Review

Validation of Didactic Material for DE: Challenges and Proposals

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Considering the current expansion of distance education (DE), writing for DE demands accurate and specific competences so it is crucial to search for more consistent criteria for validating this kind of material. In this paper, we try to place this production in the DE debate as we present the traits that distinguish self-instructional material as an emerging genre. We start off analyzing the proposals of English Open University and the Spanish UNED in order to scrutinize, detail and expand the macro- and micro-structural characteristics of the self-instructional *genre*, considering the European model. Furthermore, we elucidate what might cause this *genre* specification due to the need to incorporate relevant features of traditional learning to didactically-aimed academic writing. Finally, we present some critical points in which writing for DE is articulated to the available technological resources, focusing on the composition of professional teams who work with DE.

Keywords: Didactic material, self-instructional *genre*, instructional design

INTRODUCTION

Demands and Gaps

We are currently experiencing an incisive stimulus towards academic productivity – mostly among the faculty of graduate courses, but also present in all levels of education. The motto is writing and publishing – even though the two poles of this equation, which include what should happen *before* writing or *after* publishing, is somewhat eclipsed (Waters, 2006).

We understand the importance of accelerated knowledge production, especially in our context of historical disadvantages as compared to the globalized scenario where there is extreme competition also regarding intellectual production. However, we must emphasize the importance of *merit judgment* of academic publications in this clearly inflationary world scenario. Indeed, we are also experiencing a crisis in terms of qualified university editorial production, which may be quickly explained as the following: production tends to be evaluated under a predominantly quantitative light, which

measures volume and regularity more than acceptance or scientific, technological and social relevance. Hence the creation of an environment in which publications are vertiginously multiplied. But one wonders *who* reads all this, and *what for* – the circulation is generally small in number, so that the papers are rarely commented outside the authors' close circle of colleagues.

Following the same process of accelerated academic publication, *distance learning* emerges and expands at an exponential rate in Brazil (from little more than 600 students, ten years ago, to the current figure of around 2 million students, according to data released by Celso Costa, director of Capes Distance Learning, at the 1st International Meeting of Brazil Open University in November, 2009), and with it come new and important demands regarding expectations of faculty production. This, however, is far from being the focus of attention. Two salient symptoms: there are no more than 100 articles about DE in Portuguese available in the SCIELO website; on the other hand, most training processes of content for producing didactic material (DM) for DE are still extremely fast and take only a few hours, and only when they are truly institutional.

Overtly contrasting with this careless, innocent or uncurious vision, however, are the new and heavy

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demands that are increasingly clearer. Roughly speaking, some of the most blatant examples are:

- the didactic material for DE (or at least a substantial part of it) should be *original,* and elaborated according to a *specific textual genre* (which involves not only the challenge of sedimentation and refined organization of elements, which the professor already controlled and practiced in traditional teaching, but also a reformulation and expansion of his/her previous skills, in order to overcome weaknesses or stimulate potentials of the DE modality);

- the schedules of didactic material production for DE courses demand a *high rhythm of production* and are generally very *rigid*, for these courses are typically geared towards large audiences, and their whole implementation structure depends on following the planned stages. In this sense, it is worth noting that DM production is, by rule, the most time-consuming stage and is subjected to variations and contretemps.

- the elaboration of didactic material tends to be (or should be) guided and closely scrutinized by specialized judges, not only when the material is ready, but *during its production*, since the financial and pedagogic costs of correcting any problems after its publication is very high (via print or database platform) or even prohibitive (which certainly still causes tensions, strangeness, and even discomfort in many professionals invited to produce content);

- unlike what happens to a large part of remaining faculty publications, the social and pedagogic function of the didactic material being produced is not indirect or quantitative, rather it is *crucial* for DE students, since their chances of developing within the courses they choose rely on the quality of the DM, influencing learning and failing rates, and especially dropout rates in distance education courses;

In this scenario, which is both exciting and tense, a high price is paid for a more mechanical and frantic productivity while hurrying to supply incommensurable demands or to open previously unimaginable sources of action. Contracts of purchase and sales are always intensely discussed, involving technological and infrastructural alternatives, while coordinators and monitors are hurriedly trained. Furthermore, due importance is rarely dedicated to giving detailed explanations regarding the quality criteria that should guide *DE writing* and validating the didactic material produced, as if *technology* merely entailed the use of recent equipment or software and did not include language itself. As if we did not know that production schedules for DE generally explode because the vast majority of professors invited to produce DM are surprised by the task's complexity. Or as if we did not know, on the other hand, that speedy production has been linked to inadequate, low-quality, if not simply fraudulent, didactic material. As if we assumed that this

"linguistic filling" of the whole distance learning project was not particularly new, problematic, sophisticated or laborious. But it is.

