Unified pedagogical linguistics

Bridging generative and usage-based SLA in language teaching

Thomas Hammond University of Leeds

This article argues that generative and usage-based theories of Second Language Acquisition (SLA), which are often treated as incompatible, offer complementary insights for language teaching. While generative approaches can draw on formal linguistic theory to identify linguistic properties that are likely to cause difficulty for learners, usage-based models based on frequency, analogy and schematisation shed light on how learners can engage with the input to eventually overcome these difficulties. Drawing on recent theoretical discussions and classroom-based empirical studies, I argue that both traditions are therefore well-equipped to address two fundamental questions related to language pedagogy: what properties should be taught, and how should these be taught? I illustrate how this synergy can be applied to inform the teaching of complex grammatical features, such as article semantics and wh-questions, through both formal linguistic analysis and usage-based instructional design. By reframing SLA debates around a shared pedagogical goal, this article hopes to encourage more dialogue across traditionally distinct theoretical frameworks and contribute towards closing the gap between linguistic theory and classroom practice.

Keywords: pedagogical linguistics, generative SLA, usage-based SLA, language teaching

1. Introduction

Linguistic theory remains largely affected by the generative vs usage-based rivalry (Rastelli, 2025). These two camps embody traditional 'innatist' vs. 'non-innatist' stances and corresponding 'formal' vs. 'functional' approaches to language. Thomas (2019) traces the roots of this dichotomy as far back as 500 BC, where Sanskrit philologist Pāṇini aimed to build a comprehensive grammar and ancient

Greek philosopher Plato championed the notion that words mirror the essential nature of their referents. This conceptual divide continues to spread across various sub-disciplines of Applied Linguistics today, notably that of Second Language Acquisition (SLA), a major consequence of which has been a traditional separation of theory and practice within the field (see for example, Hwang et al., 2024). All too often, SLA discussion has centred around theoretical concepts and their oppositions, rather than accessible insights for pedagogical application (Trotzke, 2023). In an attempt to speak towards the latter, this article argues that both generative and usage-based approaches offer complementary contributions to the *what* and *how* of language teaching. It aims to show that there is more room for collaboration between these theoretical frameworks than has previously been assumed, when a shared pedagogical agenda is framed as a systematic and genuine objective and where insights from both frameworks can crosspollinate with language teaching choices and methods.

2. Generative vs usage-based approaches to language

2.1 Competing linguistic frameworks

Generative grammar in the present article refers to those approaches to language which presume a pre-existing biologically determined blueprint in the form of Universal Grammar (UG), based around the influential work of Noam Chomsky (e.g., Chomsky, 2014). UG is the pre-determined capacity that allows humans to systematically acquire and use language. It is posited to account for the discrepancy between the impoverished input and the eventual linguistic knowledge a speaker comes to acquire, classically known as the Poverty of the Stimulus (POS) argument. On the contrary, Ronald Langacker in 1987 coined the term 'usagebased' models to refer to those approaches that reject a sharp distinction between language knowledge and language use. Linguistic knowledge in these frameworks is conceptualised as the 'cognitive organisation of one's experience with language' (Bybee & Eddington, 2006: 11), where 'constructions' are the basic linguistic unit. Knowledge of constructions emerges from the memories of utterances in usage events and the abstraction of regularities within them. In other words, language learning is analogy-driven and exemplar-based (Roehr-Brackin, 2014). In this article, 'usage-based' refers to the family of developmental approaches that embody this perspective, including emergentism, 'cognitive linguistics', constructionism and complex dynamic systems theory.

Many proponents of UG argue that their approach is superior because it provides more accurate and extensive generalisations about the properties of human languages and how they are acquired (Crain et al., 2017). Whilst there is acknowledgement that more general cognitive abilities outside of UG contribute to knowledge and use of language, these are sometimes branded as 'trivial' (Moro, 2016: 2), and any usage-based, statistical model built entirely on these is said to 'smuggle innate linguistic structure in the back door' (Pinker & Jackendoff, 2009: 466). Supposedly, without UG, the question of language acquisition and language evolution 'cannot be seriously investigated' (Chomsky, 2017: 297), making this approach more descriptively and explanatory adequate. For those in the usage-based camp, any claims of UG are 'almost certainly wrong in virtually every possible way' (Reber, 2011: 24), and for some, outright 'dead' (Tomasello, 2009: 470). UG is claimed to be poorly evidenced on acquisition and evolutionary grounds, as linguistic input is far richer than was previously suspected (Pullum & Scholz, 2002), and any commonalities between languages instead come from universal aspects of human cognition, social interaction and information processing (Christiansen & Chater, 2009). It has also been claimed that languages differ 'so fundamentally from one another at every level of description that it is very hard to find any single structural property they share' (Evans & Levinson, 2009: 429), and consequently, 'the fundamental crosslinguistic fact that needs explaining is diversity, not universality' (Dabrowska, 2015: 1).

