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A Strategic Approach to Reading Academic Written Texts in Psychological Disciplines

1. **Introduction**

Within ESP/EAP,\(^1\) the language of psychology shares features proper to other kinds of specific languages. Psychology itself is deeply integrated with many other related disciplines, the so-called "more traditionally established disciplines" such as, for example, philosophy, anthropology, medicine and statistics.

This paper is based on the analysis of the strategic approach used during my quinquennial ESP academic experience at the Faculty of Education, University of Florence, with students majoring in Psychology, having approximately an initial A2 level of competence in English.

The limited length of the ESP compulsory course (24 hours, 4-6 weeks) allows exclusive focus on developing one of the receptive skills: reading. As a matter of fact, after an accurate needs analysis,\(^2\) reading can be regarded, at least currently,\(^3\) as the most

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\(^2\) I have based the needs analysis on both the objective necessities and the students' awareness of their necessities (cf. Hutchinson and Waters 1987: 53-64, Jordan 1997: 20-41, Dudley-Evans and St John 1998: 121-140).

\(^3\) Needs analysis is not a static activity, but a continuous process (Drobnic 1978).

urgently required skill that learners need to develop, simply because the majority of scientific psychological publications are written in English. The brief time available is responsible for including in this approach only the research article, leaving out all the other genres that specialists normally use.

Once the students' needs have been established, it is of paramount importance to consider the most appropriate learning process. In other words, once the goal has been fixed, the next step is to decide how to get there. Surely,

just presenting the adult learners with the product, i.e. with the particular way a given text is structured in the foreign language, is not sufficient for effective learning. For good pedagogical results, the learner has to be helped to make the transition from passive to operative knowledge, in other words, to incorporate the new knowledge into his/her own deep knowledge system (Evangelisti Allori 1998: 161).

The fact that learners already have their cognitive, rhetorical and pragmalinguistic structures as members of their own cognitive and linguistic culture is of paramount importance, especially because communication is not simply a question of understanding and recognizing new issues, but most importantly of developing a perspective for incorporating new knowledge. The process is at the same time crosslinguistic and crosscultural and involves the students' subjectivity. It also comprises both the cognitive and the affective aspects of the learner, i.e. motivation.4

My approach consists in:
• analyzing the students' needs;
• focusing on one genre: the research article;
• guiding students to become acquainted with the research article structure;
• training students to unpack and decode information contained in research articles;
• helping students identify the features which occur frequently in psychology research articles.

This approach claims to be strategic because within a very limited space of time it succeeds in stimulating the students' ac-

tive learning process in developing reading skills in all the different activities. These activities will be discussed in the following sections.

2. Approach to the Research Article Structure

On the basis of some fundamental studies on discourse and genre analysis, students are introduced to the different sections of the research article and to their rhetorical functions. In so doing, their knowledge gradually becomes operative and, by the end of the course, they will hopefully succeed in mastering the text structure autonomously.

The sections and functions of the scientific article to which it seems important to focus the students' attention are listed below:

i) name, author/s, source, institution, society/association (institutional information);

ii) title, summary and descriptors (title, abstract and keywords);

iii) previous research, its limits and perspectives (background, generalization);

iv) purpose of the study (aims and purposes);

v) participants and setting used in the experiment (samples);

vi) methodology (methods);

vii) findings (results and discussion);

viii) final conclusions (conclusions).

Once the students have become acquainted with all the sections and functions of the research article, they are guided to tackle the reading itself, by using different reading techniques, as explained in the following section.

3. Developing Reading Techniques: Intensive Reading, Skimming and Scanning

As far as reading techniques are concerned, the only one students are normally accustomed to is intensive reading, which is

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undoubtedly the most comprehensive, but also the longest and not always necessary technique. The focus ought to be partially shifted and the question in approaching a text should be: what does one want to extract from this text? Of course, if the answer is: a word-by-word comprehension, the only suitable technique can be intensive reading. But this is not always the case.

Frequently, what is necessary is only the acquisition of the main ideas contained in the text. In this case, skimming is the most suitable reading technique because, through it, the reader gets an overall impression of the content.

