

Pedagogical Construction Grammar

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Abstract

Construction Grammar has been shown to make valuable contributions to teaching. The resulting framework, referred to as Pedagogical Construction Grammar (PCxG), is presented in this chapter, starting with its origin and main principles. Different pedagogical methods used in PCxG are discussed, including network-based instruction, structural priming and data-driven learning. Some of the few pedagogical resources developed for PCxG are described, such as the German Frame-Semantic Online Lexicon and the Construction Grammar of the English Language. The chapter ends with some limitations of PCxG as well as recommendations to further enhance the framework.

Keywords

Applied Construction Grammar, Pedagogical Construction Grammar (PCxG), L2 teaching, Constructionist Approach to Syntactic Analysis (CASA), network-based instruction, constructicon, data-driven learning (DDL), structural priming, teaching practices

Key Points

- Construction Grammar can provide insights into pedagogy and help improve teaching practices, through the framework known as Pedagogical Construction Grammar.
- Various teaching methods can be adopted in Pedagogical Construction Grammar, such as the focus on form-meaning pairings, the description of constructions in networks and the use of authentic input.
- Resources based on Pedagogical Construction Grammar, although few in number, underline the relevance of this approach and its innovative nature.

1. Introduction

The last decades have seen a growing interest in Construction Grammar (CxG), not only for the description of language and the discussion of theoretical issues, but also for applications in foreign/second language (L2) learning and teaching. Ellis (2013), Ellis & Cadierno (2009) and

Holme (2010a) showed that L2 learning is construction learning. According to Bürgel (2021, p. 12), the learning of constructional units leads to more fluency as well as greater accuracy, complexity and variety in the production of sentences by learners. In addition, construction-based learning offers the possibility of generalizing and thus saving time in the learning process (Siepmann 2007, p. 73).

These insights have influenced research in L2 teaching. In a contribution to the proceedings of the first conference on “Constructionist Approaches to Language Pedagogy” (CALP; De Knop & Gilquin 2016), Herbst (2016) introduces the term ‘Pedagogical Construction Grammar’ (PCxG), claiming that “foreign language learning is construction learning” (Herbst 2016, p. 21). In that chapter, Herbst (2016, pp. 40-44) outlines seven principles for PCxG:

- (1) Following Goldberg’s (2006, p. 18) view that “it’s constructions all the way down”, L2 teaching should focus on the teaching of constructions. This insight is also grounded in earlier experimental studies which have demonstrated that learners have constructions just as natives do (see, among others, Gries & Wulff (2005) and Valenzuela Manzanares & Rojo López (2008)).
- (2) Since constructions are form-meaning pairings, the teaching of vocabulary should not only focus on new forms but also on their meanings and communicative functions (see also De Knop 2022).
- (3) Lexical constructions should be taught one sense at a time as their meanings depend on the context of use.
- (4) When it comes to teaching vocabulary, important collocations and chunks should be introduced explicitly.
- (5) In vocabulary sections of textbooks, “valency constructions should always be listed explicitly” (Herbst 2016, p. 43).
- (6) Grammatical terminology should be reduced to a minimum.
- (7) Authenticity should be achieved by looking at corpus data and teaching the most frequent constructions.

The term PCxG and its underlying approaches are starting to become well established in the scientific literature, as attested by studies published over the last few years (see Section 2). The proceedings volume of CALP-3 (Boas 2022) even uses the term in its title, “Directions for Pedagogical Construction Grammar – Learning and teaching (with) constructions”. It offers a collection of papers which illustrate or expand on one or several principles defined by Herbst (2016). In Pakzadian (2023), the seven principles of PCxG are applied to a proposal for the teaching of English collocations.

2. Pedagogical Methods

It is widely acknowledged that constructions are learned as mental units and, therefore, that “[m]astering constructions relieves the working memory and reduces the cognitive processing

effort” (Bürge1 2021, p. 11; our translation). Handwerker (2015) compares constructions to chunks, i.e., fixed formal sequences whose meaning is processed as a whole. She claims that constructions and their “lexical fillers” (Handwerker 2015, p. 137) should be taught holistically and in scenarios which represent our knowledge and experience of reality (compare the concept of ‘frames’ in Section 3).

