Book review: Languages for Specific Purposes in the Digital Era. Bárcena, E.; Read, T. & Arús, J. (eds.) (2014) New York: Springer International Publishing, ISBN 978-3-319-02221-5, 354 pp.

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The volume *Languages for Specific Purposes in the Digital Era* explores the direct relationship of nowadays Computer-Assisted Language Learning (hereafter, CALL) to aspects of natural language processing for both theoretical and practical applications, and worldwide demand for formal language teaching which pays special attention to the specialized professional domains. This book, edited by Bárcena, Read and Arús, is unique since it covers in a wide way the state-of-the-art related to the interrelated fields of computer-based teaching and learning as well as teaching and processing of specialized linguistic domains. The chapters in this volume give insights on the current state and future directions of many recent relevant aspects which are related to the applications of computers to natural languages. Some of these key aspects are authenticity, personalization, normalization, evaluation. Other chapters offer relevant research on major techniques, strategies and methodologies which are nowadays the focus of international language research projects, being both of a theoretical and an applied perspective.

The teaching and learning of Languages for Specific Purposes (hereafter, LSP) has grown significantly causing a relevant rise to a wide proliferation of the information technology (hereafter, IT) and, in particular, within the field of CALL. Since the IT owns great advantages and huge potential within the context of language learning and teaching, this volume tries to offer a wide overview of the terminology utilized not only by concrete communities but also by the syntactic, semantic and pragmatic properties inherent to LSP. This book is thus intended, broadly speaking, for those readers who are experts on the field of Language and Linguistics (both Applied and Computational) and from

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similar disciplines such as Applied Computing, Second Language Education and Educational Psychology.

This book is the fifteenth volume within the series called Educational Linguistics, by Springer, which deals with innovative studies of language use and language learning. The target audience, to be more concrete, of the current volume is anyone working in specific areas defined by the use of the IT to the processing and teaching-learning of natural languages, in restricted or specialized professional and academic contexts, such as scholars, researchers, postgraduate and graduate students, and staff in teacher education programmes, such as teachers, teachers trainers, curriculum and material developers, evaluators and, finally, others interested in this field.

This book is divided into four sections, with four chapters in each section. After the editors' preface (pp. v-ix), the first section, titled *General Issues about Learning Languages with computers* (pp.1-87), deals with general considerations related to language learning utilizing computers. The first chapter of this section, *Information Technology and Languages for Specific Purposes in the EHEA: Options and Challenges for the Knowledge Society* (pp. 3-25), written by Arnó-Macià, reviews in detail the impact of technology on LSP on the European Higher Education Area framework. The author analyses various technological applications to identify how the IT can be integrated in LSP teaching in order to help learners manage with the demands of the academic and professional communication in a globalized context. Arnó-Macià analyses an interesting educational project, such as the project *Quantum LEAP* which is shown as an integrated online learning tool aiming at providing the educational community a wide source of materials. The second chapter, titled *Fostering Learner Autonomy in Technological Enhances ESP Courses* (pp. 27-44) by Gimeno Sanz, offers the pedagogical implications of a number of technology-enhanced initiatives whose aim is to increase learner autonomy. Gimeno Sanz opens new doors not only to authentic and multimedia materials but also to a series of resources and tools. The modern learning setting offers a rather interesting chance to create and design sources as, for example, a pressroom through blogs and wikis, audio broadcasts and chats, and a workshop with a huge amount of online learning tools. A modern language classroom is therefore claimed and argued in order to develop the observational, exploratory and productive skills which language learners need to improve. In the third chapter, titled *The I AGENT Project: Blended Learning Proposal for Professional English Integrating an AI Extended Version of Moodle with Classroom Work for the Practice of Oral Skills* (pp. 45-67), Martín-Monje and Talaván offer an adaptive blended learning approach developed in the I-AGENT (*Intelligent Adaptative Generic English Tutor*) project, which tries to merge Intelligent Computer Assisted language learning (ICALL) with face-to-face (F2F) instruction with an innovative approach, where oral skills are enhanced in a natural communicative context. This project, which Martín-Monje and Talaván explain in depth, is aimed at including every learner's needs by adapting the materials to a personalized progress profile guided through Moodle. Moreover, the teacher can evaluate the learners' open production results, transforming I-AGENT into a system that goes beyond ICALL programmes. This project was developed in cooperation with the ATLAS (Artificial intelligence for linguistic Applications) research group at UNED, headed by Dr. Bárcena, one of the editors of the present book. The fourth chapter, titled *Student Assessment in the Online Language Learning Materials Developed and Delivered Through the InGenio System* (pp. 69-87) by Sevilla-Pavón, Martínez-Sáez and de Siqueira Rocha, tackles the relevance of assessment and offers an analysis of the assessment process of basic language skills, examined by the *Cambridge ESOL First Certificate in English Examination* (FCE) and the ways in which the InGenio digital preparatory materials offer to the

effectiveness and efficiency of the assessment in both tutor assessment and learner self-assessment. While self-assessment is independent and autonomous, teacher assessment is aimed at strengthening both the learners' autonomy and their sense of responsibility.