Our daily professional practice, which included more than two consecutive years of production, development and supervision of over 80 classes per week of undergraduate courses in the DE modality at Consórcio Cederj, as well as the analysis of available academic literature about production and validation, allows us to safely state that there is plenty of misinformed and unqualified work produced by content producers, validators, and even managers. The deficiency lies in understanding that the DM (especially the printed material) composes the axis around which DE is organized – therefore, the gaps and shortcomings in this production harmfully affect the teaching-learning process more than traditional classroom learning process. After all, this material should contain not only a large portion of the central "content" of the course, but also more than one can recollect, imagine or foresee with respect to typical interactions between teachers and students, where questions, complementary explanations, curious comments, references to further studies etc. play an essential role (Fialho, 2007). In this sense, the DE didactic material builds a bridge between two worlds that, in Brazil, historically formed very distant trajectories: qualified academic production and the traditionally less prestigious classroom routine.

However, despite its crucial role in organizing DE courses, the didactic material still seems to be a *blind spot* compared to the more regular and institutionalized evaluation processes in Brazil. After all, even the most official evaluation criteria of DE courses place emphasis in quantitative matters and matters related to course infrastructure. These criteria are management-focused and strictly encompass the evaluation of didactic material (and, even so, with certain difficulty) based on generic, imprecise and unstable prescriptions. The standard Ministry of Education (MEC) form for assessing courses, for instance, merely requires the institution to "possess criteria for evaluation of educational material", which clearly restores or transfers to institutions the responsibility that is generally expected of a regulating agency, in a more explicit formulation.

In this void, institutions create a number of variations and oscillations regarding the expected production criteria. Meanwhile, there seems to be consent in terms of poor recommendations that place very different matters into the same bag: the recurrent and nebulous need of a "clear and objective language" combined with administrative and pedagogic recommendation. An example would be "coherence with the pedagogic course plan" or others concerning diagramming or graphic design, such as the "use of different font sizes and types used for titles and subtitles" or even the unfathomable term "attractive presentation". These production and

validation criteria of DM are, obviously, too vague and require more studies and explanations, in order to guarantee that the final product received by the students has quality and incorporates structures and characteristics that are essential for a successful distance education.

Not surprisingly, there is still lack of substance and much improvisation in this type of guidance for DE production, and this has generated production quality variation that deserves to be more closely examined. But how can we contribute more directly to bestow clarity to these actions and a more transparent, regular and consistent validation process of didactic DE material?

Our experience and academic background point toward the following hypothesis: in addition to wider political and cultural problems, difficulties in didactic material validation have arisen due to the lack of a mature and more detailed description of the *textual genre* that emerges (and unfolds) with this modality (around which production teams must organize themselves more coherently). Structurally, the social place where this reflection can be built is fragile and unlikely due to a simple equation: whoever is immersed in this type of work personally experiences the vertiginous pressure of the accelerated demand and can hardly stop to think about what they are doing; whoever advanced vertically in a reflection guarded by better conditions in terms of qualified academic production was generally less moved by the contexts, problems and demands of which we speak. Nevertheless, we seek to relay a careful description of this genre in the next sections.

Self-instructional Texts: Macro-structural Description

We believe that most university scholars who are invited to write didactic material for DE courses are more used to producing other genres of academic texts: projects, reports, summaries, reviews, essays, manuals, or even so-called "didactic books", describing textbooks conceived to structure and support traditional classroom courses. However, seeing as the DE expansion in Brazil is a relatively recent phenomenon, whose quality criteria are still being constructed, few people are actually used to writing what specialized literature often calls "self-instructional" material.