2.2 The spill into SLA

Over the years, the rigid duality of language theory as a result of the generative vs usage-based divide has infiltrated the field of SLA. The 2015 exchange in the pages of Applied Linguistics between two leading scholars of each respective camp, Kees De Bot and Roumyana Slabakova, is a good showcase of this opposition (see also Rastelli & Gil, 2018). From a usage-based perspective, the claim is that it is still unclear what UG consists of, with research in the generative framework being limited to a few specific syntactic features and displaying too much of a narrow focus on diminishing the role of the learner's first language as evidence for some innate mechanism (De Bot et al., 2007). Ultimately, UG did not deliver in terms of 'a better understanding of what language is, nor how language development takes place, nor, crucially, how a language should be taught' (De Bot, 2015: 262). Usage-based approaches claim to do better in this regard, providing empirical evidence from longitudinal 'traceback methodologies' documenting over time what learners actually do with the language they are exposed to (e.g., Lieven et al., 2009; Eskildsen, 2015; Lesonen et al., 2020; Horbowicz & Nordanger, 2021; 2025). The generative response to such criticisms is usually twofold. The first is that UG approaches are simply misunderstood and have 'moved on' from investigating particular sequences of acquisition to now considering the interplay between

UG, the L1 and the L2 input (Slabakova et al., 2015; Rankin & Unsworth, 2016; Rothman & Slabakova, 2018). The other is that usage-based criticisms towards UG and its irrelevance to language teaching, in particular, are misconceived- as it has never been the goal of this framework to address pedagogical concerns (Slabakova et al., 2015). Put very bluntly, 'it is not and never has been the role of UG theory to offer insights into how languages should be taught' (White, 2023: 359), and those in the usage-based camp who claim to do so are sometimes said to devote more energy into critiquing UG approaches rather than offering tangible alternatives (Ionin, 2007). That being said, pedagogy-focussed research agendas can still be found within the generative SLA literature (e.g., Whong, 2011; Whong et al., 2013; Rankin & Whong, 2020), but these are often overlooked by critics within the usage-based framework.

The quotes displayed above are a snapshot of the divide within SLA over the last 25 years, where one seems to be left with no choice but to pick a side and join it. An inevitable consequence of 'irreconcilable' differences between frameworks (e.g., Tomasello & Abbot-Smith, 2002) has been a separation of research agendas which encourages scholars to adopt an inward-looking approach, with no meaningful interaction between the two stances. This divide not only effects research but spreads across academic institutions, teaching and training. Newmayer (2000) exemplified this over twenty years ago with his depiction of two fictional Linguistics graduate students waiting to be interviewed for the same academic position; one from MIT and the other from University of California at Santa Barbara. The MIT student would have been trained under a formalist, generative framework, whilst the UoC student under a functional, usage-based one. In the depiction, face-to-face conversation between the two students was 'doomed to sterility', as they are each encapsulated within their own views and carried beliefs that the other wouldn't tolerate. It is still the case today that the kind of tuition students receive on English Language and Applied Linguistics/TESOL courses throughout the UK can vary dramatically depending on the orientation of the institution and the scholars within it.

3. Is it finally time to come together?

3.1 Dissenting voices of the generative vs. usage-based rivalry

On one hand, competition between widely differing approaches can stimulate the advancement of a particular line of research. Disagreement, leading to conceptual and empirical refinement of ideas, is 'the lifeblood of any field' (Trotzke & Rankin, 2020: 4). However, it is too often the case that traditional debates are antagonis-

tic and cast from a hostile position, driven by researchers' ambitions to boost the value of their own approach by disregarding other approaches that they deem inferior. The negative effects of extreme academic modularity, and the agonism in academic discourse that comes with it, are well documented (e.g., Tannen, 2002; Badger, 2006) — yet there is no evidence to suggest that the situation is improving in SLA. Rankin and Whong (2020), in their description of grammar for pedagogical purposes, even feel the need to rebrand the concept of UG as 'Virtual Grammar', to talk about fundamental notions associated with UG in a way that 'does not immediately elicit pre-conceived views with respect to theories of language' (p.111).

