## **Recent Developments in ESP/EAP/EMI** Contexts

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**Abstract** ESP is a dynamic research discipline, underpinned by the fundamental question of how best to meet the needs of English learners, especially in our increasingly globalized and internationalized world. Since the early 1960s, ESP has become one of the most prominent areas of teaching in universities around the world. What began as a grass-roots solution to the need for vocationally-relevant English language education has evolved into a much broader field of research and application. Today, ESP plays a critical role globally evidenced by the massive growth of higher education institutions offering English-medium instruction (EMI), a conversation which must include the dichotomous approach of Content and Language Integrated Learning (CLIL). ESP has found its place as an essential waypoint in the foreign language learning continuum in EMI contexts. As students advance their knowledge in their fields of study, so must they continue to acquire the English to help them understand and articulate vocational concepts, thus giving prominence to ESP. Yet, as this volume argues, there is a significant gap between implementation and assuring quality of ESP offerings, stemming from teachers' own incompetence and the lack of materials for specific contexts, as well as a lack of opportunities for ESP teachers to develop professionally and personally. This chapter reflects upon the evolution of this field from its roots to its current context. Through chapter-by-chapter synopses, it also presents an overview of the volume's central premise that quality ESP instruction does and can exist.

**Keywords** English for specific purposes  $\cdot$  English-medium instruction  $\cdot$  ESP teacher development  $\cdot$  ESP materials development  $\cdot$  ESP curriculum

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Y. Kırkgöz, K. Dikilitaş (eds.), *Key Issues in English for Specific Purposes in Higher Education*, English Language Education 11, https://doi.org/10.1007/978-3-319-70214-8\_1

## 1 Introduction

English for Specific Purposes (ESP) is an approach to language teaching that targets the current and/or future academic or occupational needs of learners, focuses on the language, skills, discourses, and genres required to address these needs, and assists learners in meeting these needs through general and/or discipline-specific teaching and learning methodologies. (Anthony 2015:2)

The field of English for Specific Purposes (ESP) emerged following the Second World War, when massive changes took place in scientific, technical, and economic activity. This was a new age of technology and commerce, which created a need for an international language. This role fell upon English, the world's *lingua franca of* science, technology and business. With emerging developments in technology and economics a new form of learner who had their own specific reasons and motives for learning English came to the fore. Subsequently, an oil crisis arose in the early 1970s, which caused Western funds and expertise to flow into oil-rich countries. English suddenly found itself a big business and a valuable commercial commodity.

This also created significant demand for teaching English tailored to the needs and demands of people. Traditionally, English teaching was focused on grammar, but this shift in demand gave rise to a new approach. The new aim was to define how language was used in realistic circumstances. "*Tell me what you need English for and I will tell you the English that you need*," became the guiding principle of ESP at that time (Hutchinson and Waters 1987). Moreover, the conversation now turned to the important differences between the English of technology and commerce and this made people consider the notion that language usage depended on the context. The first English for Science and Technology document, an article by C. L. Barber on the nature of Scientific English, was published in 1962, followed by a new field of research exploring the nature of varieties of English, which expanded into the late 1960s and early 1970s.

Along with this, developments in linguistics began revealing the ways in which language is utilized in real communication rather than defining formal features of language use. Acknowledgement grew that language varies from one situation to another. As a result, the prevailing attitude became one where the features of specific situations required identification and the learner's program of study needed to be based on these features, as it became obvious that there were important distinctions between English used in different fields.

Since the early 1960s, ESP has become one of the most prominent areas of teaching in universities around the world leading to the establishment of such ESP courses as English for Engineers, English for Aviation, and English for Advertising, to name just a few. Also, ESP has expanded to include other areas such as English for Academic Purposes (EAP), English for Occupational Purposes (EOP), and English for Vocational Purposes (EVP) (Paltridge and Starfield 2013).

ESP is a dynamic research discipline, underpinned by one fundamental question: how best to meet the needs of English learners, especially in our increasingly globalized and internationalized world. As highlighted by Räisänen and FortanetGómez (2008), the main priority of ESP is that "the English taught caters for the needs and learners in specific disciplines other than the arts and languages" (p. 12). This single question encompasses a host of related issues from designing ESP programs, to materials development to assessment.

