16 The Role of Context in Academic Text Production and Writing Pedagogy

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INTRODUCTION

The problem of text production in academic genres has been a challenge for undergraduate and graduate students as well as for writing teachers from different departments. Previous research has provided important results on the structural aspects of academic genres (Swales, 1990) and the discursive construction of identity in academic writing (Ivanic, 1998). However, few studies have concentrated on the contributions of exploration and reflection on context to actual teaching practices. From the perspective of Systemic-Functional Linguistics (SFL), in this paper I would like to focus on the reciprocal relationship between text and context, i.e., the way context can be recreated by analysis of text and vice versa. The aim is to point out some practical implications derived from the use of SFL principles in academic writing teaching and research through context exploration. The focus will be on writing activities that aim at fostering students' awareness about the connections between contextual features (activity, identity, relations as well as the role performed by text in the situation) and their respective linguistic realizations (expression of content, instantiation of relationships between interlocutors, and organization of text).

One of the main challenges in language education and research is to teach creative ways to negotiate the norms of the language system (grammar) within the academic culture: the set of meanings, rules, values, power relations and relevant genres that constitute the social practices of a community. Educating students about the uses of language in specific contexts depends on clear descriptions of the connections between text and context.

Public discourse on academic publication in Brazil is mainly issued by the Ministry of Education through its two main Research Funding Agencies, CAPES and CNPq, which hold quantitative and qualitative expectations about scholars' intellectual production but offer no substantial line of financial support for pedagogic research and course development. Thus full-fledged writing programs are seldom found in Brazilian universities. Very often what we find is some individual or collective teaching initiatives that have survived defying all the odds (e.g., lack of personnel and financial resources) situated in specific institutions.

In my context of pedagogic practice in academic writing at the Federal University of Santa Maria (UFSM), I personally started to offer a course on

academic writing to graduate students in 1994. Since then, I have been offering the course to a multidisciplinary class, made up of Master's and PhD students. These newcomers to academia often feel that the task of writing research genres demands substantial and detailed formal instruction. My aim is to foster students' awareness of how the language system operates in different academic genres in terms of semantic field (content), interpersonal relations (effect), and text structure, so that they can engage in text production in order to appropriately perform relevant activities according to (a) their own interests and (b) the conditions and constraints of the cultural context in question. The pedagogical approach presented here is focused on students' situated practice and the cultural context of their discipline. I would like to think of it as a transformative practice.

In this paper I consider how theory works in practice, drawing practical implications, especially from Systemic-Functional Linguistics, to the teaching of academic writing and reflective thinking about the academic context. It differentiates itself from other previous texts that describe writing pedagogy approaches (as the several ones described in Zemliansky & Bishop, 2004) in that it identifies specific issues and questions that can be explored with students in order to develop their awareness about the discourse of science in their own disciplinary areas.

CHALLENGES IN THE ACADEMIC SETTING

In the academic context, the challenges in teaching writing to newcomers are many:

- Discourse events are dynamic linguistic activities that combine social and cognitive resources in meaning making, "complex dynamic systems in action, with people as agents in social systems, using other complex systems — of language and other semiotic means — in interaction with each other" (Larsen-Freeman & Cameron, 2008, pp. 161-162, 186)¹;
- Centripetal and Centrifugal forces interact in discourse (Bakhtin, 1986). In other words, genres are intersubjective representations of events that are constructed with reference to our shared experience of recurrent discursive situations. Thus they are relatively stable. At the same time, genres are social processes and thus dynamic, realized in different registers (Martin, 1992). The research article genre, for example, is differently realized in Applied Linguistics and Electrical Engineering concerning form and style, as different registers of the same genre;

- Novice writers must negotiate meaning considering the disciplinary culture they are new to (Swales, 1990; 1998) at the same time that they keep in perspective the existing power relations and tensions in their local disciplines and in academia as a broad cultural site (Ivanic, 1998); and
- Systemic knowledge is not enough to accomplish both of the above tasks, which depend on one's understanding of the meaning potentials that situations offer (Bakhtin, 1986).

