English for Specific Purposes

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What is ESP concerned with?

- the use of English in a restricted set of social and thematic areas
- chiefly for the unambiguous transfer of (technical) information
- as the preferred language of international communication
- for the needs of non-native users of English
- a restriction of General English (GenE)

- “English for Special Purposes” has become “English for Specific Purposes”
  - “special” implies restricted languages
  - “specific” focuses attention on the purposes of a task in English.
- a selection of skills (reading, listening, writing, talking)
- a selection of text types
- a selection of the vocabulary and grammar
Diatypes

Language in use

• Field
• Purpose
• Medium
• Style
Field

Field, esp. the vocabulary used: Mathematical texts use the language of mathematics just as linguistic ones use the language of linguistics and biological ones use that of biology.
Purpose

• explanatory (a.k.a. expository)
• argumentative
• directive

Textbooks and manuals as well as university lectures and term papers are largely expository. They may also include a certain amount of descriptive material. Manuals will have large sections which give instructions. Argumentative texts will be common in lectures and term papers, where the validity of a particular hypothesis is under critical discussion.
Medium

- spoken
- written
- written to be spoken
- etc.
Personal tenor or style.

- a basic dichotomy between *formal* and *informal*
- yet a number of factors and levels

The rather ambiguous term "style" is sometimes replaced with "attitude," e.g. "derogatory" or "humorous"

- in this way personal tenor is polyvalent and
- emphasizes that *personal tenor* involves a great deal more than the degree of formality
How does ESP fit into the area of AL?

- English for Specific Purposes is an excellent example of Applied Linguistics, drawing on all the major fields of Theoretical Linguistics.
- Research, which is almost exclusively corpus-oriented, looks at syntax, morphology, lexicology, text linguistics, genre studies, and even language learning.
- Of least importance to the field of ESP is pronunciation because ESP has been investigated most thoroughly in the written medium.
The most important areas of investigation in ESP

- *English for Science and Technology (EST)*
- *English for Academic Purposes (EAP)*
- *English for Occupational Purposes (EOP)*
- *English for Business and Economics (EBE)*
- *English for Legal Purposes*
- *Doctor-Patient communication*
Syntactic Features of EST

- the passive
- tense and aspect and the modal verbs
- non-defining relative clauses
- rhetorical devices
- nominal style and nominalization
- the use of the article
- the restricted use of personal pronouns
- new plurals
Frequencies of Sentence Types

In a 135,000-word corpus of scientific writing
- Declarative: unmarked, the default type
- Interrogative: in one study: 1 interrogative for every 758 words
- Imperative: 1 imperative for every 1,115 words
- Exclamatory: 1 exclamation for every 67,000 words

(Huddleston 1970)
Text 1: Insurance Policy (excerpt)

If the Policy does not contain the provisions relating to Owner and Beneficiary as specified on the reverse hereof, the Company is hereby directed to modify the Policy by including such provisions therein, superseding any existing Policy provisions relating to be effective as of the date this is signed upon its recordation at the Home Office of the Company.

(from an American insurance policy)
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The passive

- relatively uncommon in colloquial English. The *Longman Grammar of Spoken and Written English*:
- “Short dynamic be-passives are sharply differentiated by register, with conversation and academic prose at the opposite poles. …
- “Long passives are most common in news and academic prose.
- “Passives as postmodifiers of nouns are also most common in academic prose.”
- Short passives occur at a rate of about 1 per mille in conversation vs. approximately one per cent in EAP.
Passive in EAP

In an experimental facility without breeding animals the health status can be restored if healthy animals are issued into a clean fumigated or disinfected room, and the infected room is gradually emptied as experiments are terminated. It is essential during the period that the clean and infected room are both in use that a strict barrier is maintained between them. Once the room has been emptied it can be thoroughly cleaned and disinfected or fumigated. (Biber et al. 1999: 938)
Modal Auxiliaries in EAP

EAP has a different distribution of the modal auxiliary verbs as compared with conversational English

- 40% the frequency of *could*
- two-thirds that of *can*
- fourteen times as many instances of *may*
- *will* occurs 40% as often in EAP
- *would* one-third as often
- *be going to* virtually not at all (Biber et al. 1999: 489).
Nominal Style

• makes an ESP text hard for an "outsider" to read and understand

• means a higher proportion of nouns (also prepositions and adjectives) - Sager et al. found that this was 44 per cent of all words in EST vs. 28 per cent in GenE texts

• a higher degree of nominalization, where clauses are replaced by nominal phrases, e.g. because the surface of the retina is spherical → because of the sphericity of the retinal surface (example from Gerbert 1970: 36).