ESP has undergone significant transformations over the years, influenced by changing trends in approaches and methodologies in English language teaching. Attempts to characterize specialized varieties of English have given birth to corpusinformed approaches to analyses of written and spoken language, and have thus helped identify learning objectives in ESP programmes (Boulton et al. 2012). At the same time, in related fields, developments in second language research, lesson study, and computer-assisted language learning, among others, offer new perspectives with respect to methodological and pedagogical concerns. Although innovative practices in ESP teaching are certainly numerous, there remains a shortage of relevant, published research, particularly studies with sound theoretical and methodological bases, which the present book aims to address.

More recently, the growing importance of English in higher education teaching and research, along with internationalization of higher education across the globe, has led to the emergence of a global phenomenon of English medium instruction (EMI) where the English language is used in non-native contexts to teach academic subjects (Doiz et al. 2013). As EMI implementation has become more and more prevalant, there appears to be a fast-moving worldwide shift, in non-anglophone countries, from English being taught as a foreign language (EFL) to English being the medium of instruction (EMI) for academic subjects such as science, geography and medicine (Dearden 2015). Content and Language Integrated Learning (CLIL), a largely secondary education counterpart of EMI (Räisänen and Fortanet- Gómez 2008; Aguilar and Munoz 2014) aims to teach content through English by integrating language and content, and contains each explicitly as learning objectives (Coyle et al. 2010).

The distinction between EAP, CLIL and EMI can best be conceptualized according to Airey (2016)'s continuum of approaches in higher education. At one extreme of the continuum are EAP courses with only language learning outcomes. The aim of EAP courses is to provide university level students with academic language learning such as the reading and speaking skills required to perform in an Englishspeaking academic context. In the 1980s, EAP emerged from the fringes of the ESP movement to become an important force in English language teaching (Hyland and Shaw 2016). At the other end of Airey's continuum are EMI courses with only content learning outcomes. CLIL courses are found somewhere between these two extremes, having both language and content learning outcomes.

CLIL is an educational approach where the learning of a non-language subject is combined with language learning (Airey 2016), and in the majority of cases the language is English. Barwell (2005) among others has provided definitions of CLIL that "language and content integration concerns the teaching and learning of both language and subject areas (e.g. science, mathematics) in the same classroom, at the same time" (p. 143). CLIL puts a dual emphasis on discipline-specific learning

outcomes along with language learning. This supposes that content and language are priorities with clearly specified goals (Aguilar 2015), and that both the content and English language are assessed. Methodology is accommodated to teach and evaluate language and content. To distinguish it from CLIL, the term EMI is used to describe "the type of context where content is the priority and where no assessment of students' English competence is made because no language learning outcomes are acknowledged" (Aguilar 2015, p. 4).

The following definition given by Graddol further clarifies the distinction between CLIL and EMI:

CLIL is an approach to bilingual education in which both curriculum content — such as science or geography—and English are taught together. It differs from simple English-medium education in that the learner is not necessarily expected to have the English proficiency required to cope with the subject before beginning study. (Graddol 2006, p. 86)

Whereas CLIL has a clear objective of furthering both content and language as declared in its title, EMI does not (necessarily) have that objective (Dearden 2015). EMI courses have content-related learning outcomes in their syllabi, but no explicit English language related learning outcomes. Meaning is co-constructed through interactions, the integration of content and language occurs in EMI classes, irrespective of the explicit teaching aims (Smit and Dafouz 2012). EMI implies that content – which is given in English – is the priority. Some incidental language learning is expected due to exposure but without any specific language learning goals. Little accommodation can be done in terms of methodology, only to guarantee comprehension and understanding of content (Dearden 2015).

This distinction, therefore, highlights the major difference between CLIL and EMI, thus underscoring the need for ESP in the EMI context in particular. Whereas CLIL – as its name clearly suggests – integrates language learning into the content classroom, in sharp contrast, EMI to a large degree, *dis*-integrates language learning. That is, organizationally and culturally, language learning is often viewed as an activity that takes place prior to, and/or parallel to the delivery of academic content. This raises the major philosophical difference between these two approaches: the role of the content instructor – i.e. as content and language teacher or solely content. In this latter case, ESP therefore becomes the language course designed to strengthen the language that enables the learning of the content. It is a unique situation where the EMI content instructor views him or herself as a language teacher as well. ESP, it seems, fills that language void that CLIL is not missing.