On the other hand, when only a specific concept, idea or figure is requested, scanning is the reading technique to be applied, because it enables the reader to quickly find what is needed, ignoring unrelated information.

Through both guided and autonomous practice, students normally improve their reading speed and skill, learning to choose the most appropriate technique according to their specific needs. But, even when applying either skimming or scanning to a research article, students are always requested to use intensive reading both for the title and for the abstract, in which they are guided to discover the embedded keywords, which are considered essential components for any kind of comprehension of the text.

4. Reading Abstracts

Abstract writing and/or reading always constitute/s an enormously significant activity, because an abstract is for the author a kind of self-presentation and for the reader the first contact s/he establishes with the text. Consequently, the abstract can become the most significant part of an article, especially considering the various electronic retrieval systems presently available, such as PsycInfo, for instance.

Abstracts are normally written according to one of two different formats: the format recommended by the American Psychological Association (APA) or the one suggested by the British Psychological Society (BPS).
The APA uses a traditional one-body abstract format, according to which a well-prepared abstract needs to be:

- accurate;
- self-contained, defining all abbreviations and acronyms;
- concise and specific, dense with information, but not exceeding 960 characters and spaces, which is approximately 120 words;
- non-evaluative, reporting rather than evaluating;
- coherent and readable;
- rich with keywords, embedding as many descriptors as possible which will enhance the reader’s retrieval ability (APA 1994: 9-10).

The BPS, on the other hand, utilizes a structured abstract format, which contains subheadings, such as

- background;
- aims;
- samples;
- methods;
- results;
- conclusions.

This format was introduced in 1997 in four BPS journals and, as a consequence, the “analysis showed that the structured abstracts were significantly more readable, significantly longer, and significantly more informative than the traditional ones” (Hartley and Benjamin 1998: 443). The number of BPS journals which adopt the structured format is gradually increasing.

Students are “exposed” to both formats, although more emphasis is given to the APA format. The reason for this is that the Faculty of Education of the University of Florence tends to follow the APA instructions. Activity in the course is limited to decoding the structure of the abstracts, since the course is basically focused on developing reading skills.

5. PsycInfo

Another precious tool students are taught to use and to work with is PsycInfo. PsycInfo is a database published by the APA; it
contains abstracts of the world’s published literature in psychology and related disciplines.\footnote{This is now available not only on CD-roms but also on the Internet, at \url{http://opac.unifi.it, Sistema bibliotecario di Ateneo, le risorse elettroniche.}} Being an electronic retrieval system, it is of significant importance to researchers in psychological disciplines. Both a paper and an on-screen Thesaurus (1997) are provided, which prove to be particularly helpful when coming across words or expressions PsyCInfo does not recognize. This is normally due to the fact that PsyCInfo tends to employ only scientific definitions rather than conversational ones. For example, if one types in the expression \textit{burnout}, the Thesaurus gives the researcher the correct permuted term, which is \textit{occupational stress}. Once the term is typed in, PsyCInfo shows at once the number of records containing the term, from which one can have access to all the records available. Each record, in turn, contains several “fields”, yielding further important information\footnote{For further information about PsyCInfo, see “Using PsyCLit” (Ronnow 1995).} together with acronyms and abbreviations (e.g. abstract \textit{(AB)}, title \textit{(TI)} author(s) \textit{(AU)}, descriptors \textit{(DE)}, keyphrases \textit{(KP)}).\footnote{Corpora that so far have not been available for psychology (Aston 1997) could be an invaluable learning resource for psychology students, especially for studying collocation, the regular co-occurrence of two or more words within a given extent of text (Levy 1990). Corpora also give access to concordances (Sinclair 1991), lists of words framed in the contexts in which each word occurs.}

The PsyCInfo database also provides narrower terms, broader terms and related terms, to be utilized according to one’s needs in order to narrow or broaden one’s search or relate it to other relevant studies. It further provides logical operators (i.e. \textit{and, or, not, with, in etc.}), which can be used in order either to broaden or to narrow one’s research. For instance, the logical operator \textit{and} narrows one’s search: if two search terms such as \textit{occupational stress} and \textit{businessman/men} are inserted together with the logical operator \textit{and} – \textit{occupational stress and businessman/men} – the retrieval system will exclude all the records that do not contain the two terms occurring together in the same record. PsyCInfo turns out to be of great importance to students not only in terms of research activities, but also in terms of language practice.