That the field would benefit from moving towards unification, as one single approach cannot adequately address all aspects, is beginning to be recognised within some SLA circles. Truscott and Sharwood Smith's (2024) latest Discussion and Commentary article in Second Language Research label such rigid dualities as 'dangerous' for SLA, created by imprecise definitions, misunderstandings and misleading dichotomies. Here, the authors present the usage-based vs generative and innatist vs. non-innatist split as two such misleading dichotomies. They make clear that, in both approaches, using a language is fundamental, and language learning is rooted in our genes as a product of human nature. Rather, the actual differences relate to the extent of the role of usage on language learning, and the something in our nature that makes us language learners (UG vs genetic factors which underlie learning in general). Rastelli (2025) also questions whether such a long-standing polarisation is making a good service to linguistics more generally, which has the potential to steer the field towards a 'dead-end' (p.5). Under his view, both approaches are 'right', and the focus should turn to the dynamics and interaction between statistical, general-cognitive mechanisms and UG, rather than on their opposition. Indeed, there already exist a handful of theoretical models built around this interaction which aim at providing a more comprehensive and inclusive account of (first and second) language acquisition. For example, the Modular Cognition Framework (Truscott & Sharwood Smith, 2004; 2019), Input Processing Approach (VanPatten, 2025) and the Discontinuity Model (Rastelli, 2014; 2019) all contain a UG element but frame acquisition as an interplay between this and processing constraints imposed by general cognitive mechanisms such as noticing, activation and statistical learning.

In a similar vein, Rothman and Slabakova (2018) state that the generative vs. usage-based rivalry is more a matter of 'tradition and mutual misunderstanding than tangible', and that 'much work can be done at the crossroads of where data are neutral' (p. 436). On the generative side, it is conceded that other approaches have much to offer, and in order to make better progress, concepts, methodologies and techniques of statistical and cognitive investigation developed outside the

UG framework should be explored (Rastelli & Gil, 2018; Rothman et al., 2019). For example, usage-based models provide systematic accounts of input manipulation strategies, based on general cognitive mechanisms such as analogy, categorization and schematisation (e.g., Langacker, 2013). It is likely that engaging with these concepts in generative SLA would lead to better insights regarding the role of input quantity and quality; traditionally somewhat of a grey area in this framework but one that is gaining recent popularity (see for example Rankin & Unsworth, 2016; Yang & Montrul, 2017).

On the usage-based side, some acknowledge that properties of human language are shaped 'not only by experience, but also by yet-to-be discovered constraints on processing, perception, cognition and interaction,' an investigation of which 'could open the door for unification of the discipline around a common research question' (O'Grady, 2012: 495). The centrality of formal linguistic theory within generative SLA provides a useful underlying model to make sense of linguistic properties that have little obvious surface connection. Engagement with similar concepts could potentially allow usage-based researchers to uncover patterns of development that occur outside of schematic learning, based on learners' emerging knowledge of less-superficially related properties.

3.1 Towards unification: Centralising language pedagogy

Given its applied nature to 'real-world' contexts, a cross-paradigm pedagogical agenda would seem to be a productive and natural avenue for unification. Although within some circles there exists the long-standing belief that explicit teaching intervention does not bear any influence on acquisition (e.g. Krashen, 1985; Schwartz, 1993; White, 1991), research does suggest that explicit L2 instruction can result in durable target-oriented gains and is often more effective than implicit types (Ellis, 2002a; 2005; 2015; Roehr-Brackin, 2014). Regardless, both usage-based and generative scholars would agree that explicit and implicit knowledge are dissociated (Ellis, 2002a; Paradis, 2004; 2009) and that the bulk of acquisition- and therefore what should be prioritised - is the development of implicit knowledge (Krashen, 1985; Ellis, 2005). Based on this common ground, Whong et al., (2014) present the L2 classroom as the ideal domain to investigate what L2 properties to teach and how these might develop, with a theory-neutral aim of informing classroom practice. A more explicit call for unification along these lines can be seen from the recent guest edited issue in the Modern Language Journal (e.g., Michel et al., 2025; Sato et al., 2025), in which 17 scholars taking 11 different perspectives on SLA/teaching were invited to discuss their own perspective before uniting voices and suggesting what this kind of collaboration can offer to L2 education. Here, the authors conclude with a number of (very general)

conceptual, methodological and pedagogical synergies, including; 'complementary SLA/T perspectives are distinct but crucial pieces of the pedagogical puzzle' (Michel et al., 2025:99).