Recently, ESP has attracted great interest within higher education in many countries as a result of increased pressure to deliver successful English education due to the globalization of both the economy and tertiary education. There is now a growing need for undergraduate students to develop their proficiency in ESP skills and knowledge in the increasingly globalized world. Lack of ESP development by learners is a determinant factor in the quality of subject matter learning, which is also closely related to the quality of the university graduates in the relevant sectors (Kırkgöz 2014). A critical link has been found between the shrinking economies of the developing countries and the degree of English proficiency among people graduating from diverse university majors, so developing ESP teaching is one of the ways of strengthening international links and producing quality studies.

In higher education, students require improved English skills to not only study their specialized discipline, but also secure employment upon graduation. The growing interest and importance of English in higher education has led to an increased focus and critical evaluation of English programs at universities and other educational institutions. This changing landscape of English Education has also led to a growing pressure on teachers to foster students with strong skills not only in EAP, but also English for EOP and EVP. Consequently, the greater importance of English in higher education has resulted in increased pressure on English teachers to deliver effective instruction in their classes (Anthony 2015).

To this end, the quality of language learning process needs to be carefully ensured through efficient planning and implementation. However, it is also widely reported that ESP instruction in higher education is not at the desired level for a variety of reasons ranging from teachers' own incompetence and the lack of materials for specific contexts, as well as a lack of opportunities for ESP teachers to develop professionally and personally. There is a need for further development of ESP programs and ESP teachers as highlighted in many reports especially in developing countries, so this book aims to address theoretical and practical issues that are commonly experienced in disparate parts of the world. The present volume intends to address these key issues in ESP teaching and learning by bringing together current state-of-the art research at the intersection of the theoretical and practical dimensions of ESP. With the ambition of offering new theoretical and pedagogical insights for ESP practitioners and researchers alike, contributions go beyond descriptions of ESP programs to strong research-based studies in a wide range of ESP contexts. By drawing on international studies, the book aims to bring together diverse ESP practices and different aspects of relevant issues that relate to the development and administration of ESP programs, teachers and learners in a coherent fashion.

## 2 Short Summaries of the Chapters

This book has four strands including *Materials design and development in ESP, ESP Teacher Development, Curricular Issues in ESP*, and *ESP, CLIL and EMI*. These strands represent several emerging perspectives in the field of ESP. In Part I, for example, the four chapters contributed from various countries emphasize the need for materials designed for ESP targeting different language skills within sub-fields. Helen Baştürkmen and Bocanegra Valle in chapter "Materials Design Processes, Beliefs and Practices of Experienced ESP Teachers in University Settings in Spain" highlight the processes in ESP materials design explicated through interviews with experienced ESP teachers who reveal their beliefs and explore their teaching practices. In asking teachers to describe successful materials, *Baştürkmen* and *Valle* identified three emerging processes used by the teachers: *identifying suitable source materials, deciding how to use authentic texts,* and *thinking of real-world tasks*.

These processes clearly indicate how teachers view the decision-making process of ESP instruction. The researchers also revealed the stated principles and implicit beliefs reported by the participants, which helps present a teacher perspective ESP materials development. In chapter "Innovative ESP Teaching Practices and Materials Development". Fredricka Stoller and Marin Robinson not only propose but also justify specific scaffolding instruction, with the aim of increasing discipline literacy of chemistry students through engagement with ESP language skills. The chapter reveals the learning challenges that ESP students experience in developing productive written skills and describes two approaches – *read and notice*, and *read, analyze* and write, which integrate multiple language skills into ESP learning. Stoller and Robinson provide strategies that could be potentially used in various academic disciplines. In chapter "Using a Corpus-Based Approach to Select Medical Vocabulary for an ESP Course: The Case for High-Frequency Vocabulary", Betsy Quero and Averil Coxhead conduct a corpus-driven research with a view to identifying and incorporating medical vocabulary in ESP reading courses. Quero and Coxhead highlight four vocabulary-related considerations by Nation (2008) including planning, strategy training, testing and explicit teaching of vocabulary. The vocabulary sets extracted from various medical corpora are suggested for instruction, according to four strands proposed by Nation (2007). Quero and Coxhead argue that high-frequency lexis could facilitate learning as they increase the chances of repetitive encountering and provide contexts for deeper processing. Similarly, Hossein Farhady, Kobra Tavassoli and Fariba Irani examine EAP- and ESP-based corpora in order to identify grammatical structures. With its 150-million-word corpus, the study is characterized by its depth (size of corpus) and breadth (variety of disciplines). Farhady, Tavassoli and Fariba reveal a high level of similarity in the variety of commonlyused grammatical structures in EAP and ESP materials. This leads them to propose that the limited grammatical structures should be integrated into instructional materials, which teachers need to be aware of in order to promote effective strategies.

