ONLINE, MULTIMEDIA CASE STUDIES FOR PROFESSIONAL EDUCATION:
REVISIONING CONCEPTS OF GENRE RECOGNITION

David R. RUSSELL
(Iowa State University)
David FISHER
(University of Arkansas, Little Rock)

ABSTRACT: As both professional work and education come to be more and more mediated by networked computers and electronic content management systems (CMSs), it becomes possible to represent within professional education the systems of genres that characterize computer-mediated professional work, and to dynamically simulate the systems of activity that the genre systems mediate. However, students must perceive the genres and systems of genres as operating in two systems of activity, schooling and work. This paper reports case study research on one such virtual learning environment (VLE) to explore how it both affords and constrains complex genre recognition and learning in relation to time and space, conceived in terms of Bakhtin’s concept of chronotope.

KEYWORDS: genre; professional education; computer supported collaborative learning; chronotope; activity theory.

1. Introduction

Research on simulations of workplace genres in formal schooling has found that students have great difficulty recognizing texts and activity in those simulations as being relevant to the workplace—as workplace genres (DIAS ET AL., 1999; FREEDMAN, ADAM & SMART, 1994). Freedman, Adam and Smart argue that students have great difficulty because to learn a new genre they will need to sense from the inside the nature of the social action entailed by these new genres: the instrumental and praxis-oriented social motives, the complex phenomena of multiple readerships (some remote in time and place), the different life-cycle of their texts, and the different literacy practices surrounding the texts (reading practices and collaborative composing strategies). (1994, p. 221)

However, as both professional work and education come to be more and more mediated by networked computers and electronic content management systems (CMSs), it becomes possible to more fully represent within professional education the systems of genres that characterize computer-mediated professional work, and to dynamically simulate the systems of activity that the genre systems mediate. Our research group has been designing, teaching with, and researching online, multimedia fictional case studies for professional education, which attempt to represent the genre systems and communicative practices of organizations, through a new educational CMS we have developed called MyCase (MYCASE, 2007; FISHER, 2007; FISHER, 2006). In this paper we describe one of the multimedia online case studies, drawing on activity theory and genre theory, to show how the CMS represents the genre systems and activity of workplaces, and how students responded. (For a full description of the research studies, see FISHER, 2006).

Omega Molecular is a fictional biotechnology company developing genetically engineered products. In a technical communication course for 24 fourth-year undergraduate students in bio-systems engineering, the students played the role of information design consultants to it. The teacher played various roles, but mainly that of team leader to these consultants.
We draw on focus group data from that research to re-theorize the problems of genre recognition and participation—particularly in "contexts" of schooling—in light of genre systems theory, Bakhtin's concept of chronotope, and attribution theory from social psychology.

2. Theoretical framework

One of our goals in developing portals with the MyCase software has been to create environments in which students can develop a fuller feel for what it is like to participate in discourse-demanding contexts outside the classroom: to provide them with the means of, in C. Miller's (1984) words, construing new types, in Freedman, Adam, & Smart's (1994) parlance, sensing new genres from the "inside" or, as Simon Pardoe (2000) puts it, attributing professional significance to the activities they undertake in the classroom. We argue that these portals are fundamentally different from what is commonly called e-learning today. Portals created with MyCase are not self-study titles, nor are they simulations in which students work to optimize behaviors in order to "win" at some activity (e.g., make more money than other teams). Instead, we designed these portals to enable students and instructors to inhabit ongoing social roles different than those they inhabit in traditional classroom situations, roles that, we hoped, would facilitate the development of genre knowledge and know-how by enabling teachers and students to take part in social activities that resemble those that characterize various semiotic domains, to develop (critically) the subjectivity (and ultimately perhaps identity) of professionals, to gain this "sense of the genre from the inside" (FREEDMAN, ADAM, & SMART, 1994).

At the same time, we also hoped to create an environment that promoted activity different than what might result from a monolithic representation of organizational practices within the university classroom (for a discussion of the problems with the "tyranny of the 'real,'" see HERNDL, 1993). We wanted to create a space in which students could "develop the capacity to speak up, to negotiate, and to be able to engage critically with the conditions of their working lives" (THE NEW LONDON GROUP, p. 67) as a result of reading the elements of those lives. We hope that these portals provide a better tool than textbooks, courses deployed online, or even traditionally narrated cases to, as Pardoe states, "make explicit for students the implications of the professional scenario" (p. 144) in which texts are generated, circulated, exchanged, and consumed.

