CHAPTER 2

Advantages of cognitive linguistics in the teaching and learning of foreign languages in TI programmes

María Ángeles Recio Ariza & Astrid Schmidhofer
University of Salamanca, Spain | University of Innsbruck, Austria

In this chapter, we will explore the benefits of cognitive approaches to language teaching and learning in TI programmes. We will first explain the basic concepts of cognitivism, describe how cognitive approaches are used in translation and interpreting teaching and then draw conclusions on how these approaches can also be applied to language teaching and learning for prospective translators and interpreters and help them to become expert language users.

Keywords: translator training, interpreter training, language training, TILLT, cognitive linguistics, cognitive grammar

1. Introduction

Language competence is the most fundamental competence for translation and interpreting (TI) and "the driving force behind all the other competences", according to the latest European Master's in Translation Competence Framework (2017: 6). Surprisingly, despite this essential role, language competence and its development have received little attention in translation studies.

Learning a language as a tool for professional language mediation requires a well-planned and targeted learning process. To this end, we will explore what cognitive approaches can contribute to TILLT (Translation and Interpreting-Oriented Language Learning and Teaching) to ensure that the needs of students in TI programmes are being met.[1] Cognitive approaches have been successfully

1. The acronym TILLT was introduced by Schmidhofer, Cerezo and Koletnik (2021) to refer to language teaching in TI programmes with the aim of drawing attention to the specificity of this language teaching and of promoting it as a field of academic enquiry.

https://doi.org/10.1075/btl.161.02rec

explored in the teaching of translation (e.g., Seel 2020) and interpreting (e.g., Gile 1995; Kader and Seubert 2015) and seem to be efficient and useful in developing professional competence in the field of TI. As language training in TI programmes is meant to prepare students for translation and interpreting, and since teaching in those areas frequently draws on cognitive approaches, we believe that insights from cognitive linguistics can also be useful in the area of language teaching in TI programmes.

Based on an analysis of the TI process (e.g., Nord 2010; Albl-Mikasa 2012), previous surveys (Schmidhofer, Cerezo and Koletnik 2021), and our own extensive teaching experience in TI programmes, we have identified a series of linguistic needs that need to be met in foreign language training.[2] Language use of (future) translators and interpreters needs to be accurate and display contextual adequacy. Moreover, they must be able to contrast languages at different levels, develop sensitivity towards the culture-bound nature of language, and acquire metalinguistic and cultural knowledge. A crucial aspect is that they understand how language is used to express intentions, implicatures, connotations and similar and that the means to these ends may differ between different languages due to different conceptualisations of reality. Furthermore, students must gradually learn to consider written and oral discourse from the mediator's perspective, take into account their embeddedness in the communicative situation of their original production and translated reception, detect linguistic and communicative problems, and develop problem-solving strategies. Another, albeit maybe less obvious, need is that students develop autonomy as language learners, as contact hours with teachers are limited and the language level required for successful professional translation and interpreting is high.

In this contribution, we are going to explore how some of these needs can be met by including concepts from cognitive linguistics. To this end, we will first give a short state of the art of TILLT (Section 2), then explore relevant concepts from cognitive linguistics (Section 3), show how cognitive approaches are used in TI teaching (Section 4), and, finally, discuss how they can be applied to TILLT (Section 5).

2. Language teaching in TI programmes: A short state of the art

Amongst scholars who have analysed language teaching in TI programmes, it has always been common ground that this language teaching needs to be different

2. In this needs analysis, we are not going to distinguish between oral and written skills or active and passive languages.

from language teaching for general purposes (for an overview of the development of TILLT, cf. Cerezo and Schmidhofer 2021), the main reason being that future translators and interpreters will use language for purposes of professional mediation and not so much for personal needs (Schmidhofer and Ahmann 2015). Despite the disparity of topics within TILLT, most authors in the field would agree on some basic assumptions, i.e., that language is to be regarded and learnt as a tool for professional use (Angelelli and Degueldre 2002; Schmidhofer and Ahmann 2015) and, therefore, framed within the area of language for specific purposes (LPS) (Berenguer 1997; Cerezo 2019; Koletnik 2021, amongst others). However, as Bernardini (2004) points out, language teaching for translators is "a non-standard variety of LSP" (2004: 103), as language training for translators does not so much refer to domain-specific communication, but "involves first and foremost the development of specific capacities required by the translating process in its widest sense" (2004: 103).

Within TILLT, research efforts have mainly focused on the development of goals and teaching methodology. Goals (e.g., Berenguer 1996; Schmidhofer and Ahmann 2015) are usually derived from how TI students will use language in subsequent TI classes and from the overall goals of TI programmes. They are often defined in terms of professional translation or interpreting competence, which will enable students to succeed in the job market. However, language competence in competence models is usually expressed in very general terms (e.g., European Master's in Translation Competence Framework 2017; Hurtado 2017), and these models provide little help regarding how this competence can be developed effectively.

Proposals regarding teaching methodology are varied. Many of these proposals acknowledge the value of the communicative approach as a basis that needs to be expanded (e.g., Schmidhofer and Ahmann 2015), whilst others favour a grammar-based approach (e.g., Gómez-García 2002–2003) or a text-based methodology (e.g., Möller Runge 2001). Cognitive approaches have only played a marginal role so far (e.g., Recio 2011, 2021).