These challenges seem more reasonable if we consider language learning as two interrelated steps: we learn to interact and thus learn the language that is constitutive of that interaction (Halliday, 1994).

In my own teaching practice, there are additional specific challenges:

- I teach a course that lasts 15 weeks, with weekly 100-minute meetings with a multidisciplinary and multilevel academic writing class (PhD and Master's students from Chemistry, Rural Sciences, Education, Law, English, among other areas), therefore we need to analyze the different discursive practices (processes of text production, distribution, and consumption, according to Fairclough, 1989) into which students must acculturate;
- Learners are usually novices or junior scholars with different experiences in writing (mostly master's students and PhD candidates)
- Learners' make different choices for genres in which to write their texts (research project, article, dissertation/thesis chapter).

These various challenges have to be considered and recontextualized in my teaching practice in order to answer a range of questions such as the following: How do we foster learners' textual production competencies? How can we teach learners to function within academic genres to engage in disciplinary discourse? And maybe even more importantly: how can we help them develop an academic identity as authors (Ivanic, 1998, pp. 26, 219, 341)?

In order to comment on possible approaches to these questions and challenges, first I will discuss the relationship between academic text and context, taking into account the concepts of genre and register. Secondly, I will explore the pedagogic approach that I call "Academic writing cycle" — an approach that I have developed throughout the years, based on previous research on academic genres and my own teaching practice with inexperienced academic writers. Finally, implications of this approach for academic writing teaching will be drawn.

In order to examine text production in the academic setting, language will

be defined as a semiotic system with different planes of signification within the Systemic-Functional Linguistics (SFL) framework. In addition, discourse will be seen from a socio-historical perspective as an intersubjective, social and historical phenomenon, as expressed in the work of Mikhail Bakhtin (1986; 1929/1995).

THE RELATIONSHIP BETWEEN ACADEMIC TEXT AND CONTEXT

In SFL terms, the context in which a text is produced can be recreated by analysis of textual language, and the opposite is also true (Halliday, 1989). From that perspective, if genre is a socio-discursive process, then the teaching practice must develop learners' reflexivity about the relevant social context to use it as a scaffolding device to explore texts in a meaningful way.

Both text form and meaning are socially constructed and respond to demands of immediate circumstances and cultural tradition (Jamieson, 1975, pp. 414-415). Text and context are thus *mutually predictive* (Halliday & Martin, 1993, p. 22). As I will argue later, awareness about this bidirectionality (as dialectics in the work of Bakhtin, 1986; Fairclough, 1989) between text and context allows students to situate their text in the system of genres (Devitt, 1991; Bazerman, 2005) that structure academic interactions and thus helps them see the connection between the text they write and the research activity.

Definition of the academic context as a culture and disciplines as situations

My teaching practice has always included the analysis of students' text and the observation of their struggle and my own to write and become an academic writer. This teaching and writing experience finds expression in Charles Bazerman's words:

I found that I could not understand what constituted an appropriate text in any discipline without considering the social and intellectual activity which the text was part in. (Bazerman, 1988, p. 4)

In order to define the "social and intellectual activity which the text was part in" I have resorted to SFL perspective on language, genre, register, and text².

Academic discourse, genre, register and text

Academic discourse can be described as the linguistic expression and con-

struction of concepts, values and practices shared by members of an institution characterized by technical language and researching, teaching, learning and publishing practices that are constituted in different genres and registers. In SFL terms, language is a "system of meaning creation," that is, a system in which meaning is "the product of the interrelations among the parts" of the system of language and context (Martin, 1992, pp. 497-498). Both genre and register are oriented to the context.

In the broad "Context of Culture" (Halliday, 1989, p. 6), defined as the actions and the meanings (and the values attached to them) produced by the members of a social group, genres are these members' intersubjective representations of the types of situations and texts that recurrently co-occur in that social group and thus distinguish it from other social groups and their respective cultures.

In the "Context of Situation" (Halliday, 1989, p. 6), defined as the environment of the text, the set of meanings that is possible/probable (potentially available) in a given situation, register is "the configuration of semantic resources that the member of the culture associates with a situation type" (Martin, 1992, p. 498).