Whilst these efforts to distinguish common ground and united perspectives in relation to language teaching are commendable and certainly a step in the right direction, in reality, the field is yet to move beyond identifying generalisations and calling for change to actually applying this empirically in research and in practice. This is because separate theoretically-driven research agendas are still prominent; much SLA work is still written or presented within frameworks for audiences of those frameworks only. A major first step towards collaboration in SLA should therefore be identifying a genuine and shared objective, one that is informative and impactful rather than adversarial and inward-looking. By framing improved language pedagogy as this shared objective, I argue that SLA scholars working within separate approaches could be encouraged to come together and focus, systematically, on what each has to offer to language teaching. This sentiment is echoed through the launch of Pedagogical Linguistics (PL), which according to its editors, offers a point of convergence where 'all approaches to the nature of language and all approaches to the nature of linguistics are welcome to formulate the potential pedagogical import of their research' (Trotzke & Rankin, 2020:5). PL as a platform represents a significant step towards reducing the research-practice divide and increasing multidisciplinarity within the field, in contrast to traditional language teaching methods being based on a 'succession of shifts of pedagogic allegiance from one version of linguistic description to another' (Widdowson, 2020:36). In taking advantage of this platform, Section 4 now attempts to move beyond simply 'calling for change' and outlines how generative and usage-based approaches to SLA are inherently equipped to offer complementary contributions to what and how of language teaching. It then reviews what more unified SLA research might actually look like, drawing on previous empirical studies who have adopted a cross-paradigm approach, and analysing their implications for related L2 teaching from a what vs how perspective.

4. Unified SLA and improved language pedagogy

4.1 The *what* and the *how* of language teaching

In the most fundamental sense, language pedagogy is concerned with two main things- *what* to teach, and *how* to teach it. Research from usage-based and generative SLA often arrive at the same conclusions in answer to both questions, albeit via different routes and explanations. For example, researchers working within

either framework would agree that functional morphology (i.e. in English, third person -s, past -ed) is a good candidate of what to teach in the L2 classroom. For usage-based models, problems with L2 morphosyntax emerge from the dynamics of the ecology of language usage; these forms are of low contingency, low salience and appear in redundant contexts (Ellis, 2022). For generative researchers, functional morphology is the 'bottleneck' of L2 acquisition as it bundles a variety of semantic, syntactic and phonological features that affect the meaning of the whole sentence, hence presenting a higher cognitive load in processing (Slabakova, 2019). Differences in accounting for this issue are somewhat irrelevant for language pedagogy; what is important is that both sides have identified this as a problematic area for learners and agree that sufficient attention should be given towards this in the classroom (Slabakova, 2013).

Embracing the inherent characteristics of each approach, and their theoretical oppositions, could actually lead to a complementary division of labour regarding their potential contributions to language pedagogy. Generative SLA is able to identify harder and easier L2 properties based on their analysis under formal linguistic theory, therefore offering insights about what properties to prioritise in classroom instruction (e.g., Rastelli & Gil, 2018; White, 2023). Over the years, experimental generative SLA research has revealed major areas of crosslinguistic variation between languages based on underlying syntactic features and computational properties. If- in the extremely limited amount of classroom time they haveteachers can manipulate learners' L2 input to increase exposure to and awareness of these challenging aspects of variation, they will likely be in a better position to help learners achieve increased fluency and higher accuracy of these properties (Slabakova, 2013; Bayram & Rothman, 2020). This not only applies to classroom instruction but also extends to helping inform choices made by textbook writers and curriculum designers (see for example, Gil et al., 2019). The enhancement of L2 input, in this sense, is couched in principles related to 'frequency/salience' (Ellis, 2002a), 'noticing' (Schmidt, 1990) and 'input processing' (VanPatten, 2025), whereby the acquisition of difficult L2 properties is presumed to be sped up by increasing the amount of samples of these properties in learners' classroom input.

