

Guidelines for an EST Writing Course

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La enseñanza de la escritura es probablemente una de las destrezas de mayor complejidad en la enseñanza del inglés como lengua extranjera, en la medida que requiere una planificación previa que dé cabida a todos los componentes, ya sean éstos de ámbito estructural, retórico o discursivo. La literatura específica propone el empleo de los enfoques del proceso (process approach), del producto (product approach) y del género (genre approach) para tales fines, dependiendo uno u otro de variables como la situación de partida, los objetivos, la competencia comunicativa de los alumnos, etc. Sin embargo, en nuestra opinión, ninguno de los enfoques anteriores, al menos de forma aislada, es la panacea para la enseñanza de la escritura en inglés como lengua extranjera. Dada las características que presentan los alumnos de ICT (Inglés para la Ciencia y la Tecnología) en España, se propone un enfoque ecléctico que da cabida al eje estructural como paso previo a la escritura como proceso en sí mismo. Desde esta perspectiva, el presente estudio aborda los contenidos y secuenciación del material en un curso de ICT con el objetivo de obtener un marco teórico válido y aplicable a cualquier otra situación de enseñanza-aprendizaje en tono a esta destreza.

The teaching of writing is probably a thorny task for a teacher of English inasmuch as a careful planning is needed so as to make room for all the components involved, whether structural, rhetorical or discursive. The process, the product and the genre approaches are often proposed in the relevant literature, their application depending on a set of variables such as second or foreign language teaching, present and target situations, linguistic competence of learners, etc. However, in our view none of them has proved to be successful, at least independently, in the case of EFL writing instruction. Given the characteristics of EST students

in Spain, an eclectic approach is proposed by activating the four different types of knowledge, that is, the language system knowledge, the context knowledge, the writing process knowledge, and the content knowledge. In this fashion, in the present paper we will select and arrange the course material for an EST situation so as to offer a framework valid for any FLT context.

Keywords: EST (English for Science and Technology), genre approach, material sequencing, process approach, product approach, rhetorical approach, target situation, writing instruction.

Palabras clave: ICT (Inglés para la Ciencia y la Tecnología), enfoque del género, secuenciación del material, enfoque del proceso, enfoque del producto, enseñanza de la escritura.

1. INTRODUCTION

The teaching of EFL writing is probably one of the most challenging tasks of a teacher. Unlike reading, where a wide variety of texts and activities are available according to the learners' linguistic competence, writing is more complex inasmuch as a careful planning is needed so as to make room for all the components involved, whether structural, rhetorical or discursive. This picture gets even darker when dealing with technical English since the content knowledge has to be added. Hence, the design of such courses may become painstaking as teachers are more often than not faced with continuous hesitations about what to teach, how to integrate the language skills, the materials and activities, the learners' needs, etc.

Over a decade has passed since Raimés published her seminal *out-of-the-woods* article on the emerging traditions in the teaching of writing (1991: 4078-30), where the process, the product and the genre approaches are described in detail. None of them, however, is the panacea, at least if used independently. In this line, Raimés (1998: 147) suggests that an eclectic approach taking into consideration not only writers and readers themselves but also the text as the vehicle of information would be more adequate for such purposes.

This eclecticism has also been in fire in the last decades as linguists have been searching for a unified integrated model that intermingles all the approaches into a valid framework. In this vein, Tribble (1996: 43) recognises the relationship between the writer, the reader and the text itself, and proposes a model pivoting on the following types of knowledge: a) the structural domain of the language —*the language system knowledge*; b) the context in which the text will be read —*the context knowledge*; c) the role of the writer —*the writing process knowledge*; and d) the concepts involved in the subject area —*the content knowledge*.