As an example, we can think of the research article as the *genre* (in opposition to the book review, the dissertation, etc.) that is consistently different in content, format and style when used to report a research in applied linguistics or in rural sciences, thus in two different *registers* (Motta-Roth, 2003). The *text* is the concrete realization of these social-linguistic processes of genre and register choices.

The relationship between context, discourse, genre, register and text can be visually represented in Figure 1 in terms of the several planes in the overall system of language.

Text, register and genre are three levels of realization (or instantiation) of the language system. The genre — the most abstract one — is a staged, purpose-oriented set of actions in a discursive event recognized as such in a given Context of Culture (the research article in academia). The register is the configuration of meanings that realize the genre in the Context of Situation (the research article in applied linguistics for the Brazilian Journal of Applied Linguistics). The text is the immediate concrete plane of language instantiation (my article). It is this set of relations between planes of realization that the inexperienced writer will be working with to situate not only their own text but also their writing and reading practices.



FIGURE 1: REPRESENTATION OF THE STRATIFICATION OF (LIN-GUISTIC AND CONTEXTUAL) COMMUNICATIVE PLANES (ADAPT-ED FROM MARTIN, 1992, P. 496; HENDGES, 2005, P. 6).

In my particular teaching practice, academia is viewed as the "Context of Culture": a set of concepts, values, and beliefs that typically go together, associated with university life, with which students, faculty and personnel interact through texts. Each individual student's experience of a discipline as a Context of Culture can be seen as a distinctive "Context of Situation" for texts. These "Contexts of Situation" can be defined in terms of three SFL variables that find correspondence with linguistic variables that define the register of the situation:

• Field — the nature of the social practice: the activity, the actions oriented towards a communicative aim by participants of a given

situation/event (Bronckart, 1999; Vygotsky, 1986; Kuhn, 1970). It is represented by lexicogrammatical terms (verb, noun, adjective, adverb);

- Tenor participant roles, relations and interactions: the nature of the connections between participants in the event, their roles and relations. It is represented by the Mood and modality features of the text;
- Mode text organization: the nature of the semantic unit in use, its cohesion and coherence, the nature of the medium of transmission, its written/oral format.

Each genre then is realized in the form of a particular register that finds its concrete realization in a particular text. The identification of the context variables of academic practices within which we write is fundamental to become a producer and consumer of academic texts. If we want to get an insight into the configuration of a text, we must try to understand the nature of the social practice, of the activities occurring in the relevant context, the situation participants' roles and relations, and the way these conditions are construed in the text with a certain organization.

By presenting language as a socio-semiotic system that constitutes the practices of each social group (instead of a set of independent texts) we help inexperienced writers to get initiated in academic culture (a system of meanings to be understood).

NETWORKING THE WRITING PROCESS

Students learning how to write usually find helpful the "Academic writing cycle," which I developed based on previous research on academic writing and genres (Bazerman, 1988, 2005; Swales, 1990, 1998, 2004; Swales & Feak, 1994; Motta-Roth, 1998, 2001) and on my own teaching practice with inexperienced writers at UFSM since 1994.

This "Academic writing cycle" presupposes the idea that text and context are two sides of experience that must be pedagogically explored in writing courses in order to foster students' critical awareness of the *kairos* of a text (Bazerman, 2007, pp. 119-149), the adequacy in content, form and style of a text to a rhetorical moment. Thus lack of writing experience can be translated as lack of understanding of how text production fits a given context of situation.

Text and context as two sides of experience

Understanding how a text fits a rhetorical moment depends on awareness of how a text constructs an institutional context (law system, science, school/ university, business, etc.). Two simple (and to a certain extent obvious) arguments motivate the activities of the "Academic writing cycle": first, in order for students to become writers in their field, they need to become discourse analysts (to produce the texts that are adequate in the discipline, they must learn to read these texts, learn how they function by analyzing not only linguistic form and content, but the interactions that these texts construct and structure); and second, in a crossdisciplinary classroom, students from different fields need to realize how language works from a sociointeractionist perspective, that is, they need to understand that texts work differently in each field depending on the nature of the activities each area of study conducts and the kind of relations the participants maintain to produce knowledge.