UG-based research has far less to say about the *how* of language teaching, which is where usage-based approaches have plenty more to offer. Usage-inspired pedagogy is based on an individual's general cognitive learning abilities and therefore places meaning, context and use at the heart of language teaching (Tyler & Ortega, 2018). A specific example of an effective teaching approach grounded in usage-based theory is Data Driven-Learning (DDL), defined as any use of corpus or corpus-derived materials in language teaching contexts (e.g., Johns, 1991). 'Classroom concordancing' (examining concordance data in the classroom) is a DDL activity that allows learners to examine language in an inductive and

autonomous way, encouraging them to 'develop the ability to see patterning in the target language and to form generalisations to account for that patterning' (Johns, 1991: 2). This method is particularly successful in encouraging learners to identify and generalise patterns from frequent and meaningful input, with the hope that over time this leads to entrenchment (Römer, 2024). The repeated practicing of difficult linguistic forms in data-driven, usage-based activities encourages learners to move from explicit to implicit systems (Paradis, 2004; 2009) and echoes central tenants within Sill Acquisition Theory (Dekeyser, 2017), the Output Hypothesis (Swain, 1985) and a Focus on Form approach (Long, 1996). In this sense, it is not just the increased exposure to difficult properties that is posited to influence acquisition, but the subsequent practice provided by the correct use of these properties in meaningful, interactive contexts (Paradis, 2004; Truscott & Sharwood Smith, 2004; 2019).

I now present a specific example of how both frameworks could interactively inform language teaching at the classroom level.

4.1.2 An example with articles

One area of language pedagogy that generative SLA specifies would benefit from instruction is articles (e.g., White, 2023). Experimental research has consistently demonstrated how the acquisition of articles is a notoriously difficult process for L2 learners and particularly subject to L1 transfer effects, omission and/or misuse (Ionin et al., 2008). Articles carry a range of semantic properties that are supposedly available universally, the main ones being *definiteness* and *specificity* (Ionin et al., 2004). Definiteness is determined by the ability of the speaker and the hearer to identify the referent, whereas specificity concerns the familiarity of the referent in mind (Lopez & Sabir, 2019). Lyons (1999: 167) demonstrates that the combination of these two properties leads to the four possible contexts in English below:

- (1) Four possible contexts of article usage in English
 - a. [+ definite, + specific] *Joan wants to present the prize to the winner, but he doesn't want to receive it from her.*
 - b. [+ definite, -specific] *Joan wants to present the prize to the winner- so she'll have to wait around until the race finishes.*
 - c. [-definite, + specific] *Peter intends to marry a merchant banker- even though he doesn't get on with her at all.*
 - d. [-definite, -specific] *Peter intends to marry a merchant banker- even though he hasn't met one yet.*

The major difficulty with articles relates to cross-linguistic variation; languages differ as to whether or not these meanings are explicitly realised, and how they

are realised. If the L1 has no articles (e.g., Japanese, Russian, Korean), and the L2 requires articles (e.g., English), it will be difficult for learners to figure out how these meanings map onto the English system. Even if both L1 and L2 encode articles morphologically, it is proposed that this will be either on the basis of definiteness (such as English) or specificity (such as Samoan), but not both, meaning that L2 learners rely on evidence from the input to trigger the establishment of either setting (Ionin et al., 2004; Lopez & Sabir, 2019). In this respect, it is predicted that those contexts in (1b) and (1c) ([+ definite, – specific], [– definite, + specific]) will cause the most difficulty for learners, as this is where the two settings are in conflict (Ionin et al., 2004). A further complication is that article semantic concepts are often unknown to language instructors and frequently missing or underreported in language textbooks (Snape & Yusa, 2013; Umeda et al., 2019).

In terms of how to best teach these properties in light of such difficulties, Concept Based Instruction (CBI) could be adopted, which is a language teaching approach rooted in cognitive linguistics, discourse analysis and corpus-based approaches (e.g., Tsai, 2020). Here, learners work through a sequence of meaning/usage-based activities aimed at facilitating language processing skills, gradually moving from conceptual knowledge and materializations through to activities and verbalizations (Buescher & Strauss, 2018). CBI has gained recent empirical support for effectively internalising learners' memorisation and meaning across a range of L2 target items, including English phrasal verbs (Qin et al., 2023), English modal verbs (Qin et al., 2023) and Korean honorifics (Hess & Amory, 2022), as well as a whole volume dedicated to its implementation in Japanese teaching contexts (Masuda et al., 2025). Taking the teaching of English articles as an example, learners should first be made explicitly aware of the four possible contexts for article use based on the universal semantic properties of definiteness and specificity, as exemplified above in (1). This would first involve introducing the central concepts related to the four contexts; namely, 'definiteness' and 'specificity' as well as 'referent', 'speaker' and 'hearer'. A range of presentations and/or explanations with examples should demonstrate how meaning is evoked by the article choice in relation to the existence and familiarity of the referent to the speaker and the hearer. To facilitate this awareness, learners could also be presented with (or asked to form) graphical representations depicting these relations. These could look something like that below in (2).