We therefore seek to resume a very influential proposal which has largely defined the above-mentioned genre, established from consolidated experiences at the English Open University. This initiative irradiated to Brazil through the publication of Fred Lockwood's (1998) edited collection, and impacted the first public systematic developments in the field. In this context, the proposal outlined in England was complemented by a few parameters suggested by UNED, a specialized Spanish consultancy, still one of the main DE institutions in the world.

Note that the characteristics listed below seek to capture the specificities of *self-instructional material,* directly contrasting them with *traditional didactic textbooks*, since the latter belong to a didactic genre that seems to be closer to what we wish to describe. With this genre, the boundaries would be less clear and therefore less capable of refining the emerging genre description (Marcuschi, 2004). We clearly assume, in this sense, that the void between self-instructional material and genre like *booklets* and *manuals* would be more conspicuous, due to the latter's synthetic, instrumental and schematic nature, as opposed to the former's developed, autonomous, complex and reflexive structure. Not to mention the texts elaborated for *Power Point slides*, usually created to serve merely as visual scripts supporting oral presentations and therefore even more distant from the kind of full-bodied production that should be expected from self-instructional DM.

With this comparative procedure, we admit a source limitation: of course we tend to accentuate the extreme characteristics of genres that are confronted in the table 1 below, even though we know that there may be considerable gradations, nuances and counter-examples among them. Due to space limitations, we were not able to match each item presented in the table below with a specific discussions and desirable exemplifications. Nevertheless, we believe that the parsimonious table propounded can shed light on the emerging genre. We must also note that this framework basically resulted from a process of reorganization, edition and unfolding of the table initially proposed by Fred Lockwood (1998), partly reproduced, in Brazil, by authors such as Neder and Possari (2001) and Preti (2009).

Self-instructional Texts: Macro-structural Description

Regarding the micro-structural aspects of the *self-instructional material* genre, i.e., the synthetic and lexical model it presents, it is important to note that, given its function and form specificities, there are many relevant differences compared to traditional didactic textbooks. Far from being presented as a minor unimportant detail, these differences, when unconsidered, may generate material similar to that of traditional classroom courses. This inadequacy breeds notable phenomena such as unmotivated students and increased dropout rates. After all, if it is through language that relationship mediation and knowledge-building occur, a series of improper linguistic choices tends to render the teaching-learning process less efficacious (Smolka; Góes, 1995).

However, it is important to clarify that such guidance as "clear language" or "direct language" says very little

Table 1: Comparison between didactic textbook and self-instructional material

TEXTBOOK	SELF-INSTRUCTIONAL MATERIAL
Designed for generic reader, located in a dissipated spatial-temporal context	Designed for a specific audience, located in a well-defined spatial-temporal context
Meant for guiding teachers/professors	Meant for guiding students
Developed by content authors	Developed by production teams that incorporate different professionals
Does not foresee relation between content and corresponding workload schedule	Does foresee relation between content and activity and corresponding workload
Assumes the reader is interested	Seeks to capture the reader's interest
Rarely explains goals and objectives in each thematic unit	Tends to strongly establish goals and objectives in each new thematic unit
Does not warn about required studying skills	Promotes required studying skills
Seeks impersonal and formal style	Seeks personal and informal style
Visually establishes unilateral reading path	Explicitly and visually establishes diverse reading paths
Rarely anticipates doubts and difficulties that the reader may have	Is alert to possible doubts and difficulties of the reader and incorporates them into the text
Tends to focus almost exclusively in content presentation	Tends to insert, consciously and systematically, elements that mediate content
Content is compact (dense)	Content is open and detailed
Focused almost exclusively in written text	Seeks to systematize connections with other media
Usually does not require active and explicit response from the reader	Usually requires active and explicit response from the reader
Places little emphasis on self-evaluation	Places great emphasis on self-evaluation, including the creation of clear and detailed parameters for this
Activity structure is absent or timid, is subsequent to text, and places emphasis in reading review	Activity structure is robust and distributed throughout all the material, with emphasis on conceptual manipulation
Rarely offers summaries	Usually offers summaries
Post-production evaluation	Evaluation occurs after and *during* production
Occasionally updated	Systematically updated

concerning grammatical structures and appropriate word selection for text composition. We will therefore proceed below with a thorough analysis of linguistic constructions and of the type of vocabulary which is most appropriate for composing self-instruction material, given its function and context specificities.