Vygotsky (1986, 1984/2007) and Halliday (1994) both state that we learn the language we speak because we interact in the contexts that use that language to conduct social activities. I have synthesized this view in my own terms:

As learners come to realize the social arrangements of their environment, they develop reflexivity upon the rules of grammatical operation and text structures. Learners need to *reflect on context and text*, on how texts contribute to context dynamics.

This view offers a set of implications for academic writing that can be summarized in three "Discourse-analytical principles" that guide my pedagogic practice:

- (1) In order to understand the uses of formal elements in language, *learners must reflect upon their context*;
- (2) To be able to write, *novice writers need to analyze the relationship between social practices and texts*, comparing what they have been able to deduct from their observation with the texts produced in this context (journals, books, dissertations, book reviews, etc.), *focusing on how research activities, social roles and relations are constructed in texts*;
- (3) To learn a language, learners must learn to analyze discourse (McCarthy & Carter, 1994, p. 134). By reading and deconstructing exemplars of published texts from a lexical, grammatical and discursive perspective, learners will learn to write, revise, and edit their own texts more effectively.

By adopting these three principles, learners develop discourse-analytical abilities that will help them fine-tune their text form and content to a projected audience, thus avoiding the "writing-in-the-vacuum syndrome" (writing without a purpose and an audience in mind) that might arise when taking a text-focused or process-focused writing course. Based on these three principles, I elaborated a writing cycle that encompasses three sets of activities:

- Context Exploration involves learning to interact with the environment in order to learn the language, observe research practices and understand the role of language in knowledge production practices;
- (2) Text Exploration involves experiencing analytically the relationship between text and context, how language appropriately constructs the context and vice versa, by analyzing genre systems and genre sets;
- (3) Text Production, Revising and Editing involves becoming a discourse analyst by writing, revising and editing one's text as well as other classmates', focusing on how linguistic resources are used for engagement and participation in social and discursive academic practices.

The objective in educating novice writers to think of writing as a cycle of context and text exploration-text production-text revising-text editing is to take these writers from the actual stage of accomplished development in their writing competencies (in Vygotskyan terms, their Zone of Real Development) to a richer, more informed and elaborated stage (their Zone of Potential Development) in which they are able to write with a certain amount of autonomy to exert their authorship. This process is done with the help of the teacher and of the participants of the disciplinary context in which these novice writers want to participate (as a Zone of Proximal Development) (Vygotsky, 1984/2007). The observation of the context functions as a scaffolding device to help novice writers project the kind of text that may interact with the relevant context.

The activities in the writing cycle (context and text exploration-text production-text revising-text editing) are arranged as an academic writing network of three sets of questions and tasks (Motta-Roth, 2007) presented in the following section.

The Academic Writing Network

Activity 1: Context Exploration

To understand the uses of formal elements in language, learners must reflect upon their context, the social conditions under which texts are produced and consumed.

This first set of activities is geared towards students' learning of how to interact in academia in order to learn the language. In the first class, I ask learners to observe research and social practices in their environment (laboratories, research groups, project teams, etc.) and to reflect upon the role of language in knowledge production practices. Before reflecting about grammatical rules or basic text structures, learners *observe the activities and interview participants* in laboratories, offices, meeting rooms, etc., about their research and writing practices. In addition, learners search for reference material (books, research articles, book reviews, dissertations, theses, short communications, etc.) that is valued in their academic context.

Students are given a set of exploratory questions they should try to answer, acting as ethnographers that are curious about a community and their social and discursive practices:

- (a) Which research practices are used in your area? Which research projects are presently being developed in your research lab/group?
- (b) Which research concepts and problems are practiced in your area? Which are the relevant research topics for the people in your lab/group?
- (c) Which approach to a specific topic seems more interesting?
- (d) Which preliminary readings were you advised to do?
- (e) Which are the renowned journals in your area?
- (f) Which genres are relevant in your context?
- (g) Who publishes where? Who reads what?
- (h) Do you intend to publish your text? How can you do that?

