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**REVISTA DE
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DAS LÍNGUAS**

REVISTA DE DIDÁCTICA DAS LÍNGUAS

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Literacias académicas multimodais

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Academic Writing, Genre, and Indexicality: Evidence, Intertext, and Theory

Resumo

O uso consubstanciado de factos e de referências de forma a suportar argumentos inovadores impõe grandes desafios aos alunos na sua entrada no ensino superior, mesmo que na escolaridade anterior eles tenham já demonstrado perícia na escrita.

Ainda que sejam desafios singulares, não quer isso dizer que tomem uma forma similar numa multiplicidade de práticas em disciplinas e tarefas distintas. Efetivamente, estes desafios singulares apresentam formas distintas em diferentes disciplinas ou géneros, sendo que são essas diferenças que criam alguns dos atributos característicos das disciplinas assim como dos géneros que os identificam profissional e educativamente.

Por isso mesmo, ao aprender como produzir com sucesso estes atributos característicos, os alunos aprendem também o trabalho intelectual e as posições das suas disciplinas.

A prática destas características em contextos realistas leva os alunos a dedicar-se ao trabalho valorizado pelas suas disciplinas.

Palavras-chave: género, escrita específica.

Résumé

L'usage concret de faits et de références permettant de soutenir des arguments innovateurs présente des défis considérables aux étudiants à l'entrée de l'enseignement supérieur, même s'ils ont antérieurement fait preuve de savoir-faire au niveau de l'écrit.

Quoique particuliers, ces défis ne présentent pas de forme identique dans l'ensemble des disciplines et des tâches. Mais s'ils ont effectivement des formes différentes, ces différences révèlent aussi certaines caractéristiques qui identifient ces disciplines et leurs genres, qu'ils soient professionnels ou éducatifs.

Ainsi, en apprenant à produire ces caractéristiques avec succès, les étudiants ap-

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préhendent également le travail intellectuel et la position de leurs disciplines.

La pratique de ces caractéristiques en contextes réalistes leur permet de s'engager dans un travail caractéristique valorisé par les disciplines.

Mots-clés : genres, écrits spécifiques.

A few of the defining features of academic writing provide substantial challenges for students entering higher education, even if they were successful writers in their earlier education. Yet these distinctive features do not take consistent form in a single set of practices in all disciplines and all tasks. Rather they take different form in different disciplines and genres, and the differences create some of the characteristic attributes of disciplines and their professional and educational genres. Thus by learning how to produce these features successfully, students are learning the intellectual work and stances of their disciplines. By practicing these features in realistic contexts students engage in the characteristic work valued by the disciplines.

Academic writing is defined by its place within institutions and practices of education and of research. As such it places at its center the knowledge students are introduced to, think about, and are examined on in their courses as well as the knowledge produced by researchers holding academic positions. It also explicitly emphasizes the disciplinary literatures which provide the knowledge students are learning and evaluating and to which researchers contribute through their investigations and publications. Further, theory has a central role as the theory organizes, interprets and provides general principles for considering the many facts students and researchers encounter and which provide thematic meanings to the literatures of the various disciplines. Theories provide the core ideas that draw knowledge together. While all forms of writing use knowledge and ideas as well as draw on and respond to other pieces of writing, academic writing explicitly places that knowledge at the center by foregrounding evidence, theories, and other knowledge-bearing texts.

Despite this overall concern with developing both the individual student's and the total societal knowledge as embodied in disciplinary texts, academic writing is not a single, homogenous thing. Rather it varies from discipline to discipline and from educational level to level. Thus a paper in literary studies looks very different than a paper in chemistry, and the process and work to create those two papers differ greatly, including in the questions about knowledge asked, the evidence needed, the kinds of ideas used and the ways they are used,

and the ways in which the current work is related to the prior work in the field. Even within the same field, genres may vary substantially on these same dimensions; for example, a paper of literary criticism differs greatly from a paper in literary history. Further the exercises asked of a primary grades student differ greatly from those of a university student, and the professional scholar's task differs again. (For a general overview of studies and programs based on disciplinary and educational differences see Bazerman *et al.*, 2005).