\textit{6. Disc}
6. Discourse Community, Genre, Register and Language

In my approach, adopted to meet the perceived needs, the theoretical framework of Systemic Functional Linguistics (SFL) set out by Halliday and Martin (1993: 22-3) has been used. Students are introduced to the SFL perspective, which is almost always new to them. The SFL perspective can really be a revolution to learners who, before approaching it, consider languages as a static system of rules to be analyzed at sentence level, completely out of context.

On the contrary, according to the SFL framework, students learn that:

- language is a "resource for meaning" rather than a "system of rules";
- analysis is no longer focused on sentences, but at text level; in other words, analysis focuses on how sentences are used in the performance of different communicative acts, on the combination of sentences in discourse in order to produce meaning. This kind of analysis is particularly relevant to my approach because the psychological research article presents a constantly recurrent structure which students can be taught and trained to recognize and then incorporate in their own knowledge. Grammar is therefore treated as "the realization of a discourse";
- texts are no longer considered as isolated monads, but are closely related to the social contexts in which they occur;
- language is seen as a "system for constructing meaning" rather than a "system for expressing meaning";
- models are semiotic, i.e. language and life are seen as strictly related.

After discovering these new "standpoints", the students' linguistic perspective turns out to be completely renewed. Students begin to approach languages no longer at sentence level, but at discourse level and they are invited to take speech community, genre and register into consideration. In psychological discourse, the speech community is, of course, the one of scientists working in psychological fields. The genre of the research article is abstract and academic. As far as the register is concerned:
• the field is psychology,
• the tenor can be specialist to specialist (writing) or specialist (writing) to novice (reading),
• the mode is written.

On the basis of the analysis of a corpus of psychology research articles, it can be safely affirmed that this approach is applicable to all psychology research articles. In order to prove it, two articles have been selected as representative samples. In these two articles it will be pointed out how all the features submitted to the attention of the learners during the ESP courses are present in this genre. The first article is: "The impact of gender on primary teachers' evaluations of children's difficulties in school" (Cline and Ertubery 1997); it is a BPS publication and consequently follows the structured abstract format – it will be referred to as text A. The second article is: "Examining the question of gender bias in the Slosson Intelligence Test in relation to reading" (Flynt et al. 1997); it is an APA publication, which obviously has a traditional, unstructured abstract – it will be referred to as text B.

6.1. Lexical Sets and Syntactic Features

The following lexical sets and syntactic features have been selected from texts A and B as samples typical of the scientific community in general and of the psychology community in particular, whose members share the same objectives, by using the same tools of inter-communication and the same specific lexis:

“This study investigated whether ...” (A 447),
“The sample comprised ...” (A 447),
“Participants completed questionnaires ...” (A 447),
“The aim of the study reported here was to investigate ...” (A 449),
“The overall results did not support the hypothesis that ...” (A 452),
“Further studies are needed ...” (A 454),
“Controversy over ...” (B 237),
“In this study the question over ... was investigated”. (B 237),
“Sixty-six subjects were administered the SIT”. (B 237),
“There is no evidence of ...” (B 237),
“The purpose of this investigation is to examine ...” (B 238),
“The sample of this study consisted of ...” (B 241),
“No data on a socioeconomic status (SES) was available” (B 241).
“Subjects ranged in age from 8.5 to 13.5 years (M = 10.7)” (B 241).

Through the samples given above, it has been verified that the difficulties students meet are not usually related to vocabulary, but rather to grammar and to the relations between grammar and lexis. If, for instance, the final sample is taken into account, “Subjects ranged in age from 8.5 to 13.5 years (M = 10.7)”, one can easily realize that no single word is likely to create any problem. The difficulty lies in the combination of the words and in their grammatical and collocational features.