Usually, the class takes two meetings to discuss the results of their survey, to learn how to look for journals available in their area more effectively and to search through these journals more productively. After starting to write, the learner's attention will be called to different sections/genres in the journals in their areas and the different functions they perform, how to browse more efficiently through a text in order to decide if it is worth reading it extensively. The result of this activity is that students get aware of the main genres available to them and delineate their writing focus, determining the journal to which they will submit their papers, therefore avoiding the "writing-in-the-vacuum syndrome" again.

As they identify certain topics that seem to be of greater interest to them, we start delineating the semantic map for each student's text by using key-words, as seen in one student's example in Figure 2.

The example in Figure 2 was constructed by one of my students as a plan for a paper about the research he was conducting on the susceptibility to Amphotericin B of immunodepressed patients suffering from Candidemia and the pharmacological parameters that should be established in order to identify the breakpoint in treatments with the drug³.



FIGURE 2: SEMANTIC MAP FOR A STUDENT'S ARTICLE

Similar semantic structures are used as general frameworks for students' plan for their research article in order to help them keep track of the basic what's (topic), why's (objective), and how's (methodology) of their studies.

Activity 2: Text Exploration

To understand how language appropriately articulates itself in a given context and to revise their text more efficiently, novice writers need to analyze the relationship between social and discursive practices.

Phase 1: Genre systems and genre sets

Learners observe the activities and texts in the laboratories, offices, meeting rooms, etc.

This first set of text exploration activities involves the analysis of genre systems and genre sets. Genre systems instantiate participation of various parts in the process of knowledge production: researchers, peers, students, department heads, editors, book shops, libraries, target audience, etc. (Bhatia, 2004, p. 54). The system indicates the importance of interaction in various (oral and written) texts such as research proposals, advising sessions, talks, articles, books and book reviews, for the establishment and functioning of specific communities (Devitt, 1991, p. 340). In addition, the concept of genre systems is diachronically important because it helps us realize the way various genres result from former texts and influence future texts (Devitt, 1991, pp. 353-354). That is, interre-

lated genres may "follow upon another in particular settings, because the success conditions of the discursive actions of each require various states of affairs to exist" so the intervention of each of the follow-up genres will have consequences for other genres and corresponding speech acts that follow in the enactment of social intentions (Bazerman, 1994, p. 98).

I believe that students can write more effectively if they can visualize how their research article occupies a position in the network of academic genres that structure the life of their research group, as the example shown in Figure 3 of the genre system that articulates the social interactions and activities at the Reading and Writing Teaching and Research Laboratory (ReWriTe Lab) where I work at UFSM.

Within this system of genres that define a social group, there are also the sets of genres that are instantiated in the everyday life of the group, the texts that structure the daily routine of a research community (Bhatia, 2004, p. 53). Throughout the day, abstracts, book reviews, articles, research proposals, books, chapters, proceedings, etc. are produced in part or whole inside an academic group whose members share interests and aims. Novice as well as experienced writers must develop awareness of how these genre systems and sets structure their experience in the academic context.



FIGURE 3: GENRE SYSTEM AT THE READING AND WRITING TEACH-ING AND RESEARCH LABORATORY (REWRITE LAB) AT FEDERAL UNIVERSITY OF SANTA MARIA, BRAZIL

Phase 2: Text and context relationships

Learners compare lab activities to the texts produced in that context, focusing on how research activities, social roles and relations are constructed in language.

The second set of activities — studying the relationship between text and context — is an attempt to develop students' reflexivity on the relationship between discursive practices and social practices.

Some of the questions the students have to research about are:

- (a) Find exemplars of a relevant published genre (a well-succeeded interaction) in your disciplinary context. What is their usual extension in pages? How are they structured/divided?
- (b) What type of information is recurrently found?
- (c) What information seems central to you?
- (d) Which text stages are frequently found? Which speech acts are performed (statement, questioning, promise, order, etc.)
- (e) What semantic fields do the texts cover/refer to (plants, people, animals, objects, texts, etc.)?
- (f) Is it possible to identify patterns in the lexicogrammatical choices, i.e., processes (verbs), participants (nouns), circumstances (adverbs), etc.?
- (g) What research processes, participants, and circumstances are referred to?
- (h) How do you define the author's *persona* (distinctive personal style in writing)? Are the ideas stated in a straightforward way or does the author use hedging to make statements? How?
- (i) Are there signs of dialogism or polyphony? Does the author acknowledge the reader in the text? Is the text open to difference of opinion? How?
- (j) Are there signs of intertextuality? Do you recognize vestiges of other previous texts? How?
- (k) How do you think academic writers should project their identities in their texts?