This generation, circulation, exchange and consumption occur within a system of genres (BAZERMAN, 1994), regularized and stabilized-for-now (SCHRYER, 1994). Students (or newcomers of any sort to an activity) come to sense the genre "from the inside" (FREEDMAN, ADAM, & SMART, 1994) by coming to recognize the genres as mediating certain kinds of actions and operations. To do so they must, in Pardoe's term, make certain attributions, when confronted with various artifacts. They must attribute certain texts to certain genres (remembering that single artifact—e.g., text—may be perceived and indeed operate in multiple contexts) (RUSSELL, 1997). More importantly, they must attribute certain possible actions and roles to various genres. Indeed, the problem of genre recognition is in a deep sense a problem of psychological attribution. Thus the challenge of designing multimedia online simulations is to design an environment where students will experience artifacts as both genres for learning (the classroom activity system) and genres for doing productive work, albeit vicariously (the target activity system).

The critical pedagogical considerations for designing online simulations that can be used within professional writing courses to give students a sense of what it is like to learn genre "from the inside" might be understood in terms of what Russell (2002) characterized as the "depth" of and "breadth" of genre. Russell argued that perception of genre can operate
across activity systems (e.g., disciplines and professions) not only in terms of "breadth" (the range or "set" of genres available) but also of "depth" (the ways those genres mediate activity at various levels of specialization within a single activity system and among activity systems—the genre system). The texts students read and wrote in the online case experience can be thought of as functioning, at least potentially, in two different activity systems: the specific classroom for which they were written and the fictional, virtual "real-world" activity system of the simulation, in which the students and/or teachers imagine the texts to be read/written in and for.

In a sense, each text in the Omega Molecular simulation works potentially as two genres: as a vehicle for and evidence of classroom learning of technical communication; as communication in some system of activity beyond the class, in the fictional "real world" of Omega. Though one function may dominate at any one moment in time and place, students showed, at various points, that they were aware of (recognized, attributed) the ways these texts functioned—and might function—in (as, to) another system of activity.

The genre system of the course is more "real" in sense that the students and teachers are participating directly and immediately in them. But it is worth emphasizing—as the theory of activity and genre we are developing here suggests—that the most salient genres for the students and the teachers are the imagined ones. Those genres, we must remember, are the ones toward which the students are moving in their lives, potentially. And it is to these "real life" genres, that the actions of students and teachers are designed to lead. Schools and the wider social practices toward which schools orient students are kindred human activities, always linked potentially by the kind-ness of genres they share or be imagined to share. So that it is impossible finally to conclude, Non scolae, sed vitae discimus. It is never only school, but life we speak of. And the capaciousness of genre, viewed in terms of its breadth and depth, past and future as well as present, can be a resource for understanding the relation between the activities of formal schooling and other human activities (RUSSELL, 2002).

To move students from perceiving genres as a broad set to a deep system, mediating activity in contexts beyond the classroom, we had to simulate space and time within professional contexts. Bakhtin's (1981) concept of chronotope is helpful here (BAZERMAN, 2004; SCHRYER, 2002; PRIOR 1998). When subjects recognize an utterance as belonging to some type, some genre, they know not only the kinds of actors, objects, and actions that are likely—though never inevitably—involved, but also the time-space setting invoked—the landscape of interactions (Bakhtin's example is the Greek romance). To take a contemporary example, when one recognizes a document as a U.S. Internal Revenue Service tax form (BAZERMAN, 2000b), it is clear that one is defined within a bureaucratic identity of financial calculations, obligations, specific deadlines and places for submission—and ultimately complex regulations, legal sanctions, and enforcement procedures. It is also clear what actions and tools are salient (and irrelevant) within the time-space landscape the genre invokes. Yet "no matter how constrained by forms, conventions, regulations and sanctions, the tax form becomes the scene of struggle between compliance and each individual’s desire to protect personal financial interests," a way of aligning or contesting motives in relation to the activity system of US government tax collections" (BAZERMAN, LITTLE & CHAIVIN 2003, p. 459). A genre (particularly a written one) crystallizes the motives of participants and makes possible certain kinds of interactions while making others more difficult (though never impossible). A genre calls forth certain actions or (for some participants) operations with certain tools at certain times and places.

