ABSTRACT: The paper reports on a qualitative longitudinal study that focuses on the effects of social practices of the engineering communication classroom and workplace on novices' learning genres of professional communication. The integrated theoretical framework of the study is provided by three perspectives—Rhetorical Genre Studies, Activity Theory, and situated learning. The study demonstrates that in addition to the understanding of genre conventions and audience's expectations, genre knowledge is a result of a summative effect of a number of ingredients. These ingredients include (a) cultural capital, (b) domain content expertise, (c) the novice's understanding of the improvisational qualities of genre, (d) agency, (e) formal education, (f) workplace experiences, and (g) private intention. The findings of the study lead to the conclusion that some communication practices can be successfully taught outside of local contexts, for example, in the academic classroom.

KEYWORDS: genre learning; rhetorical genre theory; activity theory; situated learning; engineering.

1. Introduction

The study presented in this paper was prompted by the research into the university-to-workplace transition conducted and published in the 1990s - early 2000s. The authors of these studies observed that communication that students experience in the university and in the workplace are often “worlds apart” (DIAS, FREEDMAN, MEDWAY et al., 1999). In other words, these studies were clearly suspicious of the efficacy of traditional classroom-based professional communication education that often fails to prepare students for the world of work (e.g., ANSON and FORSBERG, 1990/2003; DIAS and PARÉ, 2000; FREEDMAN and ADAM, 2000a; FREEDMAN, ADAM and SMART, 1994; MACKINNON, 1993/2003) and raised questions of portability of rhetorical strategies from one context to another.

2. Research questions

In an attempt to refine the current understanding of how novices learn genres of their profession (in my case, engineering), I was seeking answers to the following questions:

1. What does it mean to master domain-specific genres (in particular, the genres of engineering)? (where domain includes both academic and workplace genres).

This question consists of two sub-questions:

a). What does the domain-specific rhetorical genre knowledge include?

b). Where and how do novices accumulate the constituents of rhetorical knowledge of domain-specific engineering genres and how do these constituents allow novices to communicate successfully within the engineering profession?

2. Is it possible to teach domain-specific communication strategies apart from the local contexts in which they occur?

3. Integrated theoretical framework

In the past fifteen years or so, the body of research on workplace learning and school-to-work transition has significantly grown, with many of the recent studies conducted within the theoretical framework of Rhetorical Genre Studies (e.g., COE, LINGARD and TESLENKO, 2002; DIAS, FREEDMAN, MEDWAY et al., 1999; DIAS and PARÉ, 2000). RGS views genre as typified social action (MILLER, 1984/1994) and moves the study of genre beyond the exploration of its textual features on to the analysis of the recurrent social contexts that give rise to and shape genres and at the same time, are shaped by genres (BAWASHI, 2000; FREEDMAN and MEDWAY, 1994a, 1994b; MILLER, 1984/1994; SMART and PARÉ, 1994). Thus, RGS lends itself as a useful theoretical framework to research into changes in genre creation, development, learning, and use. In my study I have adopted SCHRYER'S (2000) definition of genre as a constellation “of regulated, improvisational strategies triggered by the interaction between individual socialization... and an organization” (p. 450). Particularly important for my study is the view of genre as stabilized only for now (SCHRYER, 1993), allowing for change, and forming the rhetor's behavior.

RGS provides us with a social perspective on how individuals learn and use genres. In order to better flesh out relationships between the individual and social (cf. BERGER and LUCKMANN, 1967), between agency and structure (cf. GIDDENS, 1984; SCHRYER, 2000; 2002), some researchers have successfully complemented RGS with such social theories of learning as Activity Theory, situated learning, and other theoretical perspectives (e.g., ARTEMEVA and FREEDMAN, 2001; FREEDMAN and ADAM, 2000b; FREEDMAN and SMART, 1997; DIAS, FREEDMAN, MEDWAY et al., 1999; LE MAISTRE & PARÉ, 2004; SCHRYER, 2000, 2002, 2005; WINSOR, 2001).