The knowledge of scenarios can also provide a “tertium comparationis” (Boas 2010, p. 10) between native language (L1) and L2 constructions. This can be useful, since the learning of L2 constructions may be influenced by the existence of similar constructions in the L1. Using the case of the English caused-motion construction, Martínez Vázquez (2008) brings “evidence of how the typology of the L1-language may facilitate or hinder the learning process” (Martínez Vázquez 2008, p. 41). Her quantitative corpus analysis shows that learners from satellite-framed languages (German, Swedish and Dutch) use more caused-motion constructions in English, a satellite-framed language too, than learners from verb-framed languages (Spanish, French and Italian). It is thus advisable to design a teaching methodology which exploits similarities between L1 and L2 constructions, but also helps learners build new form-meaning pairings in L2 when L1 and L2 constructions differ from each other.

Construction-based teaching can take advantage of the fact that constructions and their instantiations may be part of a network and/or a family of constructions that resemble each other. Ellis, Römer & O’Donnell (2016, p. 300) and Römer, O’Donnell & Ellis (2014, p. 967) recommend teaching together constructions that are semantically related. This is also suggested and illustrated in Torres-Martínez’s (2018) usage-based approach to the teaching of English phrasal verbs and in González-García’s (2019) study of the subjective transitive constructions with *decir* (‘say’) in Spanish. Teaching in terms of families of constructions can “help learners notice the degree of systematicity underlying the constructions that should be learned” (González-García 2019, p. 123). With their empirical study on the learning of the English resultative construction by Korean learners, Rah & Kim (2018) provide evidence for the efficiency of a construction-based teaching methodology focusing on the concept of network. Their study involves grammaticality judgment tests and picture description tasks with three groups of Korean learners who are taught the resultative construction according to different approaches, namely a simple syntactic approach, a construction-based approach and a construction-based approach associated with a network description. The results show that network-based instruction leads to the strongest effect in the grammaticality judgment tests, including the delayed post-test.

A teaching methodology based on PCxG proves to be dynamic as it can offer different types of exercises/tasks which require more active involvement of learners. Holme (2010b), one of the first studies to have proposed a concrete application of a construction-based teaching methodology, suggests an approach consisting of five steps. First, teachers let learners discover a specific construction in a text. Second, this construction is paraphrased schematically. Third, the construction is used as a prototypical base for alternative specifications (also figurative ones), which are best presented in a table. In a fourth step, teachers show how speakers conceptualize this construction, preferably with visual support. Finally, the network representation with the prototypical exemplars in the middle and further instantiations at the

periphery can foster the entrenchment of constructions. In further exercises, learners can be asked to look for similar constructions in other texts.

Another type of PCxG approach is based on the replacement of some parts of a constructional pattern. Martínez Vázquez (2004, pp. 163-164), who deals with the teaching of constructions to Spanish learners of English, suggests giving learners a pattern and asking them to replace parts of it, for instance the verb (see also Cappelle & Grabar's (2016, p. 286) idea of "chop and change chart"). This leads to a greater ability to see if a verb matches a construction and to generalize by showing the analogy according to which constructions are built. In her analysis of resultative constructions, Handwerker (2015, p. 145) recommends considering negative evidence too and letting learners discover what verbs do not match a specific construction.

Some approaches combine PCxG-insights with Cognitive Pedagogical Grammar. Thus, Ruiz de Mendoza Ibáñez & Agustín Llach (2016, p. 151) advocate cross-linguistic pedagogical activities relying on construction-based meaning inferences. This is illustrated with the teaching of the English expression *get an idea across*. The first step involves recognizing the cognitive motivation behind the figurative expression. Step two illustrates the use of the expression with several examples. Step three deals with the usage constraints and their connection with the cognitive motivation. This three-step strategy can help students grasp the challenges in the relationship between language and cognition (Ruiz de Mendoza Ibáñez & Agustín Llach 2016, p. 173).