"In short genre recognition attunes us in deep and complex ways as to what to make of the utterance" (BAZERMAN, LITTLE & CHAIVIN, 2003, p. 456). In this sense, genre as social action differs from other theories of genre in emphasizing the positive valence of genre, as a landscape for action, rather than on its limitations or regulation of actions, and calls
attention to the strategic agency of participants, who further their interests through mutually recognized, genred action, within the moments of utterance, though always constrained by the degree of congruence in their understandings, and always open to difference. Indeed, genres facilitate improvisation and innovation, marking out the expectations against which innovation is perceived as such (and not as meaningless nonsense), in much the way the chordal and melodic structure of a tune facilitates jazz improvisation (SCHRYER ET AL, 2003). And even when (or perhaps especially when) participants are at odds, they must have or develop a socially shared repertoire of genred actions to achieve understanding, coordination, and cooperation—to meaningfully disagree over time. As Bazerman (2006) puts it, genres are ways of recognizing what acts are available that are appropriate to the moment as you see it—what you can do, what you might want to do. For example, you may perceive a moment in a disagreement as offering possibilities of either a rejoinder or an apology. Your motives, goals, plans will take shape within those two constructions of potential action. You would not even consider appropriate filing a legal brief—and if somehow you found a motive and means to pursue that path, that would radically change the nature of the situation and your counterpart's set of genred options. (p. 221)

Moreover, Yates & Orlikowski, (2002) suggest that genre systems in electronic media are often perceived differently than print genres, particularly in terms of the aspect of social psychological time called kairos. This raises a central question for MyCase. How then does electronic communication in this virtual learning environment (VLE) of Omega afford and constrain genre perception?

3. Evoking a chronotope

To create a situation that would be believable for students and at the same time would help address some of the issues Freedman, Adam and Smart (1994) have raised about the lack of efficacy of traditional case studies for immersing students in the social motive of genre, we tried to create a VLE that would afford a much more dynamic circulation of information and a much more complex system of genres than in a traditional VLE.

In the Omega simulation, students go to work (i.e., the portal; see Figure 1), log in, and gain access to documents (and audio and video) in a range of genres that represent the ongoing history of the organization, the latest organizational happenings (represented through emails, video clips, etc.), and an organizational calendar—in short, the genre system that provides the chronotopic landscape of the fictional, virtual activity system. That is these opening documents place students in a chronotope of possible discursive actions (Bazerman 2006).

Students play the role of information-design consultants as they interact with case materials in virtual time and space. During their consulting engagement they confront a number of issues through the genre system, including:

a) Discrepancies between what company officers say in public forums and the scientific data (or lack thereof) that informs their messages,
b) Issues of intellectual property and their relationship to humanitarian and/or for-profit activity,
c) The need to assemble a coherent story about the company and its current situation based on information provided in the form of artifacts and to subsequently adapt that story for various audiences and purposes (e.g., requests for financing for humanitarian projects vs. requests for investment dollars).
4. Evoking space

We designed the Omega VLE to afford the representation of genres spatially, both in terms of "breadth" of genres and "depth" of genres. For example, the document server (Figure 2) is one 'place' that contains genres that represent various departments (and disciplines) within the organization: management, marketing, accounting, research, etc. Accounting, for example, is evoked in part by its characteristic genres: balance sheets, cash flow statements, cost projection worksheets for products under development. The breath of genres is far greater than could be contained in a paper casebook. But the large genre set also becomes a genre system as documents refer to other documents. For example, the CEO's video speech represents accounting and field trial data in a much more positive light than the accounting and research documents in the document server do, potentially raising ethical questions. Students must drill deeply into the system of genres to unearth information that is useful for their consulting work—their "assignments" from the point of view of the classroom, and for making ethical decisions on how to represent the contradiction.
Fig. 2 – Omega Document Server. This component represents the organization’s file server. Additional documents and additional folders appear in this tool as the simulation progresses.