In this paper, I propose to extend the RGS framework and complement it with both AT and situated learning. This combination of complementary yet distinct theoretical perspectives will allow researchers to explore the interplay of the individual and social in the study of genre learning in the process of novices' transition from school to the workplace.

First of all, I would like to stress the inherent dialogism of both AT (ENGESTRÖM, 1987) and the concept of communities of practice used in the situated learning perspective (LAVE and WENGER, 1991; WENGER, 1998). The most recent version of AT (ENGESTRÖM and MIEHTTINEN, 1999) attempts to understand interactions between several activity systems, each of them with multiple perspectives and voices, thus bringing the notion of dialogue to the centre of the analysis of human activity. Lave and Wenger's (1991; WENGER, 1998) view of communities of practice, where newcomers, working on authentic activities with oldtimers, gradually move towards the full participation state occupied by oldtimers and eventually displace them, reflects the dialogic nature of the apprentice-master relationship in the context of an authentic activity. These dialogic features of both theories indicate their strong connection with the RGS central notions of dialogue and dialogism as conceived by BAKHTIN (1986).

Some other concepts, which are addressed in RGS can be successfully explored and expanded with the use of AT and situated learning. Examples of these concepts include the dynamics of the genre learning activity during a novice's transition from the classroom to workplace context, the concept of learning genres in communities of practice, and the concept of identity.

When studying a novice's learning trajectory in her learning of domain-specific genres as she moves from the university context into workplace communities of practice, it is crucial to understand the process through which this learning occurs. AT provides us with the lens necessary for such an analysis. Human activity in this model is represented as consisting of
mutually dependant and connected three levels of constituents: need and motive; goal, and conditions that are necessary to achieve the goal, and the corresponding levels of activity, action, and operation, with constant mutual transformations taking place between all components and levels (LEONT’EV, 1981). AT supplies us with a view of human activity as mediated through the mediational means (VYGOTSKY, 1978). AT can be productively applied to the research into genre learning. For example, generally, university instructors design specific exercises to provide input to students’ learning and perceive these exercises as connected and forming a coherent series of pedagogical tools. As the three-level model of human activity suggests, an inexperienced student does not and cannot do each exercise at the operation level because the student is like a novice driver learning to drive a car: every “exercise” for him/her has its own goal and becomes an action that requires full conscious attention. That is, what for the instructor is a mediational artifact, for a student is an object.

Another example of the AT application to the study of the university-to-workplace transition is provided by LE MAISTRE and PARÉ (2004) who successfully combine RGS and AT in order to develop a model of different activities that their participants are involved in as students in a classroom setting and as novice members of a community of practice (interns working in the workplace). LE MAISTRE and PARÉ suggest that when a student becomes involved in professional practice, the objects of “the learning activity in the school (the theories, laws, methods, tools, and other artifacts of the profession) become ‘mediational means’ in the workplace” (p. 45). The study reflects how masterful AT is in the social domain; however, it is not as effective at the individual level. On the other hand, Legitimate Peripheral Participation (LPP), an analytical perspective on learning in communities of practice provided by the situated learning perspective (LAVE and WENGER, 1991), directs our attention to local situations and individual participants. The AT view thus cannot be considered complete without being complemented by the analysis of how the learning of genres occurs within communities of practice (COP), a concept proposed by LAVE and WENGER (1991; WENGER, 1998). The notion of communities of practice allows researchers to analyze learning “that is most personally transformative” (WENGER, 1998, p. 6). Each community of practice is constituted by distinct intellectual and social conventions. These conventions are shared assumptions about the roles of the audience and the rhetor and the social purposes for communicating, which makes the notion of these conventions remarkably close to the notion of rhetorical genre.