1. Direct Order – must be adopted not only in the general structure of the class (goals, introduction, development, activities, conclusion, bibliographical reference, etc.) but also in the clause level. This means that very long, inversion-full sentences should be replaced with moderate-sized sentences organized in the generic form *subject + verb + complement + adjunct* for easier reading (Garcia, 1981). It is worth noting that, since students occasionally feel challenged by handling written text, contact with sentences and paragraphs structured in direct order, which are easier for the brain to decode, familiarizes them with the logical sequence of ideas and indirectly teaches them how to write their own texts. Furthermore, inversed order requires more complex use of punctuation marks and greater care with syntactic structure, which may lead to unnecessarily obscure texts.

2. Concrete nouns – help the reader, by means of examples, metaphors and analogies, to grasp the meaning of occasional long phrases formed by abstract nouns and adjectives (harder to be processed). Academic writing is particularly marked by a succession of long structures that link many abstract nouns, as in "comprehension of the process of producing epistemological knowledge concerning the building of otherness". However, this type of linguistic linkage makes reading harder and should be avoided in self-instructional materials, for the extension of this word structure compromises the reader's understanding of the rest of the sentence. If it is impossible to reduce the expression,

then it is interesting to employ comparisons with concrete nouns in order to render the content clearer to the reader.

3. Appositives and adjective clauses – are employed to "translate" the meaning of complex words, especially in the case of technical terms. It is worth remembering that, since the self-instructional material is written with the student's demands in mind, one should not assume that students are familiar with many terms and jargons of the field, especially in the beginning of the academic period. This periphrastic information, i.e., presented in a more detailed form than the terms it refers to, may be built in the text or as autonomous syntactic structures, in boxes or hyperlinks.

4. Mechanisms of referential cohesion (periphrastic and synonymous nouns and pronouns) – refer to previous elements in the text and allow new information to be added (Koch, 2008). Though present in most textual genres, these mechanisms are employed explicitly in self-instructional materials, which have a high repetition rate when exposing ideas. While this repetition is considered to be problematic in other fields, it is necessary in DE, since it aims to anticipate any doubts the reader may have.

Explicitly employing mechanisms of referential cohesion guarantees that phrases will not contain unnecessarily high information levels (Koch; Travaglia, 2008), which can make reading harder, because the exposed data are diluted along more sentences and paragraphs about the same subject, linked by the referred periphrastic and synonymous nouns and pronouns.

5. Mechanisms of sequential cohesion (conjunctions) – clarify the relationships among the ideas presented throughout the text (Koch, 2008), because, in addition to the content of the sentences, there is evident focus on the logical concatenations between them in self-instructional materials. This owes to the central function of this textual genre, which is to promote knowledge-building, bringing this intellectual endeavor to light, and not merely presenting ready information.

The need to focus on these cohesion mechanisms is ratified by the general organization of the self-instructional text, which presents few topic structures (more common in booklets).

6. Performatives – explain the acts of speech by means of discourse, showing that the focus is not only in the content per se, but rather in the knowledge-building process with the student. According to Austin (1965), all enunciations are performative because, from the moment they are enunciated, they perform some sort of action, although this can be implicitly or explicitly marked in the text. In the case of the self-instructional material, in order for the student to recognize the dialogical character of the meaning and knowledge-building of a certain object, one generally chooses to clearly enunciate the performatives. In practice, this corresponds to not merely saying that

"education is important", but rather "it is stated / agreed / believed / expected that education is important". Generally, statements of this nature come hand-in-hand with justifications that support them. Hence the author encourages the student to reflect upon the process of data production, instead of merely immediately incorporating them.

7. Interlocution marks – incorporate the student to the DM text, while attempting to reestablish the dialogue experience, which is a natural part of traditional in-class courses. By anticipating possible doubts and needs of the students, the author directly addresses a potential student, whose characteristics he infers from the general profile of the course's student body. In grammatical terms, this direct dialogue with the student occurs by means of interrogations that induce reflection throughout the lecture; imperatives that call the reader forth to perform certain mental activity; and vocatives and treatment pronouns that directly address the student (Azeredo, 2008).

