil language teachers' expectations we need to address the following key question: How do we reconnect to second language acquisition for innovative language pedagogy?

Several steps need to be taken to reconnect to the theory and research in second language acquisition to positively influence language pedagogy.

Firstly, we need to develop appropriate training for language teachers to drive a change in practices and policies regarding language curriculum. Curriculum or language teaching materials must be genuinely informed by what we know about language and language acquisition. An innovative approach to language pedagogy should address some of the main pedagogical questions raised by language teachers, and it should be guided and informed by theory and empirical evidence in second language acquisition. For real language teaching innovation, we should consider a principled and evidence-based approach to language pedagogy guided and informed by theory and evidence.

Secondly, language scientists are responsible for continuing to carry out appropriate and sound empirical research in second language acquisition. This type of research must make use of online psycholinguistics and neurolinguistics methods such as eye-tracking, self-paced reading, and event-related potential to investigate the role of and nature of language instruction and measure the development of implicit knowledge.

Thirdly, we need to recognize that there is a qualitative difference between explicit and implicit knowledge of the language. For the research to advance, it needs to consider ways to assess and test implicit knowledge and consider what implicit knowledge is.

Fourthly, language teachers must be encouraged to actively conduct their investigations in the language classroom to test the effectiveness of new and innovative pedagogy. As we look at the future, we need to conduct research looking into how language is represented in the mind/brain, how it is comprehended and produced, and how universals and bilingualism affect the human mind/brain. The mission of researchers and practitioners is to change the idea and the myths that language is a list of rules, that a paradigm is a way language is represented in the mind/brain, that communication can be reduced to the Q/A paradigm, that explicitly teaching grammar and vocabulary is necessary or even beneficial, and that practice makes perfect. The question is not whether or not we should teach languages but how we do it effectively.

An effective language teaching pedagogy is one based on and informed by theory and empirical research in second language acquisition. Although research in second language acquisition mainly focuses on learners and learning, the findings from this research have clear implications for language teachers and teaching. Working towards a more principled, cognitive and evidence-based approach to language pedagogy means the following:

- Having a good understanding of what input for acquisition means;
- Having a good working definition of communication;
- Having a good understanding of the role and nature of language;
- Having a good understanding of how language development happens;
- Having a good understanding of focus on form and focus on meaning;
- Having a good understanding of the role and nature of language interactive tasks.

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Professor Alessandro G. Benati (Head of School of Education, University College Dublin) has held academic positions in several British and overseas institutions. He is known for his work in second language acquisition and published ground-breaking research on the pedagogical framework called processing instruction. His research on processing instruction has been recently driven by the use of new online measurements (eye tracking, and self-paced reading). Alessandro has coordinated national and international high-impact research projects which have been influential in determining educational policy and had an impact in providing effective language teacher training programs. He is the author and co-author of several research monographs, peer-reviewed articles in high-ranked journals, and editor and co-editor of book series and scientific journals such as Cambridge Elements in SLA and Instructed Second Language Acquisition. He was a member of the sub-panel for Modern Languages and Linguistics for the Research Excellence Framework for England (REF 2021), AHRC Panel (UK), and he is an Honorary Professor at York SJ University (UK), Adjunct Professor at Macquarie University (Australia), and Visiting Professor at Anaheim University (USA).