This discussion of community as one of the central RGS notions would be incomplete without a discussion of the formation of a professional identity in novices entering professional communities of practice. In order to understand the role of the agent, it is important to investigate the notion of identity from the perspective of the proposed theoretical framework. The notion of identity is particularly important for RGS because genre “is largely constitutive of the identities we assume within and in relation to discourse” (BAWARSHI, 2000, p.343). Multiple studies of the development and formation of identities through participation in systems of genres (BAZERMAN, 2002) have demonstrated that social action and identity construction are both mediated through and constituted by genres (HIRSH, as cited in BAWARSHI, 2000, p. 343). Genres provide social codes of behavior for both interlocutors—the speaker and the listener, the writer and the reader—involved in a dialogic exchange (BAWARSHI, 2000; VOLOSHINOV, 1930/1983). Particularly important in the recent literature on RGS is the formation of a professional identity of a novice who moves into the workplace after years of academic and professional training. The development of professional identity is inextricably linked to participating in workplace genres and “learning one’s professional location in the power relations of institutional life” (PARÉ, 2002, p. 69). From this perspective, identity formation is linked to socialization into, the resistance to, or
subversion by, local genres, which may occur either without one’s conscious involvement or through a critical analysis of the organization.

Working within the framework of situated learning, LAVE (1991) and LAVE and WENGER (1996) introduced the notion of a knowledgeably skilled identity, which, as SMART and BROWN (2002) observe, is closely linked to a growing novice’s sense of professional competence. Learning to communicate in a particular professional situation is part of the process of becoming a legitimate member of a particular community of practice. As DIAS, FREEDMAN, MEDWAY et al. (1999) and SMART and BROWN (2002) have noted, learning to become an accepted and functioning member of a particular workplace situation does not involve a simple transfer of knowledge and skills acquired in an academic setting directly to a professional setting. SMART and BROWN (2002) comment that a growing sense of a novice as a competent professional, that is, the development of her professional identity, contributes to the novice’s ability to act as an expert and enhances her capacity to learn in the workplace.

The presented above integrated theoretical perspective based on the combination of AT and the situated learning perspective with RGS allows me to analyze both social and individual aspects of genre learning within activity systems and communities of practice. In addition, in my analysis of novices' learning trajectories, I used the concept of kairos as the right timing and proportion and kairotic opportunities (CONSIGNY, 1974; KINNEAVY, 1986; MILLER, 1992) as both "emerging from the communicative activities of [...] rhetors and audiences [...] in specific situations (e.g., institutional context, task, place, and chronological time)” and "enacted, arising when socially situated rhetors choose and/or craft an opportune time to interact with a particular audience in a particular way within particular circumstances" (YATES and ORLIKOWSKI, 2002, p. 108). YATES and ORLIKOWSKI further suggested that researchers should turn their attention to the active shaping of kairotic moments.

BOURDIEU’S theory of social practice (1972) provided me with the notions of agency and social capital (in particular, cultural capital as a form of culturally authorized values). BOURDIEU’S (1972) theory has been recently used by rhetorical genre researchers (e.g., DIAS, FREEDMAN, MEDWAY et al., 1999; PARÉ, 2002; SCHRYER, 2000, 2002, 2003; WINSOR, 2003) to complement RGS and illuminate the role of social agents and texts within organizations that, according to GIDDENS (1984), represent complex social structures. As WINSOR (2003) explained, for BOURDIEU, capital existed in different forms that are not necessarily “reducible to money” (p.17). BOURDIEU’S capital may take both material and not material forms that can be converted into each other (e.g., monetary capital may be used to pay for, or be converted into, education). Among other forms of capital, Bourdieu introduced social capital (e.g., hierarchical positions within an organization) and cultural capital (i.e., particular cultural knowledge, such as engineering knowledge, or competency, such as professional engineering competency).