3. Relevant concepts from cognitive linguistics

Cognitive linguistics takes the tenets of cognitive psychology as a basis for the study of language and language learning and approaches language from a holistic point of view. Contrary to older linguistic theories (such as structuralism and generativism), cognitive linguistics considers language not as a system of structures, but rather to be tightly linked to human thinking, and focuses on how the latter

can be modelled and modified. Due to its close connection with psychology, cognitive linguistics has an interdisciplinary and integrating orientation.

As Cuenca and Hilferty (1999: 22–23) highlight, cognitive linguistics is the result of the convergence of different lines of inquiry, which "parten de unos postulados comunes sobre el lenguaje y el estudio de las lenguas".[3] Cognitive linguistics is fundamentally concerned with mental representation and processing. The most influential theories in cognitive linguistics are prototype theory, metaphor theory, cognitive semantics, construction grammar (which is related to the work undertaken by Van Lier 1996 and Vygotsky 1978), grammaticalisation theory, and cognitive grammar, as described by Langacker (1987, 2000). Cognitive processes include perception, attention, memory, emotion and reasoning (Garayzábal and Codesido 2015). In the following paragraphs, we briefly describe the concepts from cognitive linguistics that we consider to be most relevant to TILLT.

Cognitive linguistics provides us with insight into how humans conceptualise the world through language. In their seminal work titled *Metaphors We Live By*, Lakoff and Johnson (1980) show that we unconsciously use a great amount of conventionalised metaphors in everyday language.[4] Metaphors help us to conceptualise reality through perception "lo que nos posibilita una percepción más detallada de la mente y su funcionamiento en el proceso de traducción" (García 2011: 27).[5] Conceptualisation of the world through metaphors can, however, vary between languages (cf. Torijano and Recio 2019; Jacinto and Schmidhofer 2020).

Zimovets and Komanova (2016: 8) analyse how the world around us is represented, and state that we perceive it fundamentally in three ways: a) the real image of the world, b) a cultural or conceptual image of the world, and c) a linguistic image of the world. With regard to the real image of the world around us, this is the apparently objective perception of it, while the cultural image is the perception or conception based on the reflection of the real image through the prism of concepts created on the basis of impressions, both collective and individual. As for the linguistic image of the world, it reflects reality precisely through the cultural image of the world. Language is usually shaped by the cultural areas in which it is spoken. Thus, Spanish, for example, has many references and idioms that

3. "are based on common assumptions about language and the study of languages" (translation by the authors).

4. Lakoff and Langacker are considered to be the founding fathers of cognitive linguistics, thanks to their seminal works Women, Fire, and Dangerous Things (Lakoff 1990) and Foundations of Cognitive Grammar: Theoretical Prerequisites (Langacker 1987) (cf. Cuenca and Hilferty 1999; Croft and Cruise 2008).

5. "which gives us a more detailed insight into the mind and how it works in the translation process" (translation by the authors).

originate in bullfighting or Catholicism due to the strong influence that those have played and, to some extent, continue to play out in Spanish-speaking countries. In the domain of religion, an example could be *hacer las cosas en un santiamén* (get things done in a jiffy), which evokes the image of someone making the sign of the cross; in the domain of bullfighting, meanwhile, an example could be *dar una larga cambiada* (to delude someone), which describes a bullfighter making a sudden turn and taking the bull where he wants it to go. According to Zimovets and Komanova (2016), when people are asked to name the objects or phenomena around them, it is possible to determine which culture(s) form(s) part of their lives through analyzing which metaphors they use.

Cognitive grammar became especially well known through the work of Langacker (2000), but also through other theorists such as Cuenca and Hilferty (1999) and Croft and Cruse (2008). According to the latter, cognitive grammar was born in opposition to, and somehow as an act of rebellion against, generative linguistics; a similar development had already been observed with generative grammar, which emerged in opposition to structural grammar.

Cognitive grammar is rather different from structural grammar. One of the distinctive aspects of cognitive grammar is that the study of language is neither atomistic nor based on rigid models which may be necessary as basic tools but which cannot always explain grammatical phenomena in their entirety. Cognitive grammar rather starts from conceptual structures, from so-called prototypicality, which, precisely, makes it possible to deal with the fuzzy and more complicated edges of certain grammatical categories. In cognitive grammar, the traditional dichotomy between syntax and semantics becomes blurred and language is never understood as a structural body, but rather always linked to meaning. As Langacker (2000) points out, the basis of cognitive grammar is fundamentally semantic; grammatical phenomena are seen as concepts that are processed in the same way that semantic phenomena are processed (Seel 2020: 20). In cognitive grammar, language processing is seen as an individual process of categorisation and schematisation, which casts doubt on traditional views on language comprehension, production and learning that rely on fixed models. Cuenca and Hilferty (1999: 65) point out that in order to process what is called the *semantic pole*, one or two coherent spheres of knowledge must be activated.[6] These knowledge spheres are cognitive domains, which reflect the mental structures and representations of an individual. However, these structures and representations are not fixed and can

6. In cognitive linguistics, grammar is structured in symbolic units that represent the relationship between the semantic pole and the phonological pole of the linguistic sign. The semantic pole is the semantic load of the meaning of a word. At the base of this view is the classical polarity between the form and the meaning of the linguistic sign.

be changed. Awareness of this plasticity of the brain could provide us with the tools with which to intervene within and improve the learning process.