The assignments are given in Figure 3 as they would be on a classroom syllabus. But the students get them as work duties, "deliverables" for the consulting firm: memos from fictional staff members or from the teacher in the role of consulting team leader. The eight assignments (taking up 10 weeks of a 15 week course) are designed to force students to explore—and come to recognize and use—the genres in the system actively, to add value to data/information by making it genred, i.e., employing it across a breadth of genres, by imbuing it with purpose as part of one or more goal directed actions in the context of the overarching motive(s) of the organization) and to reflect on their learning as they do that.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Characteristics</th>
<th>Format/Genre</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Define and/or describe a tool/process involved with genetic engineering</td>
<td>(Individual) Incorporation of at least one graphic</td>
<td>Definition for web glossary designed for Omega newcomers</td>
</tr>
<tr>
<td>2 Create a team charter/project plan</td>
<td>(Group) Task identification; time estimation</td>
<td>Memo for team lead (instructor)</td>
</tr>
<tr>
<td>3 Summarize/synthesize scientific findings</td>
<td>(Group) Using various tables and lab reports provided in the learning environment</td>
<td>State-of-the-company report</td>
</tr>
<tr>
<td>4 Create a product/process data sheet</td>
<td>(Individual)</td>
<td>Datasheet for audience interested in learning about/buying process/product; Or investor bulletin for venture capitalist interested in investing in the company</td>
</tr>
<tr>
<td>5 Develop and deliver an oral report about political and agricultural conditions in a Southeastern Asian country</td>
<td>(Group) Accompanied by PowerPoint presentation</td>
<td>Videotaped presentation to be available on the corporate intranet</td>
</tr>
<tr>
<td>6 Create a proposal or business plan</td>
<td>(Individual)</td>
<td>Proposal directed at funder (RFP available in learning environment) /</td>
</tr>
<tr>
<td>Assignment</td>
<td>Characteristics</td>
<td>Format/Genre</td>
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<tr>
<td>7</td>
<td>Develop a public Web presence for Omega</td>
<td>(Group) Display and defend in front of class (characterize major argument(s) and how they are rendered in structure and content of site)</td>
</tr>
<tr>
<td>8</td>
<td>Wrap-up report</td>
<td>(Group/Individual) Actual vs. Budget assessment; self assessment</td>
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Fig. 3 – Assignments in the form of the classroom genre of syllabus (FISHER ET AL., 2003).

Students work in groups and individually. But even when they work individually, they may share information. There is a document sharing space for students-in-the-role-of consultant. This is “their” space. Thus, the VLE represents the genre set (DEVITT, 1991, 2004; BAZERMAN, 2004), the breadth of genres, spatially.

Fig. 4 – Omega Document Sharing. Students post drafts and assignments to these folders and are able to access them from anywhere.

The VLE as documented thus far simply provides a computer-mediated environment that can support teaching genre acquisition or genre awareness with greater breadth than traditional methods. However, the affordances of the VLE for evoking changes that take place during/over organizational time enables movement beyond teaching genre acquisition and genre awareness to providing an environment that enables students to approximate the activity of organizational newcomers.
5. Evoking time

The VLE also affords the representation of genres temporally. The "broad" genre set becomes a "deep" genre system, as activity is set in motion through various rhetorical exigencies designed (largely) by the instructor (analogous to "assignments" in the genre system of a traditional classroom). This temporal dimension of genre is enacted through various tools.

There is first of all a calendar. But the deadlines are represented as growing out of the genre system of the fictional organization. They are put on the calendar within the fictional time of the organization, and may change with "new" information added to the document server, video library, and so on. As Yates and Orlikowski (2002) argue, time comes to be perceived within a genre system not so much in terms of calendar time, but in terms of kairos: "The awareness and strategic use of genre systems and the active shaping of kairotic moments (rather than passive acceptance of chronology)" is fronted in complex electronic communication, and the students use time in the VLE understand what actions are available and craft responses in time.

![Calendar of Events](image)

**Fig. 5 – Calendar of Events. Assignments arise from "workplace" exigencies (e.g., Director of Marketing preparing a glossary for new hires, CEO going to venture capital seminar, Director of Marketing going to trade show).**

5.1 Time-stamped emails and document reviews that are role sensitive

The VLE sets in motion the genre set and creates kairotic time and the chronotope of the genre system through communication tools that evoke organizational communication rather than classroom communication (though the former very often serves as the latter). Through a time-stamped email system within the Omega portal, students had the ability to email not only other students and the teacher/team lead, but also fictional members of the organization with questions or concerns. The instructor responded, playing the role of the person to whom the email was directed. A number of students used this tool to fill information gaps they found in the portal.
5.2 Role-sensitive document reviews

The email system, combined with Microsoft Word's Track Changes function and a document-sharing software tool in the VLE, allowed us to represent the temporal document cycling of contemporary organizations, mediated through electronic communication. Students received comments on their work via the Track Changes tool in Microsoft Word. This feature enabled the instructor to change the "identity" of the commenter, so that it matched that of the organizational individual to whom the document was submitted. In the case below (Figure 7), Jake Steubens, Director of Marketing has commented on the paper.