Cultural capital is the key form of capital in BOURDIEU’S theory. Cultural capital is defined as “a form of values associated with culturally authorized tastes, consumption patterns, attributes, skills and awards” (WEBB, SCHIRATO and DANAHER, 2002, p. x) and thus includes, for example, the ways people communicate within particular situations or, in other words, use certain genres (e.g., engineering genres). People can acquire cultural capital unconsciously, from their family or social contexts (e.g., school, workplace apprenticeships); they then possess such capital for life. In BOURDIEU’S view, we would be wrong to think that by deliberately learning the ingredients of cultural capital, a person who was brought up in a family with limited relevant cultural capital could acquire as much of it as a person brought up in a family with rich relevant cultural capital. People’s appropriation of this type of capital depends both on the sum of cultural capital that their family possesses and on when,
how, and in what forms this capital is implicitly transmitted to them from their family. Cultural capital can be converted into social capital: for example, people’s education and background in a particular discipline can lead to, or be converted into, their higher positions within an organization.

In discussing various other notions integral to BOURDIEU’S theory, BOURDIEU and WACQUANT (1992) observed that an adequate theory of social practice requires a theory of social agents. Human agents and the notion of agency, defined as humans’ capacity for freedom of action, understanding, and control of their own behavior (HOLLAND, LACHICOTTE, SKINNER et al., 1998; SCHRYER, 2002; WEBB, SCHIRATO and DANAHER, 2002), thus play particularly important roles in BOURDIEU’S theory. As ARCHER (2002) puts it, we need to conceptualize human agents as being both formed by their “sociality” (p. 11) and able to effect a change in society.

The concept of kairos is directly linked to the notion of agency. If we see kairos as objectively given and then discovered, and as constructed by humans, then the capacity of the rhetor to select and/or create an opportune moment and act proportionally implies agency. BOURDIEU’S (1972) theory of social practice provides insights into the acquisition and effect of cultural capital and the role of agency that are invaluable for analyzing individual rhetorical behavior within the context of the chosen discipline or profession.

4. Brief description of the ECC design

The engineering communication course I designed and taught provided the starting point for my study (ARTEMEVA, LOGIE and ST-MARTIN, 1999). The design of that course was based on RGS and situated learning perspective. In the ECC design I attempted to establish an engineering context that would allow students immersed in it to

a) experience genres of engineering communication as an integral part of any project rather than learn about genres and

b) be introduced to the idea of genre flexibility that depends on the requirements of a particular situation.

The main part of the course is a continuous project based on a topic from an engineering course(s) a student is taking concurrently with the ECC. I ask student to select topics from their engineering courses according to their interests and discuss each topic with the student. This process allows the student to experience the communication course as situated within the engineering curriculum, facilitating learning in their engineering courses. All course assignments and feedback received from peers and the instructor form an engineering project genre system (BAZERMAN, 1994). Every assignment (a project document such as statement of intent, progress reports, oral presentations of progress, completion report, and so on) is based on and connected to the previous assignment. The project gradually unfolds over the term. Students have to adapt the genres they are learning in the ECC for the purposes of their projects thus experiencing the need to use genres to provide an appropriate response to a particular situation. They experience genres as regulated, improvisational strategies, hence, developing an initial rhetorical flexibility. The accuracy of the engineering content is particularly important for the communication course, as it seems futile to separate rhetorical expertise from domain content expertise (cf. GEISLER, 1994).

5. Methodology of the study

In this study, I used a purposive sample (cf. MILES and HUBERMAN, 1994; PATTON, 1990) of ten volunteers from the 1997-1998 and 1998-1999 cohorts. At the same time, the research sample in the study is one of convenience because I recruited participants
from among my former students and is self-selective. The study received ethics approval from two Canadian Universities.

The study has an emergent design: at the beginning it was designed as an assessment of the pedagogical approach used in the ECC, and then it gradually developed into a qualitative, longitudinal exploration of former ECC students' trajectories in learning engineering communication strategies. The data analysis in the study is based on CHARMAZ’S (2000, 2002) version of grounded theory (STRAUSS and CORBIN, 1998). The case study approach used in the study allowed for "progressive focusing" (STAKE, 1995, p. 8); that is, it allowed me to reconsider and develop research questions through data collection and analysis. In my study, I collected data from a group of study participants over the span of eight years (1997-2005), while engaging in a concurrent and recursive data analysis.