In our opinion, however, the main problem is how to put these theoretical assumptions into practice. The relevant literature is abundant, especially in the field of ESL, where many monographs have been published (Robinson 1988; Kröll 1990; Brookes and Grundy 1990; Belcher and Braine 1995; etc.). Their main shortcoming, however, is that a connection can hardly be established between a second and a foreign language learner of English, insofar as the former is characterised by a considerable communicative competence in the target language, a fact which becomes a desideratum in the case of the latter. Therefore, most of the pedagogical guidelines offered in the literature are of difficult application by the FL teacher, both from a methodological and a practical viewpoint, especially owing to the number of students per group, which often constitutes an added shortcoming.

For this reason, the teaching of FL writing requires a careful selection and sequencing of the linguistic material so as to enable learners produce meaningful and cohesive paragraphs. Alcaraz (1983: 46) proposes a framework based on three stages: the first at sentence level; the second at paragraph level; and the third using texts as the basis for parallel compositions. This approach stands out for its efficiency either for a general or a specific purpose. As Raimes argues, the strategies used by learners in their mother tongue are not directly transferable to the rhetorical structure of English (Raimes 1979: 3), as it is often the case of EST learners in Spain, implying that a careful analysis of the structural level of the language is needed before the macro-level is accomplished. Taking both Alcaraz's and Raimes' arguments as the starting point, the present paper offers a proposal for the teaching of writing to EST students in Spain. The proposal would then correspond to any 4.5 to 6-credit course dealing with any EST branch, that is, engineering, design, architecture, etc. In light of all this, the selection and arrangement of the course material

is dealt with, thus trying to offer a framework valid for any foreign language teaching situation¹.

2. MATERIAL SEQUENCING

Three parts are distinguished in the sequencing of the material. Each part is developed in accordance with a different approach, that is, the intellectual/rhetorical approach, the process approach, and the genre approach.

2.1. First part: the intellectual/rhetorical approach

The intellectual/rhetorical approach, using Tribble's terminology (1996: 84-85), has been basically used for the teaching of writing at micro-structural level. The main objective during the first weeks of instruction is to enable learners to write both compounds and complex sentences where any kind of semantic relation is expressed. This initial stage of the teaching process is crucial for the eventual success of the course as it constitutes the key to write both paragraphs and full texts with success.

Following the philosophy of the approach, this section of the syllabus deals with the functions and notions which are common in the field of EST (Bueno 1995: 290; Trimble 1985: 71-98). For the purpose, the inventory of exponents has been organised into four different parts, namely, a) how to express logical relations; b) how to express intellectual attitudes; c) how to express rhetorical functions; and d) how to express factual information.

The first part, concerned with the expression of *logical relations*, comprises the four basic notions, that is, how to express cause, effect, condition and contrast. From a methodological standpoint, learners are provided with tables containing the linguistic exponents used to express these logical relations, chalk talks being necessary to describe the particular usage and restrictions of the different structures. For instance, the in-class treatment of cause would lead to highlight, among other issues, the varying positions of the subordinate clause as well as the positional restrictions of some connectors (e.g. *because* vs. *as/since*).

Three kinds of activities are particularly recommended for the practice of these notions: a) to fill in the gaps with the appropriate

connector depending on the relationship between the clauses; b) to translate; and c) to build as many sentences as possible using these logical operations. The last one is a compelling in-class activity as learners come to realise the number of sentences which may be generated just by making the necessary changes and using the proper connector, either conjunctions, adverbs or prepositional phrases. For instance, the following prompts (*soft iron is magnetised easily/used in electromagnets*) would lead to the generation of sentences like: *Soft iron is magnetised easily; therefore, it is used in electromagnets* (1). *Soft iron is magnetised so easily that it is used in electromagnets* (2). *Soft iron is found in electromagnets due to its easy magnetisation* (3); etc.