8. Enunciation marks – incorporate the author and the context of DM production to the text. Although the general recommendation for academic writing is usually to sustain an impersonal tone, erasing the subject that speaks behind the primacy of the transmitted information, this does not apply to the *self-instructional material* genre. In writing didactic material for DE courses, the author clearly places himself in the text, leaving an authorial print, as a little part of himself that the students can get to know. Again, this type of resource aims to ratify the dialogical character of the teaching-learning process and reestablishes a part of in-class contact, which occurs in traditional learning modalities. As for the choice of words that permeates the compass of the text, one observes that the self-instructional material incorporates the use of the first person in speech (*I* or *we*); adjectives that express subjectivity, i.e., the world view of the speaker; and plenty of self-reference, which implicates references to the text itself, as an object of the biosocial world. The text is composed of a series of information which has already been mentioned or is yet to be, which the author may refer to in different moments (Azeredo, 2008).

Specialization Process: An Organic View

Beyond a detailed or exhaustive list of what would be the characteristics of this emerging genre, however, we believe that it is important to seek what *unifies* them in a certain way, or what *common source* they emerge from.

Despite their apparent variety and dispersion, the writing characteristics for DE seem to derive from the same impulse: the effort to incorporate to the didactic material something central yet valuable of the best of the traditional classroom, or creating compensation systems

when faced with the evident losses caused by "dematerialization" of the classroom environment.

In this sense, let us analyze some of the vectors that govern this impulse:

- Creating a sufficiently cohesive learning environment in order to stimulate concentration in studying and creating a learning community, so as to compensate for the loss of a clearly differentiated and protected physical environment. In order to do so, one employs a structure containing planned degrees of redundancy, with high level of explanation of the internal organization and reinforcement of cohesion, so as to counterbalance the social context of the class reception which is effectively more disperse and fragmented;

- Creating a sufficiently open environment for the active exchange of experiences among members and attending to the demands of heterogeneous groups, by incorporating the student's perspective and creating information architecture with varied reading routes, in order to meet the demands related to gaps in academic backgrounds or the demands of created interest in the development of supplementary content;

- Opening for the emergence of professors and students as singular individuals, by means of a more personal writing style by the author of the material, as well as opening spaces for the effective registration of the student's production, incorporation of the student to the self-instructional text albeit through resorting to memory and imagination regarding possible interactions. Moreover, there is also the refined articulation between the self-instructional text and resources such as interactive tools and tutoring (not only *providing* this, but also doing it conscientiously and in a well-structured manner).

CONCLUSION

Critical Points and Qualitative Leaps

Considering the more general impulse that seems to govern the differentiation and specialization process in writing for distance education courses, one last point deserves to be especially highlighted: who, after all, should be involved in this production?

Indeed, structuring teams is still one of the points where the lack of criteria or consensus regarding DE course production generates the most dissonance, also because a large part of these profiles is still under construction and whose recognition is still in progress, the team charts are not always defined, and the preferential production flows are still being tested. However, factors such as *who* and *how many* professionals compose them, as well as *how* they relate to each other, are strong definers of the final quality of the didactic material produced.

Some of the most sensitive points of the production, however, articulate around two actors:

- **Content writers:** in general coming from traditional teaching and with some publication experience, they are invited to integrate, at a superior level, experiences that were rarely being touched before their immersion into DE: reflection and advanced written production, on one side, and classroom immersion on the other. In this context, attention dedicated to class planning is extremely intensified and undergoes possibly previously unseen levels of control and institutional evaluation of the classroom *event* (rebuilt or recreated in speech).

- **Instructional designers:** just recently registered in the Brazilian Code of Occupations (CBO), published by the Ministry of Labor, these professionals should be theoretically capable of guiding the whole creation and refining process of the textual self-instructional genre and still conduct articulations among the whole team involved, encompassing, in the same effort, course coordinators and Portuguese proofreaders, graphic designers and IT specialists, professors and illustrators (Filatro, 2008). In practice, however, this function can be either narrowed or can gain definitive force, depending on the educational level of the team, the degree of academic adherence in relation to the courses in production, the expected flow, as well as the institutional structure within which the production occurs (Amaral, 2009; Claro, 2007).