Moreover, cognitive grammar attempts to take into account the insights provided by neuroscience with regard to the functioning of the brain. If we know how the brain works, we can follow the routes and pathways of the brain and use them specifically to forge the foreign language learning process. As already noted, we believe that successful linking of the disciplines of linguistics and neurobiology helps to take into account the neurobiological bases of language. As Theofanopoulou et al. state, "[i]t is clear that a deeper understanding of the neurological foundations of our language faculty would provide us with a more solid basis to approach problems such as language acquisition and language evolution" (2015: 9).

Cognitivist language pedagogy focuses on the learner's mind and its interaction with the new language. Broadly speaking, language learning is considered a type of information processing that includes subprocesses such as perception, recognition, classification, comprehension, retention and automatisation (Roche 2008: 21, cf. also Garayzábal and Codesido 2015). Many cognitivists, such as García (2011: 36), highlight that learning is an active process in which language acquisition is achieved through language use. In this regard, it should be mentioned that language use often takes place in interaction with others, which often occurs in a social context. This interaction contributes to the modification and restructuring of existing mental representations through the incorporation of new knowledge. This view is closely connected with the scaffolding theory developed by Van Lier (1996), which is based on the tenets of Vygotsky's zone of proximal development (1978) and is a central element in Kiraly and Signer's Scaffolded Language Emergence approach (2017).

Within cognitive approaches to language learning, we are going to refer to skill acquisition theory (SAT) because this approach has also been used as a basis to explain how learning takes place in second language pedagogy and interpreting pedagogy. SAT, sometimes also called skill learning theory, is a general learning theory that originates in cognitive psychology (cf. Anderson 1976). It envisages human learning as driven by a series of general principles that apply to a variety of cognitive and psychomotor skills including language learning.

SAT is based on the distinction between *declarative* and *procedural* knowledge, which can broadly be defined as *knowing that* and *knowing how* (DeKeyser 2015: 95). Learning occurs in three subsequent stages. The *cognitive* stage is based on conscious activity, and the acquired knowledge is generally of a declarative nature. During the *associative* stage, declarative knowledge evolves into procedural knowledge, even though the declarative component is not necessarily lost. Connections between individual elements are strengthened and errors in declarative knowledge are gradually identified and eliminated. Proceduralisation is usually achieved through practice, which ideally is deliberate and targeted. In the *autonomous* stage, execution becomes automatic and effortless, which translates into a smaller demand on working memory, and performance becomes increasingly fine-tuned. SAT assumes that procedural knowledge is skill-specific and does not necessarily transfer to other skills; hence skills are not necessarily transferred between receptive and productive language skills (Ellis 2015: 192).

Cognitive approaches to language pedagogy provide a theoretical basis for conscious management of the language learning process. In this context, an important aspect is that learners discover how they learn best in order to organise their learning process accordingly. To find out how successful learners approach language learning, interest in language learning strategies started to emerge in the 1970s. This field of inquiry was particularly productive towards the end of the last century and the beginning of the new one (e.g., O'Malley and Chamot 1990; Oxford 1990; Cohen and Macaro 2007; Griffiths 2008), but seems to have slowed down over the past decade. Based on field research with language learners, various taxonomies of learning strategies have been developed (cf. the SILL in Oxford 1990; the classification in O'Malley and Chamot 1990: 42–54).[7] Oxford's taxonomy (1990) includes six categories, namely memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies. However, the classification of language learning strategies remains a controversial issue, which affects not only the placement of individual strategies in groups, but also the delimitation and definition of the groups themselves. As a result of literature analysis on the SILL as well the author's own reasoning, Griffiths (2013: 42–44) argues that these categories can be reduced to two large categories, namely cognitive strategies and metacognitive strategies. According to Griffiths, cognitive strategies include activities "which directly process the material to be learnt", and memory, which includes "activities aimed at remembering the target material" (2013: 43), while metacognitive strategies comprise activities "which involve controlling/managing/regulating the learning process" and include also the affective dimension ("controlling feelings or emotions") and the social dimension ("managing interaction with others"). The regrouping and the relabelling of the six SILL categories point to the fact that, as Griffiths highlights, "by far the majority of language learning strategies are essentially cognitive in their nature" (2013: 49). What is more, their cognitive nature is proven by the fact that some researchers in language learning strategies refer to the same principles from cognitive psychology as those of SAT (e.g., O'Malley and Chamot 1990).

7. SILL: Strategy inventory for language learning.

4. Cognitive approaches in TI training

4.1 Cognitive approaches in translator training

As opposed to research into interpreting and, hence, to interpreting teaching (cf. section 3.2), which has strongly focused on cognitive processes since its beginning, for many years the main focus in translation research and also translator and interpreter training was on the relationship between the source and the target language (e.g., comparative stylistics by Vinay and Darbelnet 1958), texts (e.g., Reiss 1971), and the concept of equivalence (e.g., Koller 1979).