The second part of the syllabus, concerned with the expression of *intellectual attitudes*, is branched into three sections, each of them dealing with the ways to express a) instructions, suggestions, recommendations, obligation, need, requirement and inference; b) certainty, (im)probability and (im)possibility; and c) the writer's opinion or viewpoint. On the grounds of their frequency in EST texts, learners will have to master the exponents to express the different levels of certainty in light of the importance that hedging has received in the last decades as a device to distance the writer from what he/she writes (Hyland 1994: 239-56; Salager-Meyer 1994: 149-70; Crompton 1997: 271-87; Hyland 1998). Two activities have been designed for the practice of this section. On the one hand, learners are encouraged to provide the appropriate exponent (correct tense included) in view of the context and the specific notion suggested in the text (probability, certainty, permission, etc.). On the other hand, they are also encouraged to convert the input sentences into sentences denoting suggestion, obligation, lack of obligation, etc.

The third part, in turn, deals with the *rhetorical functions* which typically appear in the field of EST •description, definition, exemplification, explanation and classification (Trimble 1985: 69-113). As with logical relations, tables have been prepared containing the exponents used to express each of the linguistic functions mentioned above. For example, in the case of descriptions, learners are provided with a chart showing how to describe an object according to its shape, colour, aspect, dimensions, etc. along with the verbs, both static and dynamic, used for the purpose. In the case of definitions, we provide students not only with the basic pattern to define (concept + class + features) but also with the linguistic

resources available to express it. For instance, the definition of a *valve* is accordingly reformulated as: *By a valve, we mean the device used to control the flow of fuels* (1). *A valve is meant to be the device used to control the flow of fuels* (2). *Valves are defined as devices used to control the flow of fuels* (3), etc.

Finally, the fourth part, under the title of *how to express factual information*, deals with the exponents used to express equality and inequality, number and quantity, purpose, finality, and time relationship and duration.

2.2. Second part: the process approach

After the initial stage devoted to the microstructure, learners are then prepared to undertake the writing of paragraphs which, following (Trimble 1985: 45), are considered as the minimum unit of information in scientific texts. Methodologically, the process approach is adopted to attain the following two objectives: 1) to make learners responsible for their own compositions; and 2) to highlight the different phases of a text, from scratch to the final draft (pre-writing, composing, revising and editing). For these purposes, learners are provided with a diagram comprising the four phases of writing along with the tasks that each of them involves. Revising, for instance, is divided into internal and external; the former focusing on cohesion and coherence and the latter on features such as spelling, punctuation, grammaticality (word-order, agreement, verb tenses, etc.).

The process of writing paragraphs is not straightforward. A sequential process is proposed to ease the transition from guided to autonomous composition, a voyage which is complex in itself, especially for EFL learners because, as Raimes points out, the strategies they use in the native tongue “are not necessarily directly transferable to the rhetorical structure of English” (Raimes 1979: 3). In this same line, Dudley-Evans and St. John argue that the role of the ESP teacher would be to take advantage of the learners’ knowledge of their own specialist field so as to “develop a common awareness to control that knowledge over the language and the rhetorical structure of the discourse” (1998: 188). In light of this, we consider that the writing of paragraphs should be accomplished as a three-stage process, that is to say, from the practice of cohesion to guided and free writing.

The employment of cohesive devices, first of all, must be the main target to pursue at this stage as it comes essential to succeed in the learning process. Learners are accordingly provided with a set of sentences which have to be arranged by providing the appropriate cohesive devices, either by foric/semantic relations or by means of connectors and ellipsis (Coupland 1984: 61; Martín García 2001: 192). This activity brings about important benefits for EFL learners for two reasons: 1) it helps students grasp where the core idea is, as compared with the other supporting sentences; and 2) it helps them acknowledge that cohesion eases the reading of the text. The use of the overhead projector is recommended here as it directly increases the learners' attention and motivation, their suggestions being considered for the final layout. The role of the teacher in this activity is to recommend a moderate use of these cohesive devices so as to pursue, using Haswell's terms, the so-called cohesive elegance, that is, few cohesive links but effectively used (Díez Prados 2001: 530; see also Díez Prados 2003). Below we illustrate the input and output texts as obtained from the students' feedback and participation in class.