I used the constant comparative method for categorization (coding) (e.g., MILES and HUBERMAN, 1994) and complemented it with the analysis of the context, or connecting strategies (i.e., case studies and narrative summaries) (e.g., CHARMAZ, 2000, 2002; MAXWELL and MILLER, 1992, 2002). For the purposes of my study, I decided to adapt the form of representation known as Individual Case Synopsis (ICS) (cf. FISCHER and WERTZ, 1979) to present an individual participant's learning trajectory in his/her learning of engineering communication strategies, with a focus on change through time. Such ICS were developed for four study participants. For the remaining six study participants, a summative Overall Summary of Experience was written.

The study used multiple ways of triangulation:

a). Data triangulation, provided by the use of multiple study participants and a variety of data sources in a study;

b). Theory triangulation, achieved through a combination of multiple theoretical perspectives used to interpret data complemented with the theory building from the data;

c). Methodological triangulation, achieved through the combination of categorizing and connecting strategies.

I also employed member checks to ensure that study participants have an opportunity to verify my conclusions based on the data collected from them (e.g., STAKE, 1995, 2000; WINSOR, 1996). All ten participants provided me with member checks. The use of various triangulation strategies and the multicase design have allowed me to verify the interpretation of the data, and thus, to validate the study.

6. Results

Four out of ten participants--Bill, Sami, Rebecca, and Moe1--supplied me with a particularly complete body of data (over 50 sources of data). These participants' stories are presented in the four Individual Case Synopses. Below I present a brief summary of these ICS.

Bill's and Sami's fathers are engineers. Bill and Sami grew up in the atmosphere of what Lave and Wenger (1991) call "war stories"; that is, oldtimer's stories about the practices of the engineering profession. Bill and Sami had various engineering related experiences through the years before and at the university and had an opportunity to be surrounded by mentors who helped them enter engineering communities of practice.

Shortly after graduating, both Sami and Bill were able not only to join engineering companies and work productively, but also to change communication practices of their companies. For example, Sami, shortly after being hired by an engineering company,
encountered a situation in which his immediate supervisor was asked to propose a solution to an engineering problem. Sami seized this *kairotic* moment and proposed his own. The genre of the proposal he used, according to Sami, was based on his learning experiences in the ECC, and was different from the kind of proposals routinely used in the company. Even though the genre of the proposal that Sami introduced differed from the genre used by the company, engineers and managers recognized the effectiveness of the new genre used by Sami, accepted his engineering solution, and quickly promoted him (ARTEMEVA, 2005).

Upon entering the new workplace after finishing his Master's degree, Bill discovered that many of the communication practices used by the start-up company were inefficient. Gradually, he was able to introduce more efficient ways of internal communication and communication with customers. The new communication strategies that he had proposed were accepted by the company and included in its genre system. In other words, the new practices Sami and Bill had introduced were recognized as acceptable and approved by oldtimers in their COPs. Both Sami and Bill referred to the ECC and other engineering related experiences as a source of their understanding of how genres work. In other words, their relevant cultural capital, ECC, workplace experiences, understanding of engineering genres as allowing for flexibility, formal education, and ability to seize and create a *kairotic* moment and act proportionally allowed them to enact genres in such a way that these genres, though changed, remained not only recognizable by professionals but also were accepted as best practices. Both Sami and Bill were successful in introducing changed genres in their respective workplaces.

Rather than providing a recipe for recent graduates, Sami's and Bill's stories illustrate the crucial role of cultural capital, domain content expertise, and agency in a rhetor's ability to both seize and create *kairotic* moments in the chronological flux of time and respond to them in a proportional manner. These stories also underline the importance of the rhetor's understanding of the improvisational qualities of genre. In addition, since experienced professionals in Sami's and Bill's workplace did recognize and accept communication practices brought in by novices, these cases seem to indicate that such practices can be taught in the academic classroom.