The second section of this volume, entitled *Computer-Assisted Experiences for the Development of Language Competences and Skills* (pp. 89-173), comprises four chapters which deal with computer-assisted experiences to develop language skills and competences. In the first chapter, titled *Internet Dictionaries for Teaching and Learning Business English in Spanish Universities* (pp. 91-109) by Fuertes-Olivera, the author offers various possibilities for teaching and learning Business English. Fuertes-Olivera proposes a lexicographical approach to the study of terminology based on the function theory of lexicography. This research, carried out by the author himself, is aimed at, firstly, answering the learners' cognitive and communicative needs and, secondly, at facilitating connectivity, thereby enhancing the use of the language. In the second chapter of this section, *Moodle Glossary Tasks for Teaching Legal English* (pp. 111- 128), Breeze offers an example of teaching and learning Legal English through Moodle glossary activities at the university level. This author describes the design and implementation of two collaborative legal glossary writing activities, over two successive years, being part of a university legal English course, and offers an analysis of the procedures and results. Breeze offers the collaborative creation of a digital legal English glossary in Moodle. The approach, explained in this chapter, complements other courses in the field of English for Specific Purposes (hereafter, ESP). The third chapter, entitled *Promoting Specialised Vocabulary Learning Through Computer-Assisted Instruction* (pp. 129-154) by Perea-Barberá and Bocanegra-Valle, discusses the teaching and learning of specialized vocabulary through IT in general and on computer-assisted teaching and learning of maritime English (ME) vocabulary, in particular, through the glossary tool contained in Moodle. The authors claim that promoting ESP courses with computer-based technology enhances students' collaborative work and this helps learners become aware of self-direction. Moreover, they also discuss the main lines of research within the field of vocabulary learning with a focus on the relation between computer-assisted reading instruction and vocabulary retention, how online dictionaries contribute in learning specific vocabulary, and how the IT enhance ESP courses referring, in particular, to specialized vocabulary development. In the fourth and last chapter of this second section, *A Practical Application of Wikis for Learning Business English as a Second Language* (pp. 155-173), Rodríguez-Arancón and Calle-Martínez present a case study of the practical applications of the Wikis for learning Business English as a second language. The pilot study takes place at a Business English course on an Economics degree in Business Administration by Universidad Complutense de Madrid (UCM), having participated 100 students in the experiment. The authors have used a Business English-oriented test and a personal questionnaire for data collecting. The innovative teaching approach enhances collaborative work, self-learning and self-evaluation within the classroom, with other groups and by utilizing wikis in mastering the four communicative skills.

The third section of the present volume, entitled Corpus-Based Approaches to Applications for Teaching and Processing Languages (pp. 175-263), includes further four chapters. The first chapter, A Genre-Based Approach to the Teaching of Legal and Business English: The GENTT Specialized Corpus in the LSP Classroom (pp. 177-196) by Borja Albi, Juste Vidal, Ordóñez López and Conde, offers a genre-based approach to the teaching and learning of legal and Business English. In order to write the present chapter, a team of teachers of LSP and teachers of specialized translation decided to work

together to design and implement two LSP courses, which belong to the degree programme in Translation and Interpreting at the University Jaume I in Spain. The authors analyze the impact of corpora on LSP teaching and illustrate this with the GENNT example of specialized discourse. The current research is specifically based upon a corpus of specialized genres developed by the authors, which offers empirically gained models and samples in order to be utilized as textual, conceptual, linguistic and terminological references. In the second chapter, entitled Innovative Methods for LSP-Teaching: How We Use Corpora to Teach Business Russian (pp. 197-222), Wilson, Sharoff, Stephenson and Hartley offer a practical application of corpora to facilitate vocabulary acquisition and to promote students' ability in order to recognize and utilize expressions in an appropriate context in Business Russian and other LSP subjects. The authors contribute to the literature on the use of corpora in language learning and teaching and, more specifically, in both Foreign Language Teaching and LSP domains, by illustrating the work of the authors, not only from a technological perspective to promote possibilities to manipulate corpora for pedagogical purposes but also from a pedagogical perspective to develop materials in order to use the IT more fully. Corpora can help develop LSP skills such as vocabulary acquisition, register recognition and differentiation. It can also offer learners with more individualised materials in LSP courses which can adjust their needs. The authors focus on the benefit of collaborative learning since this eases not only language learning and teaching but also tutors' work. The third chapter, Automatic Specialized vs. Non-specialized Text Differentiation: The Usability of Grammatical Features in a Latin Multilingual Context (pp. 223-241) by Cabré, da Cunha, SanJuan, Torres-Moreno and Vivaldi, offers an example of automatic specialized versus non-specialized text differentiation, aiming at showing that it is possible to differentiate specialized texts from non-specialized texts written in Latin languages through the analysis of some grammatical features as well as lexicon. The online tool, explained by the authors, can classify as well as it permits a search for technical statements inside non-specialised documents and vice versa. Two experiments are explained: on the one hand, the utilization of rules combining lemmas and grammatical tags, which is more efficient, and, on the other hand, the scrutinising of grammatical sequences, aimed at gaining better outcomes, which could be considered as a new perspective on areas such as terminology, specialized discourse and natural Language processing (hereafter, NLP) activities and has direct uses in the automatic compilation of search engines, the automatic summarization of specialized files as well as the automatic making of LSP corpora. In the fourth chapter, entitled Exploring the Potential of Corpus Use in Translation Training: New Approaches for Incorporating Software in Danish Translation Course Design (pp. 243-263) by Laursen and Arinas Pellón, the author cover the potential of corpus use in translation training by describing the new approaches which include software in a Danish translation course design. This chapter explains how learner's autonomy increases in the field of specialized translation because of combining functional translation strategies with the use of concordance software, and genre analysis in specialized translation training as well as corpus analysis. Moreover, they offer some illustrations on how corpus-based dictionaries for specialized translation should be organized. The learners have dealt with demonstratives and linking expressions from Spanish and Danish, which were validated with the corpus and the concordancing software Antonc, permitting learners to extrapolate corpus analysis techniques to other genres in their future careers.