• the tendency to combine a function verb and a noun instead of a simple verb, e.g. to make an investigation than to investigate, to give a report than to report.
Frequencies of Compound Nouns

- General English 0.87%
- Medical English 9.76%
- Technical English 15.37%

(Salager 1984: 138f)
Vocabulary and Word Formation

• word-formation processes
• symbols, e.g. $\Sigma$, $\leq$, $\forall$, $\pm$, $=$, $\mu$, $^\circ$, $\pi$, $\text{®}$
• graphs, tables, and illustrations
• metaphor, e.g. memory for computer storage capacity
• nomenclatures and terminologies, e.g. the Linnean system
Derivational Processes

• the usual derivational processes of GenE, e.g.
  – prefixing (anti-, in-, mis-, non-, semi-, un-)
  – suffixing (-ar, -al, -ed, -er, -less, -ment, -ness)
  – conversion / zero derivation (to dimension < dimension)
  – back formations (to lase < laser)
  – clippings (lab < laboratory)
  – abbreviations (FBR < fast breeder reactor)
  – acronyms (laser "light amplification by stimulated emission of radiation")
  – blends (pulsar "pulsating radio star")
  – composite forms (aeroplane).
Terminologies

- the importance of absolute lack of ambiguity
- the creation of terms by
  - borrowing from Greek or Latin (e.g. *apparatus*, *matrix*, or *phenomenon*)
  - using Greek and Latin combining forms (*aero-*, *astro-*, *baro-*, *cryo-*, *ferro-*, *gyro-*, *hydro-*, etc.)
  - Suffixation (*-gram*, *-graph*, *-ology*, *-scope*, *-tomy*, etc.)
- systematic terminologies, e.g. in chemistry, the order and status of roots and affixes are strictly defined:
  - Thus *eth + an + ol* signifies, in that order, a structure with two carbons, simply linked together and with one of these linked to a hydroxyl (*-O-H*) group, and no other combination of these morphemes describes that structure. (Dermer et al. quoted in Beier 1980: 32)
Texts in ESP / EST

- larger text patterns or models
- procedural lexical items.
- message types
  - the memo
  - schedule
  - report
  - essay
  - the dialog
Message Types

• **The memo** demands a response of some sort; its realizations are administrative (minutes, business letters, invoices, contracts) or journalistic (advertisements), but includes textbooks, manuals and handbooks.

• **Reports** are records of acts or processes produced at someone's request, for example, the laboratory report.

• **Schedules** order and classify material and include bibliographies, indexes, tables of contents, glossaries, the valency table of the elements, or the Linnean system of biological nomenclature.

• **Essays** are central to EST in the form of dissertations, journal articles and university theses
  
EST texts are strongly formalized and achieve textual cohesion by means of highly conventionalized structural divisions, for example journal articles normally have the following five divisions:

- an introduction, in which the purpose pursued / hypothesis investigated is presented,
- a review section, in which previous work is summarized or evaluated,
- a methods part, in which procedural sequences, criteria etc. are evaluated,
- a results section, in which the findings are presented,
- a discussion part, in which the findings are evaluated in the framework of the initial hypothesis.
Other cohesive devices

• the use of referential vocabulary (adverbs, demonstratives);
• the deictic use of tense and voice;
• the employment of enumeration, advance labeling, reporting, recapitulation, hypothesizing and rhetorical questions (Tadros 1989: 18);
• adopting recognizable patterns of logical development, such as problem and solution, statement and justification, generalization and exemplification (ibid).
The English of Air Traffic Control (ATC)

• Many international organizations depend on English as their lingua franca to insure safe international communication. Seaspeak, for example, was developed in the 1980s to facilitate clear communication in maritime shipping. It regulates ways of speaking (including pronunciation of numbers, times, or positions) and the order in which information is given, such as identification of speaker and type of message to be sent (advice, information, request, warning, etc.)
ATC

De facto international standard, as adopted by the International Civil Aviation Organization (ICAO).

- the order of priority for the different types of message;
- the spelling code for letters and figures;
- callsign details for ground stations and aircraft;
- message structure (callsign followed by content), callsign rules, acknowledgments, corrections, receptions, and endings;
- distress and emergency measures;
- conventional expressions;
- the phraseology itself, i.e. a set of compulsory skeleton messages for use in ATC exchanges
## ATC English

<table>
<thead>
<tr>
<th>Natural English (GenE)</th>
<th>ATC English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, Of course</td>
<td>Affirm</td>
</tr>
<tr>
<td>Authorized / Go ahead</td>
<td>Cleared</td>
</tr>
<tr>
<td>No, Of course not</td>
<td>Negative</td>
</tr>
<tr>
<td>I'd like to, Could I</td>
<td>Request</td>
</tr>
<tr>
<td>Repeat, Sorry? What?</td>
<td>Say again</td>
</tr>
<tr>
<td>Clear, Empty</td>
<td>Vacated</td>
</tr>
</tbody>
</table>
Enemy sit. Aggressor forces in div strength holding MLR Hill 820 complex gc AT 940713-951716 w/fwd elements est. bn strength junction at gc AT 948715 (See Annex A, COMPHIBPAC intell. summary period ending 25 June) … Mission: BLT 1/7 seize, hold and defend obj. A gc 948715 … Execution: BLT 1/7 land LZ X-RAY AT 946710 at H-Hour 310600 … A co. GSF estab. LZ security LZ X-Ray H minus 10 … B co. advance axis BLUE H plus 5 estab. blocking pos. vic gs AT 948710 … A, C, D cos. maneuver element commence advance axis BROWN H plus 10 … Bn tacnet freq 52.9 … shackle code HAZTRCEGBD … div. tacair dir. air spt callsign PLAYBOY … Mark friendly pos w/air panels or green smoke. Mark tgt. w/WP."
Literature quoted