6.2. Word Formation: Prefixation, Suffixation, Compound

In my approach, much attention is also given to the word formation process. In fact, by dividing a word into its possible several components – prefix, suffix, items which form a compound – and by focusing on its root, students, using a good dictionary, can deduce the meaning of some unknown words and enlarge their vocabulary.

Firstly, during the various reading activities, students are asked to extract one term from its context (e.g. development – a keyterm in psychology); secondly, they are requested to enunciate the word root (develop*). Once the root has been checked, they are invited to work in order to find out as many words as possible which share the same root (e.g. to develop, develop-ing). In fulfilling this task, they not only widen their vocabulary, but also rationalize the word formation process. Finally, they are required to look up their findings in a monolingual dictionary, to check them and, if necessary, to complete the list with more terms sharing the same root (e.g. develop-ment-al, develop-er, under-develop-ed, un-develop-ed).

Psychology research articles normally contain many prefixes, suffixes and compounds which seem particularly suitable for the activities referred to in the previous paragraph. The examples given below are limited to the abstracts of Texts A and B:
(1) From text A:

teacher/s, evaluation, difficulty/ties, background, educational, inconsistent, methodology, criticise/d, encourage, stereotypic, judgement/s (2), realistic, participant/s, systematically, seriousness, generally, definition, experimental, contextualise/d, disappear/ed, finding/s, investigation (447).

(2) From text B:

relation, controversy, intelligence, relatively, attention, potential, statistically (2), reading, comprehension, separately, consequently (257).

6.3. Dictionaries

All the different kinds of activities are always supported by the use of dictionaries.

The correct use of dictionaries is an integral part of my approach. After becoming aware of the English word formation process, students are more conscious of the importance of word building skills and consequently of the usefulness of deducing the meaning of unknown words from the context. In doing so, individual students ought to use good dictionaries. Learners, who often do not have a good command of the use of dictionaries, are taught to use them methodologically.

My approach includes combined activities using monolingual general English dictionaries and monolingual specialized English dictionaries (Nuccorini 1996) in order to infer the possible difference in terms of application between a word generally treated and the same word specifically treated. Several cases can commonly be found in psychological research articles, and an example is given here: "Backward readers can be helped more by teaching them to read than by teaching them to relax, according to Christopher Sharpley and Steven Rowland".9 Students are invited to read the passage. They find the expression "backward readers" quite difficult and frequently misinterpret it. The problem is that in a general English Dictionary backward is con-

9 "Christopher Sharpley of Monash University, Australia and Steven Rowland, of the Scot's School, Australia (British Journal of Educational Psychology, 56, part 1, page 40)" (Haarman et al. 1988: 11).
sidered separately from reader. For example, in the Cobeud Dictionary (1978), under “backward” (4) one reads the following: “a child who is backward does not make normal progress in learning and mental development compared to other children of a similar age, retarded”. On the contrary, a specific dictionary takes into consideration the entire expression backward readers, simply because the two words together acquire a specific, technical meaning. For example, in Reber’s Dictionary of Psychology (1995) “backward” is given the following explanations: “Backward reading cf. palinlexia. Palinlexia: reading backwards. There are two forms, one in which a sentence is read with the word order reversed, the other where each word is read with the letters in reversed order. Cf. dyslexia”.

It is evident that the specialized use is much more scientific and technical, more precise and accurate, monoreferential. Consequently, it is vital for students to become aware of the enormous difference existing between the two types of dictionaries, in order to learn, gradually, how to use them correctly.

6.4. Lexical Density, Nominalization. Grammatical Metaphor

The main reasons why academic texts are considered complex are their lexical density and heavy nominalization – the latter being a phenomenon that English shares with Italian, especially in scientific contexts (Gotti 1991: 71-81). In nominalizations “verbal processes are coded in nominal structures. Such texts are no longer dynamic in nature, but static. The language used has become greatly metaphorized” (Ventola, 1996a: 153, see also 1996b). According to Halliday (1985), grammatical metaphor consists in substituting one grammatical class or one grammatical structure for another. Processes are usually expressed by verbs, participants by nouns, circumstances by adverbs and prepositional phrases, and relations between processes by conjunctions (Halliday and Martin 1993: 80). But, when this order is subverted, as happens in grammatical metaphor in which most processes have been turned into nouns, difficulties in comprehension may arise. Once again it is a question of decoding or unpacking the long nominal group.