[+definite + specific] <i>the</i>		[+ definite – specific] <i>the</i>
REFERENT	9 :	REFERENT
existence familiarity	▽	existence
[– definite – specific] <i>a</i>		[– definite + specific] <i>a</i>
REFERENT	9 ⁴	REFERENT
existence familiarity	× × × ×	existence

(2) Graphical representation of the four contexts for article use in English

At the activities/verbalization stage, learners could then undertake discourse analysis through examining corpus concordance lines containing uses of English articles in natural data, and group these into one of the four contexts. This data-driven element aims to expose learners to authentic article use so they can further establish how the multiple universal meanings correspond to the different article forms in English and make them aware of the relevant frequency of each context. Teachers might also want to pre-select the concordance lines for students to analyse, focusing more on the two contexts that are predicted to cause most difficulty for learners (([+ definite, - specific], [- definite, + specific]). Corresponding activities encouraging learner output of articles should then follow, requiring them to produce the most appropriate form in communicative, task-based activities based on the four contexts of definiteness and specificity.

Here, generative SLA has identified a problematic area of grammar and drawn on linguistic theory to provide more nuanced predictions of, and explanations for, learner difficulties. This information can help enhance L2 input through informing the content, organisation and application of CBI activities. By practicing article forms based on these difficult concepts in highly contextualised, meaning-focussed and usage-based activities, learners will be in a better position to acquire these properties over time.

4.2 What more unified SLA research might look like

Given the argument that generative and usage-based approaches can offer complementary contributions to language teaching, it follows that findings from SLA research adopting concepts from both frameworks could lead to better insights for improved language pedagogy in light of both perspectives- the 'what' and the 'how'. In this section, I draw on recent studies that exemplify a 'cross-paradigm' approach to SLA and outline how language pedagogy could benefit from their research insights. Analysing longitudinal learner corpora, Hammond and Gil (2023a; b; 2025) adopt concepts of formulaicity and schematisation from usage-based frameworks but assume underlying linguistic properties from UG.

Hammond and Gil (2023a) investigate the development of English adolescent learners' L2 French question formation in a classroom setting over a period of two years. *Wh*-questions in French show a large amount of syntactic variation. The *wh*-word can remain 'in -situ' (3a) or be fronted, and *wh*-fronting can occur without subject verb inversion (3b), with the question marker *est-ce que* (ESK) (3c), with clefting (3d) or with subject-verb inversion (as in English) (3e).

(3) Wh-questions in French 'where do you work?'

(3a) vous travaillez où? [wh IN SITU] you work where

(3b) où vous travaillez? [wh NO INV] where you work

(3c) où est-ce que vous travaillez? [wh ESK] where [ESK] you work

(3d) *c'est où que vous travaillez?* [wh CLEFT] it is where that you work

(3e) *où travaillez -vous* [wh INV] where you work

(Hammond & Gil, 2023a: 344)

Under Jakubowicz's (2011) Derivational Complexity Metric (DCM), the structures in (3) above are ordered from lowest to highest in terms of derivational complexity, on account of their associated underlying computational operations as specified by generative linguistic theory. Hammond and Gil (2023a) demonstrate how learners' early complex French *wh*-questions produced fluently at Round 1 of data collection (i.e., those with *wh*-word fronting and inversion, as in English) are more likely formulaic expressions, rather than evidence of the acquisition of complex target L2 properties or direct transfer of L1 properties. This is because, out-

side of these formulaic forms as stated in (4), learners make errors (5) or opt for the least derivationally complex structures (6) in all other similar environments-despite these structures' dissimilarity from the L1.