A rocket operates on the principle of action and reaction.
The upward movement of the rocket is the reaction to a downward force created by escaping gases.

Two propellents (the fuel and the oxidant) are pumped by turbines into the combustion chamber.

The fuel is ignited in the combustion chamber.

When the fuel burns, it releases energy in the form of hot gases.

The gases are produced when two propellents burn inside the rocket.

The gases escape through the exhaust at great speed.

The gases provide the thrust which forces the rocket upward.

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The treatment of these cohesive devices leads us to the second and third stage, focusing on guided and free writing, respectively. Learners are asked to write short compositions from sketches and diagrams (Coupland 1984: 61; Harris 1993: 49), which have been specially designed to tackle the micro and the macro-structure. The former is accomplished by activating the logical relations between the elements of the diagram whilst the macro-structure is practiced by attending to the nature of the text itself, that is, whether a process description, an enumeration, order of importance or chronological order, etc. Free writing, on the other hand, is accomplished by using two well-known techniques, either the writing of the continuation of a text or the description of a picture or an object using specific *realia*. Particularly motivating is the use of videos illustrating, for instance, a flame-cutting process or the performance of a four-stroke engine, the students having to write the corresponding report.

Following the philosophy of the process approach, the learners' final drafts will be handed to the teacher, who will underline the errors/mistakes for further revision by the learners. Accordingly, they will have to re-write the reports by avoiding the errors/mistakes found in the previous draft. On the other hand, reformulation may also be used at this point to highlight the learners' most common errors/mistakes at any level (grammatical, lexical, etc.).

2.3. Third part: the genre approach

After paragraph building, the course is concerned with the text at discourse level, taking Swales' notion of genre as a theoretical framework (1990: 132). In this fashion, the first stage consists in shaping those sub-genres which EST learners may need. The target situation analysis carried out at the beginning of the learning process is revealing inasmuch as it allows to determine those sub-genres required by learners, both for academic and professional purposes. Thus, report-writing was singled out by practically all learners as a pressing demand for academic purposes while résumés, abstracts, journal articles and letter-writing were chosen on the professional side. Accordingly, each of these text-types makes use of a rhetoric which is embodied in every textual manifestation of the genre; learners, therefore, need to be acquainted with those discourse patterns so as to become authentic members of the academic community

to which they belong. In other words, as Tribble puts it, “to be deprived of the opportunity to learn how to write is, in this view, to be excluded from a wide range of social roles, including those which the majority of people in industrialized societies associate with power and prestige” (Tribble 1998: 146; see also Johns 1995: 277-91).

The following arrangement, by their supposed level of difficulty, is recommended for class treatment: the writing of letters and *résumés* is followed by the writing of abstracts, reports and articles, respectively. The advantage of using this order lies precisely in the fact that the learners can progressively gain confidence in the writing of longer texts, since letters and abstracts are concise compositions which serve to introduce them to these discourse patterns of the text. Abundant is the literature on the writing of letters and *résumés* and the teacher’s role will be basically to show some examples in class and explain their features, both linguistic and rhetorical. Next, learners will be asked to produce their own cover letters and *résumés* in answer to a job offer shown by the teacher.

The need for writing abstracts and research articles, in turn, unquestionably arises from considering that they both constitute the vehicle through which science and technology is transmitted, hence their importance both for study and professional purposes. In the case of scientific abstracts, their four-stage move set forth by Swales (1990: 181), problem-method-result and conclusion, has become a guideline for publication in most of the leading journals in the field and, consequently, the fact of being acquainted with these patterns is essential for members of the scientific community.