Rebecca initially lacked knowledge and understanding of what the engineering profession entailed. In the first year of university she felt confused and could not understand practical applications of the courses she was taking. In response to the end-of-the-term questionnaire question "Have you learned any useful communication strategies in [the ECC]?", Rebecca responded, "No." A term later in response to the same question she wrote in an e-mail,

Yes, actually [I have]. Many second year subjects require the writing of formal and semi-formal reports. [The ECC]... provided a basis of knowledge for these reports since they are not based on what was learned on writing reports in the first year courses. These lab write-ups include an extensive amount of documentation and written work.... Most of the concepts presented in the course are quite useful. It will eventually pay off to do the work. (25/03/1998)

A year later, after she had worked in an engineering firm for a few months, Rebecca's response to the question "Did [the ECC] help you in your engineering course work?" was

There was theoretical value in.... [the ECC]... such as organization of long projects.... The great thing that I found quite worthwhile was the final report, and the orals/abstracts/proposal that went along with it. I found it quite a good idea to concentrate on one big subject for a course such as [the ECC] then to try and... throw a whole lot of little things in as well. (30/10/1998)
The three-level (activity; action; operation) model of activity as a theoretical tool allowed me to unpack changes in Rebecca’s perceptions of the ECC usefulness for her engineering studies and work. As previously discussed, when Rebecca reacts negatively to the whole course and says that a lot of activities seem to have lacked “a ‘point’ or a foreseeable goal” (E-MAIL, 21/04/2002), she is providing us with a fairly common novice’s perception of an academic course in an unfamiliar discipline. Rebecca’s cultural capital did not appear to include the expectations of the engineering profession and she had not been exposed to the field before taking the ECC; she took the communication course at the beginning of her engineering studies when her domain content knowledge was practically non-existent. All these factors made it unfair and unrealistic to expect that she would gain the understanding of the integral role of communication in engineering from an introductory communication course.

Only with time and after having experienced situations that require the use of strategies learned in the course for other purposes, i.e., other courses and/or work, some students start realizing that discrete exercises were not as randomly discrete as it appeared while students were enrolled in the course (as Rebecca demonstrated in the third response). It is significant that, as the time passes and as Rebecca becomes more involved in the context of engineering--both as an academic discipline and as a profession--her view of the effects of the ECC change from the abrupt “No” in her first response to the recognition of the usefulness of particular course activities in the second response to the view of the course a whole in which all discrete activities find their place in the third response. Several years later, when Rebecca was working in an engineering workplace and felt very comfortable communicating professionally, she noted, "I'm lucky that I get to do the same work [in the workplace] as what I took in University --I'm using the vast majority of my education to help me with my job" (18/09/2003). In other words, to learn a genre, one needs to use it “to get things done” in an authentic setting for a particular purpose (DIAS, FREEDMAN, MEDWAY at al., 1999). Or, the accumulation of experience of a genuine activity that consists of numerous actions leads to a sharp qualitative change in the student's perception of the whole activity, in this case, learning and using genres of engineering.

Rebecca’s mastery of engineering genres occurred later than in Sami’s and Bill's cases and was based on her academic experiences in engineering classes, the ECC, and workplace experiences in the various workplaces where she worked throughout the years of her academic studies. By the time she graduated from the university, she was also able to develop her own communication strategies that helped her integrate into an engineering community of practice. The fact that she lacked relevant cultural capital made her learning of engineering genres and developing her own rhetorical strategies slower than in Bill's and Sami’s cases; however, she was able to learn from the ECC and academic and workplace environment and use what she learned in her workplace to develop successful rhetorical strategies.