These questions bring the learner from the contextual to the textual space, fostering their curiosity and critical eye about how texts are essentially related to the social practices of a given context, recreating it, recontextualizing it, in a resemiotization of previous experience.

The aim here is to make an "ethnographer" out of a novice researcher/writer. Usually, the class takes two meetings to discuss the results of their text exploration, to take a look at the exemplars of genres they have collected in their community. The result of this activity is that students develop textual awareness, identifying linguistic elements that realize certain functions at certain parts of the text (as in Swales, 1990; Swales & Feak, 1994; Motta-Roth, 2001; 2007).

Activity 3: Text Production, Revising and Editing Learning a language means learning to analyze discourse.

The third set of activities — becoming a discourse analytic producer of texts — is focused on the writing process itself. At this point learners will concentrate on textual features as they write, revise and edit their texts and those of their classmates. They analyze discourse as they are producing text or as they read it.

The starting point is often the analysis of a published text in order to develop learners' sensitivity to linguistic features, analytical competencies of textual language. The awareness gained by these exercises can be used in text production in terms of the writing itself and of the revision stages.

Questions to guide the development of analytical competencies in writing and revising are:

- (a) How are the sentences connected in the text? What is the basic text structure?
- (b) Which element is in initial and final position in each sentence?
- (c) Can you identify text stages that correlate with steps in the research process?
- (d) Are there expressions that signal text organization (theme/rheme, conjuncts, subordinators, lexical signaling)?
- (e) Do the connectors express addition, opposition, cause, consequence, etc.? What kind of connector can be found in each text stage?
- (f) Do concepts get defined? How?
- (g) Are research steps described? How? Is the vocabulary more emotional or objective, more descriptive or more argumentative?
- (h) Which actions are represented in the text? Which processes are reported by which verbs/verbal phrases?
- (i) Are there "action" verbs that suggest material processes (e.g., "catch," "emerge," "develop," "dissolve," "increase")? Or that suggest mental processes (e.g., "think," "predict," "plan") or verbal (e.g., "declare," "suggest," "indicate")? Are there processes that establish relations, classify or identify entities (relational processes, expressed by verbs such as "be," "become," "have," "seem")? Or processes that express existence or behavior (associated with the senses or body functions)? How are they used in the review of the literature or in the methodological sections, for example?

- (j) Who are the participants in the actions represented in the text (expressed by noun phrases)? Can you identify the relationship among them (author-reader, researcher-object-phenomenon)? What tone is used by the author, e.g., symmetry/asymmetry (expert/expert, expert/lay person), friendship, impersonality, informality, formality, etc.?
- (k) Which nouns and adjectivals can be associated with the circumstances described in the methodology, for example?
- (l) Which interdiscursive elements are in the text, i.e., that simulate conversation, self-promotion, recommendation, etc.?
- (m) Does the author make self-reference, reference to the reader or other groups? Which words or pronouns are used for that?
- (n) Which verb tenses are used? Is there verbal, nominal or adverbial modalization? What kind of modalization is used, epistemic or deontic?
- (o) When is passive or active voice used? Are the agents of the actions explicitly mentioned in the text?
- (p) Which among these linguistic features do you think fit to adopt in your own paper?

These questions (and their paraphrases) focus learners' attention on the lexicogrammatical features of the texts they read and write. The aim here is to develop learners' awareness of the linguistic system and its uses, the text structure, content and style.

Usually, two-thirds of the twelve classes are dedicated to revising, criticizing and rewriting the texts of three or four students each day. Each week the class debates a section of the paper, its function and textual configuration, linguistic features, etc., so that at the end of the twelve weeks, each student has a complete paper that has been developed along the course.