However, when interest in the translation process, and thus, the person performing it (the translator) began to increase, researchers started to focus on what translators should and can do (Hurtado 2017) and the mental processes that occur in the translator's mind. While early studies applied elicitation methods like thinking-aloud-protocols (TAPs), nowadays, access to the *black box* is mainly gained through technologies like eye tracking and keystroke logging (for an overview, see Göpferich 2008 and Jakobsen 2017). In translation teaching, different procedures have been used to grant teachers access to students' thoughts, the most common being TAPs (Kussmaul 1995) and translational commentaries (García 2008).

Besides research into thought processes, translation teaching has also taken advantage of cognitive grammar to promote the cultural competence of translation students. Seel (2020) relates cognitive grammar to the functional theory of translation as developed by Reiss and Vermeer (1991) and by Nord (1993) and shows how cognitive grammar can be used to unveil "the opacity and the culture-boundedness of PUs (phraseological units)" (2020: 17). He uses cognitive grammar to analyse the conceptual contents of phraseological units by determining the associated domain and its focus, a task that can only be carried out if the learner possesses culture-specific background knowledge. In his analysis, Seel shows how cognitive grammar can provide conceptual apparatus for understanding such opaque elements and help to direct learners' attention towards the concepts behind words. Through the analysis of culture-bound elements of language, learners improve their cultural competence and (through the translation of these) also their cross-cultural competence and, as a result, their overall translation competence.

Omar (2020) makes use of cognitive linguistics to explain the translator's behaviour and choices. He contends that a translator's knowledge and their cognitive abilities and experiences determine what meaning the translator assigns to words and, therefore, the understanding of the source text and the production of the target text. According to Omar, translation is thus "the product of the experiences in the real world" (2020: 47). As a consequence, in his translation teaching, which he calls *cognitive*, he promotes a teaching model that focuses primarily on the process and the cognitive operations involved therein.

4.2 Cognitive approaches in interpreter training

Since the early days of interpreting research, the cognitive dimension of the interpreting process has been central to the discipline. Particularly in the field of simultaneous interpreting, research into the cognitive dimension has rendered groundbreaking insights into aspects such as information processing during interpreting (to name but a few, Seleskovitch 1968; Seleskovitch and Lederer 1984; Chernov 1994; Moser-Mercer 1997, 2002), cognitive processing capacity (Gile 1985, 1995), cognitive load (Seeber 2011), and strategies of text comprehension and production (Kalina 1998). During the past years, the study of cognitive processing has been broadened by integrating a neurolinguistic perspective with the help of technologies like brain imaging and eye tracking (e.g., Hervais-Adelman, Moser-Mercer, Michel and Golestani 2015; Chen, Kruger and Doherty 2020).

The strong cognitive orientation of (early) interpreting research has also informed interpreter training, wherein models and insights from research are used to make students aware of the mental processes being performed during interpreting and to enable them to use different strategies to cope with difficult situations. We briefly describe some insights from research, many of which were provided by active interpreter trainers and have had an impact on interpreter training.

Practical interpreter training should provide students with tools for analysis of their own performance and possible reasons for errors; however, these tools need to be easy to understand and handle. This is the reason as to why Gile's effort models (1995) have become a frequent tool in error analysis, as their simple structure allows students and trainers to detect possible causes of errors or poor performance. According to Gile, interpreting "requires some sort of mental 'energy' that is only available in limited supply", and "sometimes requires more than is available, at which times performance deteriorates" (Gile 1995: 161). According to Chabasse and Dingfelder Stone (2015: 76), "[m]odels can help beginners visualise and ultimately understand the individual components of the interpreting process, thus allowing them to isolate particular aspects and work towards their automatisation, an important step for proficiency in interpreting". This last point also helps students to understand the importance of practice, since through automatisation, effort can be lowered and mental resources can be freed (cf. the tenets of SAT explained above). Practice, particularly deliberate practice, will help students to develop expertise, which should ideally be what Moser-Mercer (2008: 9) calls

adaptive expertise (as opposed to routine expertise) and which enables learners to "efficiently apply basic domain knowledge and to develop innovation skills that will help them solve routine problems as well as identify new problems".

A second area of interest for interpreter training is the use of cognitive strategies, which can help to deal with difficult situations and lower the effort required from the interpreter. Kader and Seubert (2015) distinguish between macrostrategies (planning, expectations, inferencing and monitoring) and microstrategies (like chunking, paraphrasing, generalising and prioritising, among many others), among which, especially the latter are, in our view, basically cognitive operations. According to Kader and Seubert, in the learning context, not only can strategies be used for diagnosing errors, "students are [also] handed a tool through which they can purposefully and gradually improve their interpreting skills according to their learning level, by consistently finding or being made aware of strategy-based problem-solving approaches" (2015: 140).

5. How TILLT can benefit from cognitive research

In this section, we are going to describe how the language learning process in TILLT can be shaped on the basis of the concepts from cognitive linguistics and cognitive language pedagogy as described in Section 3.