A few examples from texts A and B are provided below:
(3) "in small and medium sized towns" (A 448),
"on a six-point rating scale" (A 451),
"the statement-total correlations" (A 452),
"gender-related stereotypes" (A 453),
"the gender-of-the-child effect" (A 453),
"A general linear regression procedure" (B 237),
"a statistically significant predictor" (B 237),
"an individual's general intellectual functioning" (B 238),
"16 reading disabled students" (B 239),
"reading expectancy scores" (B 239),
"various comprehensive intellectual measures and standardized
achievement tests" (B 240),
"possible gender bias" (B 240),
"simple linear regression model" (B 241),
"three simple linear regression equations" (B 243),
"the Befleroni correction technique" (B 244),
"an experiment-wise error rate" (B 244).

Students are guided through the unpacking process. Both
with regard to premodification and postmodification, the first
step consists in finding the long nominal group nucleus, to
which either, both the premodifiers or/and the postmodifiers
have been "attached". The main issue to be explained here is
that in academic written texts, when grammatical metaphors are
used, messages are not carried out by processes, but by partici-
pants.

6.5. Infinitive Clause and -ing Form Replacing a Relative Clause: Decoding and Encoding

As stated above, conciseness and density in information are
two syntactic characteristics, proper to scientific publications,
which enhance their "desirable objectivity" consistently. Using
infinitive clauses and replacing relative clauses with -ing forms
contribute to the achievement of this goal.

A few samples from texts A and B are provided below:

(4) "to be seen as having special educational needs" (A 447),
"Presenting the same list of single word/phrase descriptors" (A 448),
"inviting them to participate in the study" (A 449),
"teachers completing the questionnaire" (A 450),
"starting here in the reception year" (A 456)
"Examining the question of gender bias" (B 237),
"thus indicating the SIT to be appropriate" (B 238),
"as having learning problems" (B 239),
"Using the Statistical Analysis Software (SAS) package [...] revealed to be ..." (B 243),
"corresponding to an experiment-wise error rate" (B 244),
"regarding gender bias in the SIT" (B 245).

But infinitive clauses and -ing forms can very often cause ambiguity and make meaning unclear. Consequently, students are trained to unpack sentences containing either an infinitive clause or an -ing form and to reword them into a decoded form, paying attention not to change their meaning. Here, for instance, the complete sentence of the first sample is provided: "Internationally boys are much more likely to be seen as having special educational needs". Learners are asked firstly to decode its meaning, secondly to reword it with a relative clause of this kind: "Internationally boys are seen as those who, much more likely than girls, have special educational needs". This process becomes a sort of mental exercise, which helps to develop the students' ability to understand the text correctly.

6.6. Passive Voice and Tense

Although the inclination is slightly changing in academic writing, the use of the passive voice still prevails in psychology research articles. This is due to a kind of shift between actor and action, which has the effect of placing emphasis on the research rather than on the author/s.

In terms of tenses, it can be said that simple present, simple past, present perfect are the ones most frequently used in research articles, although this statement must be treated with some caution. A few samples from texts A and B are provided below.\footnote{These are only a few instances of passive voice and tenses out of the many found in the two psychology research articles.}

(5) (Text A, Introductory section): investigated, comprised, completed, was found, are much more likely, to be seen, have pointed, is found, is not found, are reported. have been inconsistent, is presented, have been used, would be needed, are required, were asked, was found.
After working on each article, students are asked to provide convenient examples of both voice and tense use and sometimes to rephrase each sentence by substituting, for example, passive with active voice. This practice helps students become confident with both voices and tenses and master them autonomously at a receptive level.