In the US, in primary grades children's writing stays close to their life experiences, but as students move to middle school and high school their academic work in their various subjects takes a more central role in their writing. Students have to learn to write about material presented in their textbooks in history, science, and math and anthologies in the literature classes. The writing, however, sticks very close to the material presented in the textbooks. The evidence, ideas, and narrative patterns are already present for them and they need only select and summarize from what is already presented to them in their reading. Usually the textbooks present one dominant authoritative view and conflicting perspectives are rarely given much space or authority to question the official knowledge offered for reproduction. Thus theory may be left implicit and unexamined. Any added material comes from personal experiences or personal reactions and evaluations. In such a context there is often little purpose for explicit citation of sources, as the discursive universe of each class is dominated by the single textbook.

As students advance from secondary education and into university, however, textbooks present more conflicting views and students are sometimes asked to read, contrast, and evaluate views from multiple sources. They are asked to analyze cases and data and to develop critical stances in their academic writing. They are asked to develop arguments using ideas from their readings and gather evidence from sources beyond the classroom in library based research assignments. In short, students are asked to write in increasingly complex intertextual environments. Nonetheless, they retain the role of students learning to navigate the world of received knowledge, less knowledgeable than the authorities who write the books or teach their courses.

In postgraduate education students' roles shift from receivers of already established knowledge to producers of new knowledge or professional appliers of knowledge to novel circumstances. Whereas the undergraduate student becomes ever more familiar with an expanding range of already produced knowledge, embodied in textbooks, reference works, and the library,

the scholar must make fresh contributions to the field, making evaluative judgments about knowledge already gathered and what needs to be known, asking new questions, gathering fresh evidence, and adding to the disciplinary literature. Postgraduate student writing moves from genres of school assignments to genres of professional publication, with dissertations and theses having characteristics of both, sometimes in tension (see Paré, Starke-Meyering & McAlpine, 2009; Lundell & Beach, 2002). Similarly assessment practices move from hierarchical judgments by examiners who know more than the students to dynamic processes of knowledge negotiation among peers engaged in parallel inquiries.

Each of these stages of schooling and professional development requires different kinds of writing needing different kinds and levels of skills. Thus as students advance, even highly successful students may not have the full range of tools needed for the challenges of their new level of education. Students would gain in meeting these challenges by instruction and support in the particular practices and forms of writing appropriate to their situation and level. Further as their interests become more specialized in university and postgraduate programs in differing disciplines, they must address the specialized writing tasks of those fields. Our pedagogy for writing development therefore needs to recognize differentiation of tasks, skills, and situations.

Genre approaches to writing provide us ways for investigating and understanding this differentiation of writing, and then help us frame instruction and support that is responsive to the particular communicative needs of students at different levels and in different disciplines. One set of approaches to genre arise out of linguistics; these approaches focus on standardized patterns of lexicogrammar, such as provided by Systemic Functional Linguistics (Halliday & Matthiessen, 2004) and on standardized patterns of text organization, such as provided by Swales' move analysis (Swales, 1990). Another approach (which I am more associated with) arises at the intersection of rhetoric and sociocultural theory.

This sociocultural rhetorical approach considers texts as responses to rhetorical situations (Bitzer, 1968) and genres as typified responses to recurrent situations (Miller, 1984). Thus the starting point of genre is the perceived recurrence of social actions within perceived recurrent social arrangements. The patterns of linguistic forms are a result of these formations having been successful in similar circumstances. These similarities of situations, actions, and texts historically crystallize into robust social systems which rely on current genres to define communicative goals and roles (Bazerman 1994,

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Russell 1997). This approach allows us to understand the different kinds of writing students need to do in the complex organized systems of schools and disciplines. This approach focuses on students in their writing carrying out significant action through meaningful utterances that address community expectations and perceptions. Patterned lexicogrammatic and text organizational choices follow the meaning needs and historically successful models at play within the situation. (For examples, see Bazerman, 1988; Bazerman & Paradis, 1991; Bazerman & Russell, 2002; Bazerman, Bonino & Figueredo 2009).

In this view genre typifies many aspects of the situation, from social roles and values to graphic aesthetics and lexical choices, but in the remainder of this presentation I would like to focus on a few related aspects that are highlighted in academic settings and are of great significance for both student and researcher writing—evidence, intertextuality, and use of theory or ideas. These three are all related to what we consider knowledge and educated thought and are highly salient throughout most academic writing tasks. Yet the role and representation of each of these vary from level to level, discipline to discipline, and genre to genre. By considering how each of them plays out in the genres we are asking particular students to write in, we can provide more focused teaching and support.