At a general level, cognitive linguistics can provide information to teachers and, in particular, to learners relating to how learning works at the cognitive level. Understanding the general mechanisms in the brain, particularly those involved in (language) learning, can help them to develop awareness of their language learning process and offer possibilities to intervene actively in this process and make it more efficient. This includes an understanding of how new knowledge is integrated into already-existing networks and mental representations and how these are constantly restructured and modified through learning, which can be achieved through analysis and self-observation.

A theoretical model such as SAT can help students to understand the processing of information, the different types of knowledge, and the role of practice. It can help learners to develop awareness of the process because they can see how a language structure that might require a large amount of attention and mental resources at the beginning is used gradually more smoothly and automatically, and that rules might be forgotten when use is fully automated. Moreover, this understanding will motivate them to engage in practice, as they can observe the positive effects that practice has upon their accuracy and fluency. Learners might then be more open to different formats of targeted and deliberate practice provided by teachers, as it might be easier for them to see the purpose of these activities. We must not forget that most of our learners are motivated young adults who have chosen languages as their main working tool; developing ways in which they can hone this tool is an important step for them to become (teacher-) independent learners and develop important skills for engaging in lifelong (language) learning. A further benefit of using SAT to organise teaching and explain learning at a cognitive level is that the principles of SAT are often implicitly or explicitly applied in interpreter training.[8] Being familiar with these principles can help students to then understand the whys and hows of activities and procedures used in these classes.

Besides an understanding of the general principles of learning, being familiar with different learning strategies can guide learners to find out what works for them individually. It can thus be useful to provide them with an overview of learning strategies and have them observe which ones they prefer and encourage them to try out different ones. This will help them to begin to know themselves as learners and gradually become independent, efficient and expert language learners who will hopefully later become expert language users (as required in language-related professions such as translation and interpreting). According to Ericsson, Krampe and Tesch-Romer (1993: 400), the differences between average adults and expert performers "reflect a life-long period of deliberate effort to improve performance in a specific domain". The judicious application of language learning strategies constitutes such a form of deliberate practice that can enable students to obtain the expertise that the profession will require of them. In this context, moreover, it is useful to provide information on TI profession(s) and the related linguistic requirements, as this will help them to understand their needs and the requirements that they are expected to bring to TI classes.

While cognitive strategies (cf. the aforementioned classification by Griffiths) can assist them in improving their interaction with languages and materials, metacognitive strategies contribute to achieving long-term goals, as they can help students to become autonomous learners (cf. the principles of the EHEA in "The Bologna Process 2020" 2009). This is particularly important for TILLT because in-class hours are very far from being sufficient to reach the required language level for TI. In this context, it might be useful to provide students with an introduction to the metacognitive aspects of learning and/or provide activities and coaching for them. As most students come directly from schools where almost everything is set out for them by their teachers, they might feel overwhelmed by

8. SAT is often quoted as the theoretical basis for the widespread classroom model of PPP (presentation-practice-production), which starts with an explicit explanation of a language structure, which is subsequently practised in carefully designed activities and, finally, in a communicative situation (Ellis 2015: 244).

the demand of suddenly being responsible and independent learners (as generally imposed by universities). In this regard, one of the most important strategies is that of integrating language practice into everyday life and striving to convert every situation in which the foreign language is present into a learning opportunity. Languages and language learning will accompany them professionally and personally for their whole life if they finally work in one of the professions for which they are trained in TI degrees. Constant contact with the target language will not only enable them to automatise language skills and gain fluency, but also provide opportunities for reflection on the language and its evolution and on their own performance as professional language users.

Cognitive grammar has not yet received much attention in translation and language pedagogy, even though it offers, thanks to its interdisciplinary origin, a holistic view on language and a possibility for integrative teaching and learning (cf. the use of cognitive grammar in TILLT in Recio 2011, 2021). Cognitive grammar is mainly conducive to improving comprehension processes, as these crucially depend on learners' existing mental representations. Cognitive grammar can draw attention to how new information interacts with existing representations, and how the latter intervene in the comprehension processes of discourse, even though the reader is mostly unaware of it, and thus promote an optimal balance between top-down and bottom-up processes. Such awareness is especially relevant in the case of culture-related concepts, as Seel (2020) shows in his contribution on the comprehension of phraseological units. What is more, such detailed and self-observant understanding is important for translation classes and can help to promote a process-oriented translation pedagogy. In the translation process, cognitive grammar provides the translation student with the tools with which to solve comprehension problems and categorise different elements of language correctly. This is especially important in the case of polysemic lexical units, which, depending on the meaning, may even belong to different grammatical categories.[9]

Awareness of the culture-bound nature of language can also be raised by drawing attention to the immense number of metaphors that are used in daily life and often differ considerably between different languages. For this purpose, metaphor research can make learners aware of the cultural influence on language and of the importance of knowing not only a language but also the culture(s) associated therewith. This can promote heightened awareness of and interest in the cultures of target languages and the motivation behind spending time abroad. On

9. Cf. for example, the different use of the German schon as an adverb in Er kommt schon heute (He is already coming today) and as a modal particle in Das wirst du schon schaffen! (I am sure you will be fine!).

a more practical level, it will contribute to a fuller understanding of texts by being able to examine texts through the cultural prism of native speakers and understand conceptualisations and references that might not be obvious at first sight. Furthermore, it can induce learners to analyse their own culture-bound interpretative schemata that might otherwise be applied unconsciously.