Moe enrolled into the engineering program expecting to be able to make money after the graduation. He didn't know much about the profession when he started his studies, was not particularly interested in the engineering program, and was soon discouraged. In Moe’s case, learning of relevant genres does not seem to have occurred to the same extent as in Sami’s, Bill's, and Rebecca's cases. He repeatedly missed the communication opportunities--kairotic moments--that came up in both the academic and workplace parts of his life and might have allowed him to develop into a professional communicator. For example, he avoided any writing tasks at the University and was happy when other students took it upon themselves to do the writing part of course team projects. He later developed an ambition to become an entrepreneur rather than an engineer. However, he wasn't successful in his initiatives to secure funding for his enterprises because his sensitivity to the genre of the grant proposal had not developed even after several attempts to apply for funding. He repeatedly included unrealistic
budgets in his business plans and missed *kairotic* moments (deadlines for grant application submissions) by writing his business plans at the last minute. His story allows one to speculate that his difficulties in learning and using appropriate communication strategies may be caused by his lack of relevant cultural capital, understanding of the flexibility of genres, inability to recognize, seize and respond proportionally to *kairotic* moments, and his markedly different private intention; that is, his goal was to make money rather than to become a professional engineer.

### 7. Conclusions

Applications of the proposed integrated theoretical perspective to the analysis of the nature of activities in the classroom and workplace and genre learning in COPs demonstrate that RGS, AT, and situated learning are not only compatible with each other, but, in fact, can be used as complementary. In other words, to adopt an AT analogy, the combination of the theories reviewed in this paper can be used as a mediational tool in research activity. This integrated theoretical perspective provides scholars with the lens to view mediational artefacts that novices use as they move through time and space and through different activity systems. It also allows researchers to focus on the role of identity and individual agency and the tension between agency and the social forces acting in COPs and activity systems, wherein novices are learning to use workplace genres.

In this study, I observed that genre knowledge in those novices who had exhibited the ability to use engineering genres successfully (and even changed some workplace genres) was a result of a summative effect of various genre knowledge "ingredients" accumulated from different sources at different time periods. The various sources of such genre knowledge ingredients included, but were not limited to, classroom and workplace practices. The accumulation of genre knowledge ingredients did not necessarily happen in a smooth, uninterrupted way with a clear beginning and a clear end. The interpretation of the data suggests that, in addition to the knowledge of genre conventions and understanding of audience's expectations, the following components have a critical influence on the formation of genre knowledge:

- cultural capital,
- domain content expertise,
- the novice's understanding of the improvisational qualities of genre,
- agency, as reflected in the novice's ability to both seize and create *kairotic* moments in the chronological flux of time, respond to them proportionally, and enact genres in the ways that are recognizable by the community of practice,
- formal education,
- workplace experiences, and
- private intention.

All these ingredients of genre knowledge help novices to understand the intricacies of domain-specific genres.

As BAZERMAN (1997) pointed out, once rhetors understand "the dynamics of a genre," they have a range of rhetorical choices. “including choices that are far from traditional in appearance, but which nonetheless speak to the circumstances.... The pressure of genre is not of conformity so much as of response to complexity” (p. 23). This research further urges us to revisit our understanding of what it means to successfully master the genres of a profession and what it means to teach these genres.

It is notable that, contrary to the findings of the recent studies on the university-to-workplace transition (e.g., DIAS, FREEDMAN, MEDWAY et al., 1999), neither Bill nor Sami nor Rebecca had difficulties drawing on genres learned in the classroom context when
applying them in the workplace context. The findings of this study suggest that some ingredients of genre knowledge can, in fact, be taught in a classroom context like the one provided in the ECC; however, for the genre knowledge to become active and for the individual to be able to apply this knowledge successfully, it needs to be complemented by other genre knowledge ingredients accumulated elsewhere. In other words, the findings of the study again raise a question of portability of rhetorical strategies across contexts, but from a different perspective. It appears that rhetorical strategies may be portable but only if a novice already possesses a combination of particular genre knowledge ingredients.

The study suggests that communication instructors need to extend their pedagogies beyond teaching genre conventions and audience awareness and provide classroom contexts that would allow students to experience genres in a situated learning environment and develop the understanding of genre as allowing for flexibility and educated intervention. The question that remains unanswered at this point is: how can we assess domain-specific genre learning by students? According the findings of the study presented in this paper, such an assessment becomes possible only years after the students have been introduced to the conventions of genre. The longitudinal research model used in the study may indicate directions for the development of a "delayed" assessment. Opportunities for the design and administration of such delayed assessment need to be explored in the future.

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