Students submit all drafts to the document-sharing tool (Figure 4). The instructor reviews documents (as an organizational reviewer, for example, the Director of Marketing) and submits reviewed documents to the document-sharing tool. The only drafts that are not submitted to this tool are the graded drafts, which the instructor emails directly to students.
Fig. 7 – Comments made on a "student" draft "by" the fictional Director of Marketing.

Discourse not only circulates through organizational time and space in the document cycling of review, but also in longer time scales potentially, extending even beyond the chronological time limits of the course to the chronotope of the fictional organization's genre system and activity. Student-produced documents or information they find and post in a Web Reference Library can be used by other students, either that term or—if the instructor chooses to leave them and the students give their permission—in future terms, so that students contribute to the workings of simulation by providing discourse other students can use.

5.3 Student texts repurposed in other genres within the genre system

The fictional genre system provides systematicity to the work over time, as documents created in one genre for one organizational exigency (and class assignment) are repurposed for other exigencies (and class assignments) in other genres—and often linked intertextually or hypertextually. One goal for this circulation process was to make available to students the "best drafts" of each other's work. The instructor encouraged students to draw on each other's work as they progressed through the semester to increasingly complex assignments. One result of this writing circulation was the development of an online glossary from definitions developed by each student within the Omega case. Figure 8 shows how definition memos were repurposed by one group to create an online glossary that comprised part of the public website the team built for Omega. Students were then able to use the glossary they collaboratively created for their future projects.
We have described some of the ways we used electronic means to represent not only the breadth of genre in engineering communication (the genre set) but also the depth of genre (the genre system) by creating a chronotopic landscape of space and time that moved the genres from being inert to active in a systematized way. We now consider some of the affordances and constraints of this representation of genred space and time for students.

6. Affordances and constraints of simulated space

Unlike most face-to-face classrooms, a virtual learning environment can manipulate space in complex ways visually and electronically. Most VLEs (e.g., WebCT, Blackboard) represent the space of the classroom in more or less its own terms, through traditional classroom genres (with spaces marked out for readings, assignments, discussions, schedule, etc.). We tried to test the affordances of an electronic VLE for representing space in terms of the chronotope and genres of a target system of activity: consulting for a bio-technology engineering firm.

6.1 Space for Action.

Omega contains a number of genres, such as laboratory reports and financial statements as well as software tools, which are closely tied with the organizational representation that serves the classroom. Indeed, as we pointed out, the interface for these portals is nothing more than a representation of what an actual web portal might look like for a typical employee at a biotechnology company.

Because of the hypertextual nature of this representation of organizational space, students, from the time they log into the environment, face an indeterminate situation and
must struggle to set (frame) problems (i.e., figure out what to do) within the problem space of the company and the stakeholders that interact with it (e.g., environmental activists, insurers), using know-how they have acquired from life, from their previous courses, and from what they have covered thus far in the course employing the simulation. Schön sees this framing struggle as an essential part of learning any new competency:

The paradox of learning a really new competence is this: that a student cannot at first understand what he needs to learn, can learn it only by educating himself, and can educate himself only by beginning to do what he does not yet understand. (1987, p. 93)

One example is the Omega state-of-the-company report (see Figure 3) in which students are asked to formulate and support their assessment of the organization’s health and future prospects while also providing a plan of action for the upcoming months. While their familiarity with the report genre in classroom terms helps them to understand some of the activities they must undertake to complete this assignment (similar to DEVITT’S, 2004, use of antecedent genre for teaching genre awareness), they have to figure out just what a state-of-the company report is in this particular context and how producing such a report will help the organization take the direction their consulting group recommends. Students, then, must turn back to the case context to determine what the potentials for action are in this situation. They must visit various information "spaces" representing different "areas" or functions of the organization, each representing a range of genres, often with several instances of each. They also often had to go "outside" the organization to find information, usually at other "sites" on the web.

In the course described in this study, at the request of Omega CEO Kurt Danzer, all groups developed ideas about Omega and its place in the market, and several went further and suggested changes to what they saw as problematic workplace practices at Omega.

For example, one group, noting that the CEO seemed unwilling to authorize insurance coverage for same-sex partners (they gathered this from an email exchange that appeared in the site), researched corporate insurance rates at a number of companies and found one that would supply at the same price for the projected number of people. They provided an overview of this research and detailed pricing figures with their report.