6. Conclusion

In this chapter, we have explored the possible benefits of integrating insights from cognitive linguistics into TILLT. We brought together principles of cognitive linguistics, aspects of cognitive approaches to language learning, and the teaching of translation and interpreting. On this basis, we have identified and described some areas in which TILLT can benefit from a cognitive perspective on language and learning, such as raising awareness of the culture-bound nature of language, understanding learning processes from a holistic perspective and how to optimize them, and providing tools for promoting learner autonomy. Each of these areas would merit more in-depth research in the area of TILLT, which, in turn, would also contribute to transforming TILLT into an area of truly interdisciplinary research.

References

Albl-Mikasa, Michaela. 2012. "The Importance of Being Not Too Earnest: A Process- and Experience-based Model of Interpreter Competence." In *Dolmetschqualität in Praxis, Lehre und Forschung*, ed. by Barbara Ahrens, Michaela Albl-Mikasa, and Claudia Sasse, 59–92. Tübingen: Narr.

Anderson, John R. 1976. *Language, Memory, and Thought*. New York: Psychology Press

Angelelli, Claudia, and Christian Degueldre. 2002. "Bridging the Gap between Language for General Purposes and Language for Work: An Intensive Superior-level Language/Skill Course for Teachers, Translators, and Interpreters." In *Developing Professional-level Language Proficiency*, ed. by Betty Lou Leaver, and Boris Shekhtman, 91–110. Cambridge/New York: Cambridge University Press. https://doi.org/10.1017/CBO9780511606465.005

Berenguer, Laura. 1996. "Didáctica de segundas lenguas en los estudios de traducción." In *La enseñanza de la traducción*, ed. by Amparo Hurtado Albir, 9–29. Castellón: Publicacions de la Universitat Jaume I.

Berenguer, Laura. 1997. L'ensenyament de llengües estrangeres per a traductors: Didàctica de l'alemany. PhD diss. Universitat Autònoma de Barcelona.

Bernardini, Silvia. 2004. "Corpus-Aided Language Pedagogy for Translator Education." In *Translation in Undergraduate Degree Programmes*, ed. by Kirsten Malmkjær, 97–111. Amsterdam: John Benjamins. https://doi.org/10.1075/btl.59.08ber

Cerezo Herrero, Enrique. 2019. "Lenguas extranjeras con fines traductológicos: en busca de una identidad propia." *Quaderns. Revista de Traducció* 26: 239–254.

Cerezo Herrero, Enrique, and Astrid Schmidhofer. 2021. "25 Years of Research on Language Training in TI Programmes: Taking Stock and Ways Forward." In *Foreign Language Training in Translation and Interpreting Programmes*, ed. by Astrid Schmidhofer, and Enrique Cerezo Herrero, 17–44. Frankfurt a M.: Peter Lang.

Chabasse, Catherine, and Maren Dingfelder Stone. 2015. "Capacity Management in Interpretation: Efforts, Directionality, and Language Pair Considerations." In *To Know How to Suggest*, ed. by Dörte Andres, and Martina Behr, 75–102. Berlin: Frank & Timme.

Chen, Sijia, Jan-Louis Kruger, and Stephen Doherty. 2020. "Reading Patterns and Cognitive Processing in an Eye-Tracking Study of Note-Reading in Consecutive Interpreting." *Interpreting* 23 (1): 76–102. https://doi.org/10.1075/intp.00050.che

Chernov, Ghelly V. 1994. "Message Redundancy and Message Anticipation in Simultaneous Interpreting." In *Bridging the Gap: Empirical Research in Simultaneous Interpretation*, ed. by Sylvie Lambert, and Barbara Moser-Mercer, 139–154. Amsterdam: John Benjamins. https://doi.org/10.1075/btl.3.13che

Cohen, Andrew D., and Ernesto Macaro (eds). 2007. *Language Learner Strategies*. Oxford: Oxford University Press.

Croft, William, and D. Alan Cruse (eds). 2008. *Lingüística Cognitiva*. Madrid: Ediciones Akal.

Cuenca, Maria Josep, and Joseph Hilferty (eds). 1999. *Introducción a la lingüística cognitiva*. Barcelona: Editorial Ariel.

DeKeyser, Robert. 2015. "Skill Acquisition Theory." In *Theories in Second Language Acquisition. An Introduction*, ed. by Bill VanPatten and Jessica Williams, 94–112. New York: Routledge.

Ellis, Rod. 2015. *Understanding Second Language Acquisition*. Oxford: Oxford University Press.

Ericsson, K. Anders, Ralf Th. Krampe, and Clemens Tesch-Romer. 1993. "The Role of Deliberate Practice in the Acquisition of Expert Performance." *Psychological Review* 100: 363–406. https://doi.org/10.1037/0033-295X.100.3.363

European Master's in Translation Competence Framework. 2017. https://ec.europa.eu/info/sites/info/files/emt_competence_fwk_2017_en_web.pdf

Garayzábal Heinze, Elena, and Ana Isabel Codesido García. 2015. *Fundamentos de psicolingüística*. Madrid: Síntesis.