In Part II, chapters are concerned with ESP teacher development. Various perspectives and strategies are investigated in this part. Chapter "Lesson Study in Higher Education: A Collaborative Vehicle for Professional Learning and Practice Development of Teachers of English for Specific Purposes" by Julie Norton introduces lesson study as a collaborative professional development tool, which could be used within the ESP domain in England. Norton uses Desimone's five principles to draw upon key characteristics of ESP-oriented lesson study. Norton argues for holistic approaches - as opposed to acquisition of specific discrete competencies which could support life-long learning from multiple perspectives with the ESP domain. In chapter "The Processes Behind RA Introduction Writing Among Turkish Arts and Science Scholars", the order of the authors should be as follows: Demey Yaylı and Suresh Canagarajah discuss how scholars at universities write research articles with specific reference to processes they allude to via self-reporting in interviews. Considering that these scholars are graduates of EAP, investigating their writing processes could provide implications for EAP programs in EMI-oriented higher education institutions. The authors provide an insider perspective on the instruction of academic writing with reference to the challenges and strategies of non-native English writers regarding publishing in international English medium

journals. Chapter "Practitioner Research as a Way of Understanding My Work: Making Sense of Graduates' Language Use", authored by Tuula Lehtonen, similarly, concerns itself with understanding the kind of language ESP graduates need and how they use language in their workplace following graduation. Lehtonen conducts this investigation as an example of practitioner research. Based on her observations, she argues that a life-long learning perspective should be followed in teacher development, which creates a liberating sense of engagement in developmental activities. In chapter "Expanding Possibilities for ESP Practitioners Through Interdisciplinary Team Teaching", Tim Stewart, focuses on and discusses the potential impact of interdisciplinary team-teaching among ESP practitioners. He introduces collaborative interdisciplinary team teaching and describes how this practice is implemented by highlighting the notions such as status, professionalism, and mutual respect, required for successful implementation of interdisciplinary teach teaching. Chapter "Perceptions of Students, Teachers and Graduates About Civil Aviation Cabin Services ESP Program: An Exploratory Study in Turkey", by Enisa Mede, Nergis Koparan and Derin Atay, investigates multi-layered perceptions for the ESP teachers, students and graduates to ensure triangulation of the impact of the civil airline cabin services ESP program delivered at their school. Mede, Koparan and Atay suggest that students' needs triangulated with those of actively working graduates should be central to curriculum development of such ESP programs. Their approach could ensure a realistic means to addressing the needs of the students at the curriculum development stage.