From a methodological perspective, an amalgamation of the genre and the product approach has proven helpful for EFL learners, which consists of the following phases (Verdejo 2000: 323-26). First, working in groups, learners must distinguish between the stages mentioned above in authentic abstracts taken from their field of expertise. Second, once the universality of these moves has been corroborated, learners will pinpoint the recurrent grammar forms that serve to identify them, that is, complex noun phrases, the passive voice, the third person singular, the past tense, etc. Third, students are asked to rewrite a set of scientific abstracts which do not follow the pattern in accordance with the requirements. Finally, the task is obviously completed with the writing

of abstracts from an article proposed by the teacher, hence incorporating reading as a complementary task.

This same methodological approach is used for report-writing instruction. As in those sub-genres above, reports are typically featured by a five-stage move consisting of introduction/fundamental principles/methodology/results and conclusion. Their in-class treatment does not differ from that described for abstracts and articles inasmuch as learners are asked to collect samples from books of the specific subjects that they study and check how the rhetorical pattern is embodied in each case. Next, they will have to write a 750-word report on a topic connected with the common core subjects where the micro and the macro-level will be put into practice (see Houghton 1984: 47-57).

3. CONCLUSIONS

To measure the effectiveness of this framework, tests were administered to the students enrolled in the subject *Technical English II* both before and after the teaching period. The assessment was carefully designed in order to include all the variables that could directly or indirectly have affected the conditions of learning (i.e. number of groups, same/different teacher, number of students per class, etc.). In the School of Engineering at Málaga University, students may optionally enrol in two English language courses —*Technical English I* and *Technical English II*, in their second and third year, respectively. While *Technical English I* is particularly concerned with reading skills, *Technical English II* aims at the development of writing skills. Each of these subjects is offered to students specialising in mechanical, electrical and electronic engineering. For the experiment, mechanical and electrical engineering students of *Technical English II* were chosen as the experimental groups while the control group was constituted by the electronic counterpart.

The tests were especially designed to measure the learners' writing skills by means of the following activities: a) to re-write a text where all connectors have been previously left out and where only the stem of verbs is supplied; b) to write a coherent paragraph from a set of random ordered sentences; and c) to write a report from a sketch, where a particular technical procedure is involved. The results led us to observe a general

improvement in the students' writing abilities. In figures, 36 out of 63 students from the experimental groups obtained better marks than those in the control group, where only 10 out of 31 obtained the same level of achievement.

Finally, it is also important to highlight the benefits of feedback in the learning process as a whole. On the one hand, the most valuable feedback technique is reformulation, by means of which students come to learn from their partners' compositions. In this fashion, it is recommended to project a couple of anonymous compositions on a screen to allow the group to imitate one successful production, and guess and correct the most common errors/mistakes in a faulty one. Re-writing, on the other hand, is another feedback technique by means of which the students have to re-write all their drafts according to the teacher's general guidelines (i.e. use punctuation marks, make sentences out of clauses, check your vocabulary, concord, appropriate tense, etc.). The teacher, however, will not correct the compositions in detail; on the contrary, he will just underline the faults so that learners can identify and correct them. This procedure becomes highly beneficial for the learners' writing abilities not only from a grammatical but also from a discourse perspective.

All in all, the methodological framework presented here is a valuable asset for the teaching of EFL writing for the following reasons. First, recall that modern languages, and especially English, are the Cinderella in the curriculum of many University degrees, not only in Spain but also in other European countries, more often than not limited to a few optional subjects with a small number of credits but a large number of students per class. Second, the fact that the strategies used by foreign learners of English in their mother tongue are not directly transferable to the target language further complicates the teaching process. Therefore, we consider that the framework proposed here may fulfil the needs of many University teachers of English inasmuch as it goes from the sentence to the paragraph and eventually to the text itself. The learners are accordingly provided with a solid description of the basic functions and notions of the EST text, which further facilitates the task of writing at macro-level by producing not only cohesive paragraphs but also texts accepted for publication by the international scientific community.

NOTES

¹ The methodology proposed here is put into practice in Miranda, Calle and Moreno (2004).

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