Lastly, we call attention to the predominant absence of "content judges" who may contribute to the validation process of DM to DE: if the production is understood to possess specific characteristics and to be, in many ways, extremely demanding and original, one would expect this filter to be triggered more systematically. After all, if it is true that, in traditional education, the lecturer's classes are not as thoroughly sieved, it is also true that, in the DE world, the wrongs and the rights always occur in large scale, with more definitive consequences.

Besides, we have seen that all this caution, if it exists, ends up transposing to traditional learning as well, in a "collateral effect" of production for DE courses, which is very symptomatic: perhaps it indicates that, in the new convergence between academic writing and the classroom, some unforeseen properties are emerging. These teaching and learning qualities did not exist separately before this moment of convergence and ebullience, but are not appearing in vain. Their net worth will only be defined with our attention to these new realities and with decisions that, even amid the most vertiginous outcomes, must be discerned and made

REFERENCES

Amaral MM (2009). Navegando nas ondas da educação online: competências do designer educativo. *Rev. Adm. Pública,* Rio de Janeiro, v. 43, n. 6, Dec.
Austin JL (1965). *How to do things with words.* New York: Oxford

University Press.

Azeredo JC (2008). *Gramática Houaiss da Língua Portuguesa*. São Paulo: Publifolha.

Bakhtin M (1992). Os gêneros do discurso. In: BAKHTIN, M. *Estética da criação verbal*. São Paulo, Martins Fontes.

Bolter JD (1991). *Writing space: the computer, hypertext, and the history of writing*. New Jersey: Ed. Lawrence Erlbaum Associates.

Claro T (2007). A docência no consórcio Cederj: interatividade ou transmissão? *Anais do V Encontro de Educação e Tecnologias da Informação e da Comunicação*. Disponível em <http://etic2008.files.wordpress.com/2008/11/unesatatianaclaro.pdfacessíve>. Acesso em 15 ago 2010.

Fialho AP (2007). Arquitetura da Informação. In: BARRETO, C.C. *Planejamento e elaboração de material didático impresso para educação a distância*. Rio de Janeiro: Fundação CECIERJ.

Filatro A (2008). *Design Instrucional na Prática*. São Paulo: Pearson Education do Brasil.

Garcia O (1981). *Comunicação em prosa moderna*. Rio de Janeiro: FGV.

Koch I (2008). *A coesão textual*. São Paulo: Contexto.

Koch I, travaglia LC (2008). *A coerência textual*. São Paulo: Contexto. LDB - *Lei de Diretrizes e Bases da Educação Nacional*. LEI N°. 9.394, de 20 de dezembro de 1996. D.O.U. de 23 de dezembro de 1996.

Lockwood F (1998). The design and production of self-instructional materials. Londres: Kogan Fage Limited.

Marcuschi LA (2004). Gêneros textuais emergentes no contexto da tecnologia digital. In: *Hipertexto e Gêneros Digitais*. Rio de Janeiro: Editora Lucerna.

Ministério do Trabalho e Emprego (2002). *Classificação Brasileira de Ocupações*. Available in <http://www.mtecbo.gov.br/cbosite/pages/home.jsf>. Acesso em 02 ago 2010.

Moran JM (2007). *A integração das tecnologias na educação*. Disponível em: <www.eca.usp.br/prof/moran/integracao.htm>. Acesso em: 14 ago 2007.

Neder MLC; Possari LHV (2001). Oficina para produção de material impresso. In: MARTINS, O. B. (org.). *Curso de formação em educação a distância: Educação e comunicação em educação a distância*. Módulo 3, Curitiba: UNIREDE.

Preti O (2009). *Educação a distância: Material didático impresso: orientações técnicas e pedagógicas*. Cuiabá: EdUFMT.

Silva M (2000). *Sala de aula interativa*. Rio de Janeiro: Quartet.

Smolka AL; Góes MCR (orgs) (1995). *A linguagem e o outro no espaço escolar: Vygotsky e a construção do conhecimento*. Campinas: Papirus.

Waters L (2006). *Inimigos da esperança – publicar, perecer e o eclipse da erudição*. Trad. Luiz Henrique de Araújo Dutra. São Paulo: Editora da UNESP.