THE JOURNAL OF TEACHING ENGLISH FOR SPECIFIC AND ACADEMIC PURPOSES
Vol. 1, N° 2, 2013, pp. 189–192

PROFILING TECHNICAL ENGLISH IN ENGINEERING ENVIRONMENT

Miloš D. Đurić

University of Belgrade, Faculty of Electrical Engineering, Belgrade, Serbia

1. General Description

Written by a highly respected ESP author, Terry Phillips, the Technical English textbook is bursting with ESP properties which have been extraordinarily designed to capture students who pertain to different engineering profiles. Not surprisingly then, Technical English reaches towards a wide audience of future civil, mechanical and electrical engineers whose practical aspirations are driven not only by gaining an insight into how professional engineers actually utilise technical language to promote their own field, but also in how technical English language may, in turn, shape engineering environment requiring all types of written and spoken communications. However, since some units (e.g. Unit 18 and Unit 19) contain biology-based and chemistry-oriented knowledge, this textbook might be of use also to these professionals as well.

This textbook has been designed for students who use English in specific scientific and engineering language contexts. Naturally, Technical English is based on a multi-level syllabus that blends rigorous, research-based ESP skills instruction together with a balance of sufficient level of General English skills, as well as engineering-appropriate high-interest technical English language. The textbook can be utilised within any information-rich engineering English course taken by future engineers, who will be expected to work and live in the English-speaking engineering environment.

By combining challenging technical language content and covering a wide range of technical topics this textbook shows that its approach is fully aware of future engineers' needs whilst being direct and concise. Furthermore, the textbook places emphasis on effective technical sciences communication in English between both native and non-native speakers. Essential features of Technical English include: authentic source materials reflecting the technical language pertaining to both scientific articles and instruction manuals, listening texts ranging from spontaneous dialogues to formal academic lectures, transferable reading and listening skills with clarification and support grammar tips.

2. Summary

The Technical English textbook opens with the "Book Map" (p. 4) that outlines the reading text structure together accompanied by grammar point structure. The textbook consists of twenty-one units, arranged in the following manner: 1. Points and Lines (p. 5-8), 2. Fraction and Ordinals (p. 9-13), 3. Arithmetic (p. 14-18), 4. Surfaces and Angles (p. 19-22), 5. Spaces and Volumes (p. 23-26), 6. Measuring (p. 27-30), 7. Algebra and Formulas (p. 31-35), 8. Natural or Man-Made? (p. 36-40), 9. Bits and Bytes (p. 41-44),

10. Computer Networking (p. 45-48), 11. Elements and Compounds (p. 49-53), 12. States of Matter (p. 54-58), 13. Properties of Matter (p. 59-63), 14. Symbols and Keys (p. 64-68), 15. Structures and Plans (p. 69-74), 16. Forces, Loads and Tools (p. 75-80), 17. Energy and Motion (p. 81-85), 18. Cells, Organs and Systems (p. 86-91), 19. Chains, Webs and Cycles (p. 92-96), 20. Micromachines and ICT (p. 97-101), and 21. Electricity and Magnetism (p. 102-106). Each unit is focussed on a unit topic and contains ESP activities to practise speaking, listening, reading and writing skills, as well as activities intended for key vocabulary development. The Technical English textbook ends with "Word List" (p. 107-109), which contains the most relevant and statistically frequent lexemes typical of ESP contexts in the engineering domain. The textbook contains five hundred basic technical words.

The author's authentic tasks promoting ESP-specific transferable skills are designed to meet the technical language requirements of future professionals (mostly engineers) who need technical English for work, travel and socialising. As well as dealing how experts communicate at conferences and at work, Technical English helps students interact effectively outside this professional environment. Thus, it can be also used by students who are taught professional technical and engineering subjects through the medium of the English language. In addition to this, the textbook can be utilised as an easy-to-use technical English reference tool by professionals who are already employed and have to cope with this type of English. Students are introduced to technical English skills by describing experiments, carrying out genuine technical documentation tasks, collecting the specific data and observing the specific information in task-based activities.