García Álvarez, Ana María. 2008. "Der translatorische Kommentar als Evaluationsmodell der studentischen Übersetzungsprozesse." *Lebende Sprachen* 1: 26–32. https://doi.org/10.1515/LES.2008.26

García Álvarez, Ana María. 2011. "Aprendiendo a agudizar la percepción para la comprensión y traducción de referentes culturales, gastronómicos alemanes: un enfoque cognitivo en el aula." In *En las vertientes de la traducción e interpretación del / al alemán*, ed. by Silvia Roiss et al., 25–38. Berlin: Frank & Timme.

Gile, Daniel 1985. "Le modèle d'efforts et l'équilibre d'interprétation en interprétation simultanée." *Meta* 30 (1): 44–48. https://doi.org/10.7202/002893ar

Gile Daniel. 1995. *Basic Concepts and Models for Interpreter and Translator Training*. Amsterdam: John Benjamins. https://doi.org/10.1075/btl.8

Gómez-García, Carmen. 2002–2003. "Sobre la necesidad de contravenir las reglas de las nuevas metodologías." *Encuentro. Revista de investigación e innovación en la clase de idiomas* 13–14: 101–112.

Göpferich, Susanne. 2008. *Translationsprozessforschung. Stand – Methoden – Perspektiven*. Tübingen: Narr.

Griffiths, Carol. 2008. *Lessons from Good Language Learners*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511497667

Griffiths, Carol. 2013. *The Strategy Factor in Successful Language Learning*. Bristol: Multilingual Matters. https://doi.org/10.21832/9781847699428

Hervais-Adelman, Alexis, Barbara Moser-Mercer, Christoph M. Michel, and Narly Golestani. 2015. "fMRI of Simultaneous Interpretation Reveals the Neural Basis of Extreme Language Control." *Cerebral Cortex* 25 (12): 4727–4739. https://doi.org/10.1093/cercor/bhu158

Hurtado Albir, Amparo (ed). 2017. *Researching Translation Competence by PACTE Group*. Amsterdam: John Benjamins. https://doi.org/10.1075/btl.127

Jacinto García, Eduardo, and Astrid Schmidhofer. 2020. "Análisis contrastivo (español-alemán) de verbos con sentido metafórico empleados en la descripción arquitectónica." *LinRED* 17: 1–38. https://doi.org/10.37536/LINRED.2020.XVII.15

Jakobsen, Arnt Lykke. 2017. "Translation Process Research." In *The Handbook of Translation and Cognition*, ed. by John W. Schwieter, and Aline Ferreira, 19–49. Hoboken: Wiley-Blackwell. https://doi.org/10.1002/9781119241485.ch2

Kader, Stephanie, and Sabine Seubert. 2015. "Anticipation, Segmentation…Stalling? How to Teach Interpreting Strategies." In *To Know How to Suggest*, ed. by Dörte Andres, and Martina Behr, 25–144. Berlin: Frank & Timme.

Kalina, Sylvia. 1998. *Strategische Prozesse beim Dolmetschen*. Tübingen: Narr.

Kiraly, Donald, and Sarah Signer. 2017. *Scaffolded Language Emergence in the Classroom*. Berlin: Frank & Timme.

Koletnik, Melita. 2021. "LSP and Additional Language Teaching for Translators: New Researched-based Evidence." In *Foreign Language Teaching in Translation and Interpreting Programmes*, ed. by Astrid Schmidhofer, and Enrique Cerezo Herrero, 69–86. Frankfurt a M.: Peter Lang.

Koller, Werner. 1979. *Einführung in die Übersetzungswissenschaft*. Heidelberg: Quelle & Meyer.

Kussmaul, Paul. 1995. *Training the Translator*. Amsterdam/Philadelphia: John Benjamins. https://doi.org/10.1075/btl.10

Lakoff, George. 1990. *Women, Fire, and Dangerous Things*. Chicago: University of Chicago Press.

Lakoff, George, and Mark Johnson (eds). 1980. *Metaphors We Live by*. Chicago/London: University of Chicago Press.

Langacker, Ronald W. 1987. *Foundations of Cognitive Grammar. Vol. I. Theoretical Prerequisites*. Stanford: Stanford University Press.

Langacker, Ronald W. 2000. *Grammar and Conceptualization*. Berlin: Mouton de Gruyter.

Möller Runge, Julia. 2001. *Siglo XXI. ¿Innovamos? La enseñanza de una segunda lengua extranjera*. Salobreña: Alhulia.

Moser-Mercer, Barbara. 1997/2002. "Process Models in Simultaneous Interpretation." In *The Interpreting Studies Reader*, ed. by Franz Pöchhacker, and Miriam Shlesinger, 149–161. London: Routledge.