Because students in school are learning the specifics of knowledge in each subject area and the ways these connect to the ideas of those subjects, their writing tasks typically require students to display what they know and how these relate to relevant ideas or theories, from the beginning of disciplinary learning onward. Whether for examination purposes or to help students develop their thinking, students are asked to find evidence and examples of the ideas they are being introduced to. At first the range of selection of evidence and ideas may be limited as students are asked to reproduce relevant statements from their textbooks, but as their education advances the range of specifics to be selected from as relevant may expand as well as the range of ideas and theories they may draw on. As this happens they need to gain further flexibility in articulating those ideas, showing the connection to the specifics, and retelling the specifics in ways appropriate to the ideas discussed. While at first the specifics and ideas are drawn from the limited domain of class assigned texts, by upper secondary and university work students have to draw on a wider range of readings which they must explicitly cite, but even more from which they must select, evaluate, synthesize their ideas.

We can think of academic writing in terms of the forms of knowledge it indexes and the connections it draws between the worlds it indexes. On one side academic writing indexes the concrete facts of the world gathered by disciplines and on the other are the general ideas or theories that have been developed to explain those facts. The relation between the two is on one side of data or evidence to confirm or argue for theories, and is on the other side of theories to explain or find patterns in the data. But the work of collecting data, developing ideas, and arguing for the validity of these theories is done in the literature of the field, the various texts produced by members of the field to develop new evidentiary and theoretical knowledge, to collect and synthesize that knowledge and to apply it to situations. So academic writing not only evidences the world and theories, but also the disciplinary literature which produces facts and ideas and argues their connection. It is this literature that students need to learn to read, navigate, and refer in order to take on more professional roles and it is to this literature that researchers attempt to contribute by proposing new knowledge in new texts.

Each academic text (whether by students or researchers) almost always calls explicit focal attention to facts, other texts and/or ideas, and most usually makes a connection among them as a central point. In so doing the writer takes a stance and establishes an orientation towards the material indexed, evaluating it, and then discussing it for some purpose at hand. Very often the writer then integrates the knowledge indexed into some larger claims or reasoning that the writer proposes. However, these general indexing practices of academic writing work out very differently in each discipline and genre. So in order to understand the differing academic genres, it will be useful to understand how they handle facts or evidence, other related texts, and multiple ideas, as well as the typical relations drawn among the three.

Thus an experimental article in physics may structure a review of the literature around certain theoretical principles that have been well accepted and some puzzles or results published in other articles. It will then propose an experiment to gather new data to address or resolve this puzzle, and the remainder of the article will report and discuss the evidence in relation to results in other papers and the accepted theory. On the other hand, an essay in literary studies may explain a new and controversial theoretical perspective, then apply it to some well known familiar texts (which are, in effect, the data), and finally compare the interpretation that arises to other interpretations. The set of practices for selecting and representing the material, evidentiary world, ideas,

and the prior discussion in each genre establish common disciplinary relations with material world and intertextual world of knowledge and theory.

More specifically concerning evidence, each discipline has its own practices and mechanisms for

- deciding what data would be interesting, important or appropriate to collect;
- locating sites for data collection and procedures for collecting valid data;
- authorizing the validity of that data;
- selecting from large domains of data for the purposes at hand and representing the selected data appropriately within the text;
- and integrating that data with the argument of the text and with other knowledge of the field.

Further within the genres of that field, there are different expectations for representation and use of that disciplinarily appropriate evidence. Thus in teaching students to back up their claims with facts and evidence, it is not sufficient simply say you need more facts; you need to introduce them to a complex, discipline and genres specific set of procedures by which they locate, collect, and select facts and then represent them appropriately within the context of their claims. In fact you are teaching them a complex set of relations to the material world, with ontological and epistemological implications.

Similarly concerning the intertext, each discipline has its own practices of

- identifying disciplinarily valid or appropriate literature;
- selecting it for the problem or issue at hand;
- surveying or aggregating the findings and ideas in the literature;
- highlighting and discussing consonances or conflicts among texts;
- and applying it to the inquiry or issue at play in the current writing.

Thus teaching referencing the literature goes far beyond teaching correct citation formats to assisting the students constructing their vision of how the literature adds up and how it bears on the task at hand. The intellectual work of citation includes knowing

- what you hope to gain by looking at the literature;
- having a sense of what is available to be found;
- knowing where to go to find what you need and how to find it;
- how to deal with complex searches;
- how to deal with not finding exactly what you are looking for and develop alternative strategies;

- how to interpret and evaluate what you find in the sources from multiple perspectives;
- how to develop both critical and synthetic perspectives;
- how to select which sources to discuss as important and relevant to your current inquiry;
- how to represent the relevant material from multiple sources efficiently and responsibly while still keeping the focus on your own argument and maintaining a consistency of voice and perspective.