To engage the potential user's interest and spark the user's ESP-skills creativity, this textbook includes an authentic material which is used in the engineering environment. Each unit presents the pertinent technical English words and phrases related to a certain technical field, whilst simultaneously reviewing grammar points that might help students to express themselves with confidence. The textbook's concise, and yet clear structure may motivate students by teaching them the unique ESP-based language skills necessary for success either at university level engineering studies in English-speaking countries or at engineering environment workplace. Furthermore, the textbook's easy-to-use ESP language format combined with ESP-specific learning approach makes the teaching material engaging for teachers and students alike.

Although concise in terms of its format, this textbook contains the core ESP language and ESP-specific skills which are typical of a range of technical and engineering specialisations. Technical English provides the students with essential technical concepts, which frequently occur in authentic technical English spoken and written discourse, and which are accompanied by well-selected and relevant illustrations. The textbook units highlight and demonstrate certain differences in ESP English when compared to General English. Not surprisingly, some unit sections focus on everyday English and non-technical language situations, as well.

Technical English sets new standards for reflecting how English for Specific Purposes behaves in predominantly engineering language contexts. At the same time, a broad range of grammar points and exercises ensure the ESP flexibility through multiple exposures to genuine engineering English language, systematic and intensive exercises which are presented in full colour. Canonical technical concepts pertaining to fields of algebra, geometry, physics and chemistry are first introduced and then clearly explained. In this way, students are presented with meaning and usage of ESP-specific lexemes. In addition

to this, technical language is taught through engaging engineering spoken and written contexts, establishing a balance between inductive and deductive technical English approaches, which are integrated in each unit's grammar and vocabulary revision section. On the one hand, students gain valuable technical English skills, and on the other hand, they find out fascinating insights into the General English environment.

As regards university lectures and teachers, they can tailor the textbook to their own requirements by using the wide range of audio materials, found on the textbook's accompanying CD, so as to make classes really interactive. Tables and formulas presented throughout this textbook provide the extra ingredients for improving technical English in its written form. Nevertheless, these sections, containing formulas, tables and other visual aids, may also be used for speaking practice. It should be also mentioned that one of the key properties of this textbook is the development of General English skills alongside its engineering and technical content. In short, this textbook develops the specialist language and communication skills that future engineers and professionals need to communicate confidently in the English-speaking engineering environment.

3. EVALUATION

Technical English focuses predominantly on English used in the engineering environment. However, the course book may also be used by future experts in chemistry and biology. This textbook covers specific communication skills needed for a career in engineering and scientific research fields. Moreover, it comprises genuine technical texts, tables, diagrams taken from common engineering practice and diverse interactive teaching ESP materials which are accompanied by authentic audio materials. The textbook's topics range from describing spaces, volume, measures, arithmetic operations, symbols and keys to presenting structures and plans processes at professional conferences.

Built on a solid technical English syllabus of grammar, speaking, listening and writing, this textbook is straightforward and easy to use with clear ESP learning aims. Technical English language and vocabulary are carefully graded and presented within the concrete technical English context-based units. In addition to this, the ESP language is well integrated into the whole textbook and ESP-specific lexemes are briefly summarised within each unit. This textbook may be used for self-study; however, it may be ideal both for higher education classroom and one-to-one lessons. Written by Terry Phillips, a qualified professional with extensive experience, this textbook uses genuine technical English spoken and written discourses, as well as genuine documentation patterns in order to offer a sort of realistic practice for students hoping to fully grasp technical English.

To sum up, the textbook, entitled Technical English, is an easy-to-teach ESP course for students and professionals studying and working in the English-speaking engineering environment who are very keen to acquire specific technical English lexical items, syntactic structures and discourse chunks both quickly and confidently. The textbook contains the solid grammar syllabus with common ESP reference and review sections, tasks aimed at helping students to acquire listening comprehension and note-taking skills, accompanied by authentic audio material on CD. At the same time, the course book comprises genuine visual aids specimens, exercises intended to improve organisation of information in technical English, tasks for enhancing the recognition of specific ESP language cues, exercises aimed at ESP vocabulary acquisition. Thus, it fully prepares

students for technical English environment, as well as helping them to grasp and acquire the described spoken and written technical English discourses.

Technical English is a thought-provoking ESP course ideal for students and professionals who need ESP-based communication skills required in the twenty-first century. This textbook may also make academic lectures in technical English more accessible to students because it contains information-rich and well-chosen topics pertaining to engineering and technical EAP. Technical English should be a must-have ESP and EAP tool intended for students and professionals who want a fresh and original technical English course that equips them to use English in the engineering environment.