A construction-based methodology can also be enriched with discourse functional properties of constructions (e.g., the position of subordinate clauses in sentences or their communicative role in dialogues). In that perspective and inspired by Holme (2010b) and Herbst (2016), Vander Haegen (2021) proposes a method for the teaching of German irrelevance (concessive) conditionals to Dutch advanced learners. As a starting point, the teacher proposes a text with prototypical exemplars of a construction. The properties of these exemplars are first explained by the teacher. Then, learners have to deduce further characteristics by themselves from corpus examples collected by the teacher. Finally, learners are invited to search for similar examples in a corpus.

Among the techniques which can sustain the teaching of L2 constructions, structural priming has proved useful (De Knop & Mollica 2022; Ellis, Römer & O'Donnell 2016). The basic assumption of this methodology is that "speakers tend to repeat syntactic structures they have just encountered" (Gries 2005, p. 365). This means that L2 learners who read or hear a sentence with a specific structure are likely to re-use or echo this structure in the sentences they produce immediately thereafter, using the same structure with different lexical material. In their empirical approach to the teaching of ditransitive constructions for Italian learners of German, De Knop & Mollica (2024) apply this methodology with priming exercises and a visual representation of the order of the complements (indirect and direct objects in nominal or pronominal form). Their study yields promising results.

Another technique which can contribute to the teaching of constructions is data-driven learning (DDL), that is, the use of corpora by students to make discoveries about language. As Römer (2024, p. 1239) points out, "[t]hrough the sorted concordances typically used in DDL, learners are [...] presented with frequently co-occurring language items which are likely good exemplars of a construction". Constructions can also be used as a starting point for DDL activities, as

described in Gilquin (2021). In that study, students are given handouts with corpus examples illustrating different constructions and are asked to carry out certain tasks, such as underlining the verb in the *way* construction or describing the subject of the *MAKE* causative construction. The comparison of pre- and post-tests reveals that students are better at producing instances of the constructions after the DDL intervention and that they seem to have generalized about the constructions based on the corpus examples.

3. Pedagogical Resources

Most of the applications of CxG to pedagogy so far have been part of ad hoc research projects, mainly aimed at testing the efficiency of PCxG. This partly explains the relative scarcity of publicly available pedagogical resources developed within the frame of PCxG.¹

A few publications include the materials used for teaching interventions. Thus, in Gilquin (2021), mentioned above, the worksheets used to teach the constructions under study are included in appendices. Other scholars provide worksheets that can be used to teach specific constructions, e.g., certain French syntactic constructions in Siepmann (2016) and some Spanish lexico-grammatical constructions in Bürgel (2021).

Attempts have also been made to offer more comprehensive descriptions of the constructions of a language, in the form of constructicons. Some of these constructicons have been developed with pedagogical applications in mind. This is the case of the German Frame-Semantic Online Lexicon (G-FOL), “a frame- and construction-based language resource for English-speaking learners of German” (Boas, Dux & Ziem 2016, p. 303).² The resource is organized around frames, such as ‘Buying and Selling’ or ‘Family and Relatives’. For each frame, the ‘Frame Elements’ (e.g., Buyer, Seller, Goods, Money and Store for the ‘Buying and Selling’ frame) are defined and illustrated through authentic examples representing different constructions. Words that are typically found in these frames are listed, described and presented in ‘Sentence Templates’. For the verb *verkaufen* (‘sell’), for instance, the following templates are mentioned in G-FOL, together with information about cases and English translations:

- SELLER verkauft GOODS (‘SELLER sells GOODS’)
- SELLER verkauft GOODS für MONEY (‘SELLER sells GOODS for MONEY’)
- SELLER verkauft BUYER.dative GOODS (‘SELLER sells BUYER GOODS’)
- SELLER verkauft GOODS an BUYER.accusative (‘SELLER sells GOODS to BUYER’)

(<https://frames.coerll.utexas.edu/frames/selling>)

The G-FOL website includes worksheets with activities focusing on certain frames. Gemmell Hudson (2022) also shows how to use G-FOL to build a curriculum, covering several frames and constructions and including a variety of activities. Other examples of pedagogically

¹ We do not include here pedagogical resources that are compatible with (some) principles of PCxG but were developed within other frames (e.g., corpus linguistics).

² G-FOL is available at <https://frames.coerll.utexas.edu>.

oriented constructicons can be found in Loenheim et al. (2016) for L2 Swedish and Su, Ye & Wei (2024) for English for academic purposes.