Part III includes chapters related to Curricular Issues in ESP. In chapter "Introducing Innovation into an ESP Program: Aviation English for Cadets", Mustafa Er and Yasemin Kırkgöz evaluate an ESP curriculum currently used for training potential combat pilots. Er and Kırkgöz reveal and discuss the challenges in the implementation of the curriculum, with a view to restructuring and developing new curriculum in the same context. This could set an example for curriculum designers in varying contexts. Er and Kırkgöz suggest a curriculum that prioritizes the needs of the institution and those trained in the program for a more effective set of outcomes. In chapter "From EFL to EMI: Hybrid Practices in English as a Medium of Instruction in Japanese Tertiary Contexts" Naoki Fujimoto-Adamson and John Adamson, similarly, discuss pedagogical issues required when transitioning from EFL-oriented language teaching to EMI-orientation in a Japanese context, where EMI is a government-mandated top-down practice. The resistance from implementers and the alignments tailored for the contextual realities are discussed at micro and macro levels, drawing on data collected from two different Japanese contexts. They argue for hybridity in practice, which involves L1 inclusion for accessing linguistic meaning through translanguaging. Chapter "Fostering Active Learner Engagement in ESP Classes" by Nemira Mačianskienė and Ima Bijeikienė investigate how an ESP program designed to promote active learner engagement is implemented with a program evaluation design. They report on successful ESP practices in their university, with contextual evidence, highlighting active student participation as a facilitative factor in the implementation of ESP programs. They provide several implications for locally developing contexts, particularly in collaboration with the students to adjust instruction for maximum efficiency. In chapter "Are We Really Teaching English for Specific Purposes, or Basic English Skills? The Cases of Turkey and Latvia", Servet Celik, Anna Stavicka, & Indra Odina report on a comparative study that investigated instructor roles in multiple contexts by considering backgrounds, contextual experiences, and classroom instructions. Celik, Stavicka, and Odina discuss a major difference between the ESP instructors in Turkey and Latvia. They report that the former externalizes the deficiencies and attributes failure to the system of education, whereas the latter follows a more constructive approach to understanding and overcoming challenges in their local contexts. In chapter "Listening Comprehension Strategies of EMI Students in Turkey", Adem Soruc, Asiye Dinler, and Carol Griffiths report on a study which deals with micro-linguistic abilities of ESP students particularly for listening comprehension strategies employed. They find critical results from the quantitative analysis with refence to gender, contexts, grades, classes and departments. These could provide valuable specific implications for ESP curriculum designers and instructors. Soruc, Dinler, and Griffiths also discuss several evidence-based suggestions and implications which could inform ESP researchers.

In Part IV, the chapters focus on ESP, CLIL, and EMI, perspectives from different countries. Concerned with the need for teacher development in ESP-related programs, chapter "ESP/EAP in University Programs in a Non-target Language Community - Issues and Challenges", contributed by John O'Dwyer and Hilal Atlı, discusses the issues and challenges encountered in these programs in a Turkish context. O'Dwyer and Atlı describe the state of such programs at higher education institutions stressing the need for training instructors who teach ESP and EAP courses in order to enhance the quality of instruction. O'Dwyer and Atlı conclude the chapter by drawing on the fact that EMI universities need to expand their resources including materials and professional development options for their instructors. Chapter "The C of Cognition in CLIL Teacher Education: Some Insights from Classroom Based Research", by Isabel Alonso-Belmonte and Maria Fernandez-Agüero, reports on foreign language CLIL teaching practices as perceived by teachers working at state bilingual schools. They reveal common practices and propose that teachers be provided with relevant training for learning teaching CLIL. They draw attention to the role of activation of prior knowledge through training lower order thinking skills, which, they argue, fosters language development and thinking skills. In chapter "The Changing Roles of EMI Academics and English Language Specialists", Julie Dearden provides research evidence to discuss assumptions regarding EMI contexts, such as student proficiency as a factor in success, and a shift from L1-based instruction to L2-based instruction. Dearden provides a detailed discussion related to sustaining that shift, describing the changes and requirements that would support this process. She suggests a developmental model that includes professional support for language specialists and academics as well as for EMI students. In the final chapter, Donald Staub argues that EMI universities should develop EAP quality assurance programs supported by an accreditation model, which provides a tool through which program stakeholders can assess the quality of their program, while also improving practice and assessment. He sees the use of external

models as a means to validate of local practices, which could result in higher quality and minimized internal challenges.

*Key Issues in English for Specific Purposes* aims to bring together the latest research-based studies in higher education from diverse contexts across the world, as well as exploring the future developments for the field. In this respect, the book makes an original contribution to the field in that it focuses on research studies, as opposed to mere theoretical arguments, general guidelines for course design, or program descriptions in ESP. Emphasizing teacher learning and teacher development in ESP is also a welcome angle.

The wide range of topics and multiple perspectives presented in these chapters have the potential to contribute to the development of ESP practices and theoretical underpinnings. The issues included ESP materials, ESP teachers' development particularly based on inquiry-based strategies, and topics that could inform curriculum designers and policy makers. The variety of context across Europe and beyond also contributes to the multiple perspectives as well as to the diversity of the experiences from different local contexts.

We hope that this collection on the key issues in ESP will serve as a source of inspiration to many ESP practitioners, teacher educators, MA and PhD students working in the context of higher education, policy-makers, ESP program coordinators, academic researchers, especially those interested in ESP research in the international contexts. Our desire is that the book is an interesting and enlightening read.

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