Moser-Mercer, Barbara. 2008. "Skill Acquisition in Interpreting a Human Performance Perspective." *The Translator and Interpreter Trainer* 2 (1): 1–28. https://doi.org/10.1080/1750399X.2008.10798764

Nord, Christiane. 1993. *Einführung in das funktionale Übersetzen: am Beispiel von Titeln und Überschriften*. Tübingen/Basel: Francke.

Nord, Christiane. 2010. *Fertigkeit Übersetzen*. Berlin: BDÜ Fachverlag.

O'Malley, J. Michael, and Anna U. Chamot. 1990. *Learning Strategies in Second Language Acquisition*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9781139524490

Omar, Youssif Zaghwani. 2020. "Impact of Application of Cognitive Linguistic Theory in Teaching Translation at Libyan Universities." *Ahwaz Journal of Linguistics Studies (AJLS)* 1 (4): 42–56.

Oxford, Rebecca L. 1990. *Language Learning Strategies. What Every Teacher Should Know*. Boston: Heinle & Heinle.

Recio Ariza, María Ángeles. 2011. "La Gramática Cognitiva y su utilidad en la enseñanza de lengua extranjera para traductores e intérpretes." In *En las vertientes de la traducción e interpretación del / al alemán*, ed. by Silvia Roiss et al., 163–173. Berlin: Frank & Timme.

Recio Ariza, María Ángeles. 2021. "Fremdsprachenunterricht im Übersetzen und Dolmetschen im 21. Jahrhundert: Ausarbeitung eines auf dem Kognitivismus basierenden Entwurfs eines Mooc für den Unterricht der deutschen Sprache für ÜbersetzerInnen und DolmetscherInnen." In *Language Teaching in Translation and Interpreting Programmes*, ed. by Astrid Schmidhofer, and Enrique Cerezo Herrero, 139–161. Frankfurt: Peter Lang.

Reiss, Katharina. 1971. *Möglichkeiten und Grenzen der Übersetzungskritik*. München: Hueber.

Reiss, Katherina, and Hans J. Vermeer (eds). 1991. *Grundlagen einer allgemeinen Translationstheorie*. Tübingen: Niemeyer.

Roche, Jörg. 2008. *Fremdsprachenerwerb. Fremdsprachendidaktik*. Tübingen/Basel: A. Francke.

Schmidhofer, Astrid, and Heiko Ahmann. 2015. "Translationsrelevanter Fremdsprachenunterricht: Besonderheiten und Zielsetzungen." *Moderne Sprachen* 59 (1): 49–70.

Schmidhofer, Astrid, Enrique Cerezo Herrero, and Melita Koletnik. 2021. "Why we need TI-oriented language learning and teaching (TILLT)." *Elope* 18 (1): 71–89. https://doi.org/10.4312/elope.18.1.71-89

Seeber, Killian G. 2011. "Cognitive Load in Simultaneous Interpreting: Existing Theories – New Models." *Interpreting* 13 (2): 176–204. https://doi.org/10.1075/intp.13.2.02see

Seel, Olaf Immanuel. 2020. "Phraseology and the Implementation of Cognitive Grammar in Translation Didactics." *CLINA* 6 (2): 15–32. https://doi.org/10.14201/clina2020621532

Seleskovitch, Danica. 1968. *L'interprète dans les conférences internationales: Problèmes de langage et de communication*. Paris: Minard.

Seleskovitch, Danica, and Marianne Lederer (eds). 1984. *Interpréter pour traduire*. Paris: Didier Érudition.

"The Bologna Process 2020 – The European Higher Education Area in the New Decade". 2009. http://ehea.info/media.ehea.info/file/20090223-Ostend/54/2/BFUG_Board_CZ_19_4_draft_communique_200209_594542.pdf

Theofanopoulou, Constantina, Pedro Tiago Martins, Javier Ramírez, Elisabeth Zhang, Gonzalo Castillo, Edward Shi, Saleh Alamri, Anna Martínez Álvarez, and Evelina Leivada. 2015. "Neurological Foundations of Language: Emerging Perspectives." *Llengua, Societat i Comunicació* 13: 4–11.

Torijano Pérez, J. Agustín, and María Ángeles Recio Ariza. 2019. "Translating Emotional Phraseology: A Case Study." In *Computational and Corpus-Based Phraseology. EUROPHRAS 2019. Lecture Notes in Computer Science*, ed. by Gloria Corpas Pastor, and Ruslan Mitkov, 391–403. Berlin/Basel: Springer Verlag. https://doi.org/10.1007/978-3-030-30135-4_28

Van Lier, Leo. 1996. *Interaction in the Language Curriculum. Awareness, Autonomy and Authenticity. Applied Linguistics and Language Study*. New York: Longman.

Vinay, Jean Paul, and Jean Darbelnet. 1958. *Comparative Stylistics of French and English: A Methodology for Translation*. Paris: Les éditions Didier.

Vygotsky, Lev. 1978. *Mind in Society. The Development of Higher Psychological Processes*. Cambridge (Mass.): Harvard University Press.

Zimovets, Natalia V., and Alla Y. Komanova. 2016. "Phraseological Units with the Elements of Colour Denomination." In *Trends in the Development of Modern Linguistics in the Age of Globalisation*, 8–11. Prague: Belarusian State University.