- (4) Formulaic 'derivationally complex' wh-questions [wh INV] observed at Round 1
 - a. comment t'appelles tu 'what is your name'
 - b. *où habites-tu* 'where do you live'
 - c. quel âge as-tu 'how old are you'
 - d. quel est la date de ton anniversaire 'when is your birthday'
- (5) Learner errors in similar environments observed at Round 1
 - a. *la couleur a cheveux?

 the colour has hair
 'what colour is her hair' (intended meaning)
 - b. *il âge a frère
 the age has brother
 'how old is your brother' (intended meaning)
- (6) 'Derivationally simple' *wh*-questions [wh IN SITU] in similar environments observed at Round 1
 - a. elle s'appelle comment she calls-herself how 'what is her name?'
 - b. elle a les yeux comment? she has the eyes how? 'what colour are her eyes?'

Tracking learners across another two data collection points over the following two years, the authors note a rise in more derivationally complex *wh*-questions of the [wh INV] and [wh ESK] kind. At Round 2, the lexically-specific combinations où est ('where is') and qu'est ce que ('what is it that') feature in the majority of these more complex structures (7), whilst other structures outside of these combinations remained in the least derivationally complex forms [wh IN SITU] (8). This suggests again that learners were predominantly making use of holistic chunking strategies at this stage of data collection, rather than demonstrating knowledge of more derivationally complex L2 properties.

- (7) Examples of [wh INV] and [wh ESK] structures with où est and qu'est ce que at Round 2
 - a. où est la fille? 'where is the girl'
 - b. *qu'est ce qu'elle fait?* 'what is it that she does'
- (8) Examples of *wh*-questions [wh IN SITU] outside of *où est* and *qu'est ce que* at Round 2
 - a. il s'appelle comment he is called what 'what is his name?'
 - b. tu veux quel jour? you want what day 'what day do you want?'

By the end of the data collection period (Round 3), it is only those learners who showed consistent use of the holistic question chunks (such as those exemplified in (7)) who begin to demonstrate knowledge of complex L2 properties (wh-fronting and inversion) more generally for L2 French question formation (i.e. outside of où est and quest ce que), as exemplified by utterances such as those in (9).

- (9) Examples of [wh INV] and [wh ESK] structures outside of *où est* and *qu'est ce que* at Round 3
 - a. *comment est activité a Belleville?* 'how are things at Belleville?'
 - b. où est ce qu'on peut manger le déjeuner? 'where is it that you can eat breakfast?'

Thus, applying the usage-based concept of formulaic-schematic learning to the dataset allowed for a better understanding of pupils' 'UG-based' syntactic knowledge in the L2, both in terms of how this might be constrained at initial stages of learning and how this might manifest thereafter. That is, derivational complexity seemed to override L1 proximity in learners' early productions of French wh-questions, and the use of related formulaic expressions and lexical chunks likely helped learners overcome difficulties in acquiring more derivationally complex structures. These findings therefore allow for a better understanding of what syntactic properties to target/not to target in this specific learning context, and how to go about teaching these. When teaching French wh-questions to English learners, what seems to be their default structure, despite being one that is unavailable in their L1 [wh IN SITU], might not need much attention in the classroom. Instead, the more derivationally complex structure [wh INV], despite being

similar to learners' L1, might benefit from more attention. Regarding 'how' to do this, the results suggest that encouraging learners to engage in meaningful contexts with examples of the more complex structures in the form of conventional formulaic phrases ($comment\ t'appelles\ tu$, $quel\ est\ le\ date\ de\ ton\ anniversaire\ etc.$) and lexically-specific schemas ($[où\ est\ +\ NP]$, $[qu'est\ ce\ que\ +\ VP]$), will likely facilitate acquisition of these more complex L2 properties outside of these specific instances.

In a similar line of research, Hammond and Gil (2023b) analysed beginner classroom Spanish learners of L2 English over four data collection rounds spanning across a period of 7 years. Applying a usage-based traceback analysis, they found that a high proportion of learners' wh-questions in the L2 had likely been instantiated by formulaic expressions (e.g., what is your name), via the extraction and generalisation of related utterance schemas. This is briefly exemplified below in (10) where the same learner (number 18) seems to move from a formulaic phrase through lexically-specific construction to a more abstract schema between the ages of 10 and 17.

- (10) Evidence for usage-based learning trajectory: Learner 18
 - a. Age 12: what's your name [formulaic expression]
 - b. Age 16: what is your job [what is + NP]
 - c. Age 17: what are you studying [what + COPULA + X]

Beyond *wh*-questions, the study also identified correlations between a more frequent use of formulaic expressions and related utterance schemas (such as those shown above in (10)) at early rounds of data collection and more evidence for knowledge of these expressions' underlying syntactic properties, in a UG-sense, at the later rounds. That is, those learners who produced more formulaic *wh*-question forms embodying underlying syntactic operations such as *wh*-fronting, subject-verb inversion, argument-movementⁱ and *do*-support, showed significantly more evidence for knowledge of these operations in their spoken output at the later ages via a range of different surface structure manifestations, including; negation, relative clauses, and overt subjects with auxiliaries, modals and complementisers (Hammond & Gil, 2023b).