The fourth section of this volume, entitled *Processing Natural Languages* (pp. 265- 348), encompasses four final chapters. The first chapter, *Representing Environmental Knowledge in EcoLexicon* (pp. 267-301) by Faber, León-Aráuz and Reimerink, presents a multilingual terminological knowledge base (TKB) named EcoLexicon, which is addressed to certain professionals, such as translators, technical

writers, and so on. The authors aim at verifying that the internal coherence at all levels of a dynamic knowledge representation checks that complex domains can be shown in a user-friendly way. Ecolexicon offers advantages of a relational database, which permits for a fast distribution and growth of the platform and of an ontology in order to promote the users' demands. According to human conceptual systems, reconceptualization conceives the dynamic and multidimensional nature of terms and concepts. In the second chapter of this section, entitled *New Approaches to Audiovisual Translation: The Usefulness of Corpus-Based Studies for the Teaching of Dubbing and Subtitling* (pp. 303-322), Rica Peromingo, Albarrán Martín and García Riaza offer new approaches to audiovisual translation. Corpus-based studies are a recent and very useful instrument to analyze audiovisual text. Having detailed the empirical methods which are suggested by corpus linguists and how computing tools can be utilized to analyze audiovisual discourse, the authors present the analysis of the CORSUBIL corpus, a corpus of bilingual subtitles in English and their corresponding subtitles in Spanish, which are extracted from many relevant films in the history of American filmography. This chapter on the corpus-based studies presents an interdisciplinary research by combining AVT and Corpus Linguistics and, at the same time, shows one of the potential possibilities which they present. The field of corpus-based studies is proved to be a quite recent approach to the study of the audiovisual text. In the third chapter, the title of which is *The Pragmatic Level of OntoLingAnnot's Ontologies and Their Use in Pragmatic Annotation for Language Teaching* (pp. 323-344) by Pareja-Lora, the author offers the pragmatic annotation of the OntoLingAnnot annotation framework, emphasizing on its pragmatic categories, which are included as concepts and examples of its ontologies. The author shows six pragmatic categories which can be utilized for annotating texts and dialogues utilizing the current framework. These pragmatic categories are linguistic coverage, degree of formalization, ontological gap-filling, scalability, extensibility, interoperability, standard compliance and usability. This framework is a relevant contribution to Ontological Engineering, Pragmatics and Linguistic Annotation. Moreover, this approach is also scalable, extensible, interoperable, standard compliant and highly (re)usable. In the last chapter of this fourth and final section, *Reflections on the Future of Technology-Mediated LSP Research and Education* (pp. 345-348), Arús, Bárcena and Read, the editors of the current volume, predict new approaches which will shape ongoing research, on combining CALL and LSP. The editors introduce important future trends, such as the Web 2.0, Open Educational Resources (OER), Massive Open Online Courses (MOOCs), gamification and Mobile-Assisted Language Learning (MALL). These trends are already in the present.

The book's aim of presenting the state-of-the-art of technological and methodological innovation in the teaching and learning of specialized linguistic domains is surely achieved. The four different sections of this current volume cover relevant and interesting current knowledge and research in the interrelated fields of computer-assisted language learning/teaching and the processing of specialized linguistic domains. This volume is a rather valuable collection which offers insightful discussions on various issues related to LSP Research and Education. *Languages for Specific Purposes in the Digital Era* is probably to be regarded one of the first volumes which combines various principles, models, techniques and strategies within the specific kinds of CALL systems which deal with the treatment of linguistic aspects, thereby being an interesting reading material for teachers and researchers, who are interested not only in computers but also in domain-specific languages. Considering that IT is future and future is innovation, the range of the IT is thus expected to cause new contributions to the topics which have been covered in the present book.

About the author

Salvador Montaner Villalba is currently writing his PhD thesis at UNED. He is an EFL teacher in Valencia. He is a member of Editorial and Scientific committee at different online Journals. He collaborates with ATLAS-UNED at several national projects.