In each field and in each genre theory may also take on a different role both as a center of discussion and in connection to the literature of the field and the data offered in the current text and elsewhere. Some seek the development of theory as their primary end, whereas some see theories as the way to highlight the particularity of each event or object of study and others see themselves as dominantly empirical, eschewing theory. Some genres are shaped and controlled by dominant theories which dictate the structure of arguments, whereas even in the same disciplines certain areas of theory may be unsettled and arguments need to be structured so as to recognize the alternative perspectives that might be imposed by others. Some fields put theories at the center of discussion and others are cautious, even skeptical about overarching theories. Some are open to borrowing theories from some other fields where as others stay closely to their home-grown theories. Some seek coordination and agreement over theories, while others encourage alternative views. Some fields encourage raising conflicts between theories, while others tolerate factional separation of theory groups. In some citing certain authors announces doctrinaire theoretical positions, while others allow more eclectic discussion. Some have high evidentiary requirements for theoretical claims while others encourage speculation. Even in a single discipline one may have, depending on the genre, different orientations toward theories and greater range for speculative thought. So just as with evidence and intertextuality, introducing students to writing with theory is no simple thing and involves socializing students into the practices of varying disciplinary cultures and particularities of genres. (For a series of in-depth studies of how theory, disciplinary resources, and evidence work out within one writing assignment in an introductory university oceanography course see Kelly, Bazerman, Skulaskaitis & Prothero, 2010; Kelly & Bazerman, 2003; Kelly, Chen & Prothero, 2000; Kelly, Regev & Prothero, 2008; Kelly & Takao, 2002; Takao, Prothero & Kelly, 2002.)

In conclusion, genres are typified utterances within activities. Each text

is an utterance, made interpretable through genre, but nonetheless a unique, meaningful utterance. Engagement in writing means commitment to an utterance within an organized set of activities. Within the typified utterance we refer to aspects of life, other texts, and publicly available ideas. What we refer to, how we represent it, how we connect our references, how we reason about them, and what we are doing depends on the genres and the activity systems they are part of. In the academy, genres are differentiated by disciplines, level of education, and specific activities. I append a series of questions that can help you start to analyze disciplinary texts for the practices surrounding evidence, intertextuality plus an additional series of questions to help consider the difference between student and professional writing in a discipline.

Appendix 1. Some questions for analysis of academic texts

Evidence in examples

- Identify the most specific data points, examples, evidence in the article.
- Relationship to Reality: What is this data or evidence of? What is the relationship between the data and phenomenon or object of study? How was the data collected and warranted? Methods issues?
- Entextualization: How are data, evidence represented? Evaluated? Used? Tied to other data and claims? Integrated into argument?

Intertext

- Identify one point of attachment of the intertext or a patterned group of such points of attachment.
- Relation to Intertext: What kinds of texts are referenced? How are these selected and what are criteria of relevance? How do the selected texts relate to the larger body of texts in the field?
- Entextualization: What is the form of reference and citation? What information is provided? How are they evaluated? How are the referred texts used in the argument? How do they relate to the specifics presented and argumentative claims of the paper

Theory-Data relations

- Identify a theory or theories central to the argument of the article and locate specific points of reference.
- How is the theory presented and characterized?
- What kinds of sentences tie theory to data and data to theory?
- Are there multiple levels of judgments and claims? What is the network of reasoning that makes for a dense, solid connection?
- How do the theoretical claims attach to, contest, integrate with theoretical statements in the literature, either held generally or attributable to individual authors?

Appendix 2. Questions to consider the difference between student and professional tasks

- What are reasonable expectations for first year students to identify, collect, use data/evidence from text, reference and material sources? What kind of tasks set appropriate learning challenges? For seniors?
- How do you move students from a world dominated by a single authoritative textbook to active participation in a dynamic, contended intertext? How do you show them how data becomes a resource and a responsibility in creating a position in the intertext?
- What do students understand by a theory and their relation to it? How many theories do they know and understand in the domain? What criteria do they have for evaluating and selecting theories, for what tasks? How do they use theories? What tasks will increase their sophistication of use and the accountable relationships to the literature and the empirical evidence? How can they learn to move in the intertextual world of theory?

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