By far the most fully-fledged PCxG-based resource to date is Herbst & Hoffmann’s (2024) *Construction Grammar of the English Language*, which relies on their Constructionist Approach to Syntactic Analysis (CASA). This grammar reflects the CxG principle that “it’s constructions all the way down” (Goldberg 2006, p. 18), in that it describes the English language at all morpho-syntactic levels in terms of constructions. So-called ‘construction grids’ represent the different constructions that combine to form a phrase or sentence, “showing at every single point what the contribution of each of these constructions is with respect to form and meaning” (Herbst & Hoffmann 2024, p. 67). Figure 1, for example, reproduced from Herbst & Hoffmann (2024, p. 157), illustrates the two constructions underlying the phrase *a nice evening*. In addition to including corpus examples, the grammar offers ‘collo-profiles’, that is, lists of items frequently occurring in a construction (e.g., *give*, *tell*, *bring*, *cost*, *offer* in the ditransitive construction). An (ongoing) online CASA constructicon supplements the grammar book.³

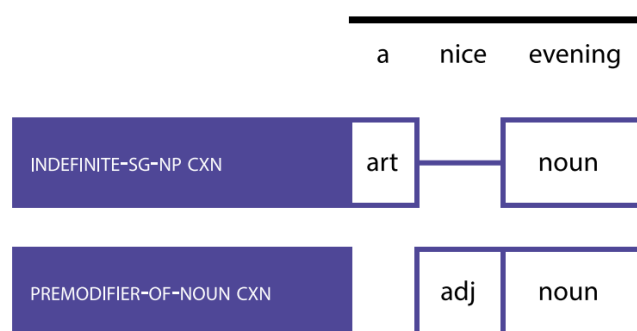


Figure 1. Construction grid for *a nice evening*.

Reproduced from Herbst & Hoffmann (2024, p. 157).

4. Conclusion

Despite recent advances in PCxG, research in this area is still in its fledgling stage. A variety of teaching methods have been developed or adapted to take the tenets of CxG into account, but concrete applications and resources are still largely lacking. In addition, the pedagogical contexts in which PCxG has been tested are relatively limited, and so are the constructions and the target languages involved.

Yet, the results obtained so far are encouraging. PCxG offers a coherent framework to teach the whole of language, from the lowest to the highest levels of analysis (cf. Herbst & Hoffmann 2024). Through the teaching of abstract schemas and networks of constructions, it makes learning easier and faster (De Knop 2020; Siepmann 2007) and fosters creative uses of language

³ The CASA-ConstructiCon of the English Language (CASA|Con) is available at <https://constructicon.de>.

(Gilquin 2021). It also exposes learners to authentic language, with a special focus on features that are supposedly most relevant to them (e.g., most frequent words within a construction, main functions of a construction). It therefore seems a worthy enterprise to pursue research into PCxG by testing it on more languages, more constructions, in more contexts, etc. (see, e.g., Pakzadian 2024).

We should also continue exploring other ways of applying PCxG. One interesting avenue is the combination of CxG with kinesthetic or embodied methods of teaching. In Segura-Llopes et al. (2023), for example, a roulette wheel is given to students with the fixed element of a construction in the middle and the variable elements in the movable part of the wheel. The students are invited to turn the roulette wheel and invent a sentence with the specific construction that they have obtained. Kanli (2024) explains how constructions can be taught through dancing. Using a special choreography, students learn the underlying image schemas of prepositions in Spanish.

A major challenge will be to ensure that PCxG is applied by teachers in the actual classroom, not just by researchers as part of teaching experiments (see also Gilquin & De Knop *fc.*). To this end, it will be necessary to provide teachers with the necessary materials, but also offer them concrete advice on how to integrate PCxG into the curriculum. First attempts in that direction have been made by Bürgel (2021), Bürgel, Gévaudan & Siepmann (2021), Bürgel & Siepmann (2016), Holme (2010a, 2010b), Ruiz de Mendoza Ibáñez & Agustín Llach (2016) and Siepmann (2007). In addition, since not all teachers may be aware of the benefits of construction-based teaching, it would be desirable to show how more traditional teaching practices can be integrated with constructionist approaches and how this combination can bring added value to teachers and their students.

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