The sets of activities in the "Academic writing cycle" are represented in Figure 4. The figure shows a writing cycle as an activity network. The first phase of the cycle starts with the unidirectional arrows, with activity 1 leading to activities 2 and 3. This phase is completed with learners' first attempt to write a text relevant to the context they have in mind. The subsequent phases change the cycle into a network, because learners can continue from any activity at any moment, and any activity can occur at any time, lead to any next activity and even occur at the same time of other activities. Thus learners can go back and read more about the chosen topic before revising their text, or can revise the text before looking for more information, or can revise the text as they rewrite it.

In the following section, I will project some implications of the present approach for the teaching of academic writing.



FIGURE 4: "ACADEMIC WRITING CYCLE" (BASED ON MOTTA-ROTH, 2001)

IMPLICATIONS FOR ACADEMIC WRITING TEACHING

Awareness of how the language system operates in terms of semantic field, interpersonal relations and text structure can help students appropriate the system to serve their own interests according to the conditions they identify in their immediate research context. We can help novice academic writers develop writing abilities by leading them to explore social and discursive practices within their disciplinary culture. As novice writers learn to write, they need to consider contextual regulations (in Bakhtin's terms (1986) "centripetal force") as well as social, and therefore dynamic, collective discursive practices ("centrifugal forces").

With Bazerman's initial quote in mind (one needs to comprehend the activity to understand the text), students' first task is to observe their actual academic environment in order to build a framework to better understand how academic discourse and knowledge production practices are dialectically constructed. Texts are then seen as socio-rhetorical processes and artifacts, i.e., tools writers use to realize goals and carry out activities within a complex set of social relationships constrained by the goals sanctioned by the disciplinary community (Haas, 1994, p. 44).

Novice writers can be educated to develop an academic identity by helping them to decide what to write, to whom, and for what purpose.

From a critical perspective, the class should work with the concept of author-

ship so that learners can become authors themselves, writing texts that hold connection with the activities of their daily academic life (Halliday, 1991, p. 13). "Authorship" is the writer's prerogative and responsibility to choose the aim, the content and style, the readership of the text (Ivanic, 1998, pp. 26, 219, 341).

Observation of genre systems and sets (activities, roles and relations that mediate language) in specific contexts (lab activities, classes, office hours, research group meetings, etc.) should inform language pedagogy.

Genre pedagogy involves a debate over the production, distribution and consumption of texts. It is important that learners and teachers get to know (or learn to explore) the social situation of the relevant genres of each target-community, by asking questions such as the ones listed here.

Educating students about the uses of language in specific academic contexts depends on clear identification of the connections between text and their surrounding circumstances. There seems to be three great challenges in academic writing teaching that genre pedagogy can respond to: novice writers need to understand what genre is and how it functions, teachers have to effectively teach someone how to engage in the genres that constitute academic life, and novice writers must take part in the discourse of science.

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¹ I thank my colleague Vera Menezes de Oliveira e Paiva from the Federal University of Minas Gerais, Brazil, for calling my attention to this point.

² I should point out that Bazerman does not see the linkage between text and context as determinative and tight as Halliday and Martin do (see "mutually predictive" cited above). For him, text and context are dynamically interactive, so one needs to understand both in order to understand either fully. Predictability of course does increase with the stability and pervasiveness of particular practices of text and situation typification, but always creativity, novelty and locality of meaning, and polysemiousness work against simple predictivity in either direction. The situation does not define exactly what to say and whatever is said always modifies the situation, as does the uptake. (Bazerman, personal communication, July 27, 2008)

³ Immunodepressed: Patient whose immunologic system has been effected

by disease or treatment. *Candidemia*: Yeast infection. *Amphotericin B:* Fungicide agent, a powerful antibiotic drug used in yeast infection treatments. *Pharmacological Parameters:* Dimensions or ways of measuring or predicting the response of a patient to the properties and actions of a drug. *Breakpoint*: Condition(s) that determine(s) when a treatment must be interrupted. Source: *The On-line Medical Dictionary* (http://cancerweb.ncl.ac.uk/omd/); *Stedman's Online Medical Dictionary*, 27th Edition (http://steadmans.com/), retrieved on June 14, 2006.

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