Through analysing both schematic and underlying computational development, the authors argue that the application of both generative and usage-based

i. 'Argument movement' refers to a syntactic operation in English whereby the subject moves from specifier of the verb phrase (VP) to specifier of the tense phrase (TP). Evidence for knowledge of this operation is the use of overt subjects in clauses that are marked for functional category T, including lexical verbs inflected for tense/number/person, auxiliaries, negation and complementisers.

paradigms achieved a more comprehensive description of the observed developmental trends than either model could have done independentlyⁱⁱ. The application of generative SLA theory allows for a more accurate picture of complex target language properties' development in learners' interlanguages, through the analysis of their manifestation in a variety of surface forms longitudinally. This can help shed light on what properties of the L2 seem to be causing difficulty at different stages in the learning process, as well as why this might be. Adopting usage-based notions of formulaicity and schematisation through related 'traceback' analyses gives a complementary picture of how learners manipulate the classroom input they are exposed to along the way. This gives implications for how best to present complex target language features to learners in light of their general cognitive makeup and sensitivity to frequency effects, as well as their propensity for pattern identification, analogy and generalisation.

For teaching practice, the results advocate a lexical-based approach, in the sense that formulaic sequences and highly functional/related utterance schemas should be given to L2 learners in holistic, unanalysed form early in the learning process. Then, teaching learners to deconstruct these phrases into related constructions/schematic frames could not only lead to a better ability to form similar functional structures in the L2, but could also lead to a quicker acquisition of related target grammatical properties (i.e. wh-fronting, inversion) more generally. CBI-related activities, for example, could be one way of facilitating this process by firstly initiating learners' conceptual links between form and function and then strengthening these through usage in meaning-based activities. Presenting learners with a range of visuals/examples related to the basic form-function mappings of formulaic expressions (e.g., what is your name - [ask name]) and any related utterance schemas (e.g., what is + NP - [ask about something]), and then creating usage opportunities based on these related functions, would encourage the schematic analysis and generalisation of fixed, conventional forms. Over time, this greater practice and engagement with these more difficult linguistic properties in meaningful contexts is envisaged to promote faster acquisition of these underlying properties beyond their schematic frames.

ii. These ideas relate to the integration of statistical and grammatical learning in SLA more generally. For a comprehensive review of this line of thinking, see Rastelli (2014; 2024) and references therein.

5. Conclusion

In the broadest sense, this article has argued for a 'coming-together' of traditionally competing SLA frameworks centred around improving language pedagogy. More specifically, it has outlined the complimentary nature of generative and usage-based insights to language teaching and highlighted the strengths of adopting concepts from both approaches in SLA research for crosspollination with the what and how of L2 instruction. All this is not to say that important theoretical distinctions between these frameworks do not exist or should be banishednor is all SLA research required to have pedagogical implications. Rather, through an interaction of approaches centred around a clear, shared objective, I believe there is scope for scholars within traditionally disparate frameworks to collaborate in a more productive and programmatic way than has been done previously. This would undoubtedly lead to greater pedagogical insights for language teaching that 'go beyond the monoperspectives of the individual researchers or groups of researchers within the same subfield' (Michel et al., 2025:101). A more integrated collaboration beyond the boundaries of SLA seems, to me, a necessary first step before the field can consider how its findings can actually be translated to language teachers/practitioners in the 'real world'- an issue that continues to persist within both frameworks and one that is beyond the scope of this article (but see, for example, Marsden and Slabakova, 2019; Römer, 2024). We are yet to understand the full potential of a unified Pedagogical Linguistics, which benefits from theoretical and empirical insights developed within different SLA frameworks and which offers genuine and complementary insights for language teaching practice. It would be a shame to waste such an opportunity, given the level of expertise that lies within each research programme and the potential benefits of their collaboration for language pedagogy.

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Address for correspondence

Thomas Hammond School of Education University of Leeds

LS₂ 9JT

UK

T.A.Hammond@leeds.ac.uk

https://orcid.org/0009-0003-2722-6413

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