6.7. Approach to Discourse Markers

Discourse markers (also defined as linkers or logical connectors, Huddleston et al. 1968) have a high profile in scientific publications in general and in research articles in particular, because they are the useful means to understand logical relationships in a text. Different groups of discourse markers are tackled throughout the course:

- discourse markers expressing addition and semantic continuity (e.g. and, in addition, in addition to, not only ... but also..., moreover etc.);
- discourse markers expressing contrast (e.g. but, although, however, on the one hand ... on the other hand, whereas, despite the fact that, nevertheless etc.);
- discourse markers expressing listing (e.g. firstly, secondly, thirdly, lastly, finally etc.);
- discourse markers expressing logical consequence (e.g. thus, consequently, therefore etc.);
- discourse markers expressing exemplification (e.g. for example, in particular etc.);
- discourse markers expressing certainty, possibility, doubt (e.g. of course, possibly etc.).

After considering the different groups of discourse markers, students are required to point them out in a selected passage of the research article. They are then guided to rephrase sentences containing discourse markers, without altering the original meaning. In completing this task, their competence increases
not only in terms of recognition, but also in terms of production.

A few examples from texts A and B are provided below:

(6) "However, they give support to an emphasis on ‘realism’..." (A 447);
  "For example, there is considerable variation in the degree of sex
  imbalance ..." (A 447);
  "Firstly, our data relate only to a small and restricted range of types
  of difficulty...Secondly, our sample of teachers was drawn from
  two regions of England..." (A 454);
  "However, there were no statistically significant differences in the
  regression equations..." (B 237);
  "Consequently, for this subject group, there is no evidence of gender
  bias in the SIT" (B 237);
  "Subsequently, gender was added to the regression equation..." (B
  244);
  "In summary, the results indicate the following: ..." (B 245).

6.8. Hedging

Students are made aware that academic texts are to be consid-
ered only apparently more objective than other types of texts:
"they are simply more effective at hiding subjectivity linguisti-
cally" (Ventola 1997:176). The choice of avoiding polarity is the
reason why in scientific publications, and particularly in psychol-
ogy research articles, hedging is constantly used (Hyland 1994,
Salager and Meyer 1994).

Hedging includes the use of modal verbs, some adverbs (e.g.
perhaps, probably, possibly etc.), some adjectives (e.g. likely, probable,
possible etc.) and impersonal verb forms (e.g. appear, suggest, think
etc.). Compound hedges are sometimes used in order to
strengthen the flexibility of the claim even more consistently
(e.g. it may be suggested ..., it seems possible ... etc.).

A few fragments from texts A and B are provided below:

(7) "It has been suggested that..." (A 447);
  "These findings should be treated with some caution" (A 447);
  "It may be that" (A 448);
  "appeared to confirm" (A 448);
  "It is possible that" (A 448);
  "This may also undermine" (A 448);
  "I would expect... I would see" (A 451);
"The implication may be that" (A 453);
"It would be advisable" (A 454);
"It could be that" (A 454);
"possible minority bias" (B 237);
"should also be investigated" (B 238);
"possible gender bias" (B 240);
"It can be administered" (B 242);
"would suggest,... could be described" (B 243);
"caution should be exercised" (B 245).

Through examples of this kind, students are helped to become acquainted with the concept of "indeterminacy" or "the system of modality." In particular, by using the examples which are always copious in psychology research articles, their attention is drawn "to the area of meaning that lies between yes and no - the intermediate ground between positive and negative polarity" (Halliday 1985: 335).

7. Conclusion

After establishing the students' needs and the most suitable genre for psychology students, this paper has focused on the research article structure, the possible reading techniques, the most important linguistic features developed during a 24-hour course in ESP (Psychology), including lexical density and heavy nominalization, which often turn out to be problematic for intermediate students. It has also explained how students are guided towards a systemic functional approach to language, and how they are helped to become familiar with a wider linguistic horizon.

My approach does not claim to be original or exhaustive. Nevertheless, it can be argued that, within the short course length, it has succeeded in providing students with the essential tools that are needed to tackle the reading of research articles in English and in stimulating them to actively "receive" new knowledge.

According to the non-structured evaluation forms administered to students at the end of each course throughout the five years, the approach has proved to be extremely useful and effective in meeting the students' needs, despite the fact that the
quantity of time dedicated to English within the curriculum is reported to be inadequate – a problem which the University Reform under way in Italy should take into serious consideration.

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