Another group suggested that Omega designate a "knowledge manager" to ensure that some of the communication disconnects—including problems with the company's financial reporting that had characterized the company's existence thus far—be remedied. They provided a detailed plan for restructuring the information located in the Omega document server as well as budgetary estimates for developing and managing a more sophisticated intranet.

As we might expect with any indeterminate situation, different students with different histories noticed and emphasized different potentials in taking action within the classrooms in which this simulation was deployed. The point here is that because of the constellation of genres in the simulation, students were able to decide for themselves (i.e., "frame" or "set") what the "real" problems were and then propose solutions, based on the know-how they gained from the course as well as potentials made available within the genre system and chronotope of the simulation.

6.2 Sharing location

These types of rich-context-dependent activities and the partial assumption of workplace social motive would have been much harder to produce in a classroom situation in which students were not engaged with a group of electronic texts (Omega) from which they
were drawing and to which they were adding throughout the semester. Students reported that
the learning environment helped to provide this continuity and in doing so, contributed to the
realism of the simulation (for methodology and complete results see FISHER, 2006). In focus
groups, all students agreed (n=8, for the question) that the online environment helped rather
than hindered their learning experience:

Interviewer: Do you feel that the on-line case environment helped or hindered your
learning in this class?

Eric: I mean, it's one thing to come into class and attempt to say, okay now you are
in a business, you know. But I mean, and you don't go to the building. You don't go
to the building for the business, you don't go and convene all in one room. I mean,
we're all over the place, I mean, the web site was kind of like the location, sort of,
where everybody combined, and that kind of brought us together as a company, I
think. So, all the company data was there, we would share files there, sort of brought
it all together, whereas without it I don't think I would have felt like I was in the
company, and I don't think I would have treated it as a company. And acted like that,
if it wasn't there, so I think it helped.

Interviewer: Interesting. What else? Help or hurt?

Ryan: This is kind of continuing on that, yeah, it helped, because you know, it kind
of felt like we were really involved in a real world company. Because you know,
even trying to write this investor bulletin, I was talking to someone who was trying
to help me through it, and they said, well, knowing it's kind of like a real company
on there with all the information that we have, we can't really make anything up
about it, and can't make stuff up about competitors, because there are real
competitors out there. So. You know, it gave us the experience of actually working
for someone rather than here are a bunch of assignments, turn them in, get a grade.
(TCAII, pp. 101-102)

In Eric's statement, we see the importance of the online tool enabling students to act in
ways they might not otherwise have. In other words, the portal helped make this student
willing enter into the chronotope afforded in the simulation by providing a workplace to
which he returned when he needed to attend to his project.

Ryan carries this idea further, explaining how the real-world significance he attributed
to the game caused him to play by a set of rules he might not have if he were tackling a purely
"academic" situation in which there might be the tendency to "dry lab" or simply fabricate
certain aspects of the assignment for expediency's sake. Thus, even though Omega was
fictitious, it was richly so. In other words, there were enough details about the company
provided so that students could (if they chose) act as if it really existed.

The MyCase simulations posed a number of constraints as well. Students were always
only "acting" as if they were in a professional environment, and they continued to see their
learning in terms of the epistemic and institutional motives of grades, though less so. In a
survey in one course students were no more likely to say they "played the role of a
professional in addition to the role of a student in this class" as compared with students in a
traditional classroom. Another group of students (four in this interview group out of a total of
20 for this interview), while much less enthusiastic about the experience than the group
above, still noted the effects of a prolonged immersion, even as they evidenced some of the
tensions between classroom context and target (workplace) context that spring from the
assigning of grades:

Matt: I think we all came to the consensus that we are looking for a grade and not
really learn more about Omega, even though we did learn more about Omega.
(Spring2004Session2 Feedback, p. 14)
Matt's statement that he learned about the organization in spite of his unwillingness to play a role other than student suggests one direction for further study. How might students participating in a simulation like Omega offered in a course within a discipline compare with students using the traditional curriculum when evaluated against concrete performance competencies?

7. Affordances and constraints of simulated time

Perhaps the clearest way in which the Omega portal enabled students to immerse themselves in the world of the simulation is through their depiction of time in terms of simulation events, rather than classroom events, the chronotope and kairos of the organization rather than of professional education. In other words, students (as consultants) are asked to complete assignments (submit deliverables) based on simulation exigencies (i.e., the Director of Marketing is attending a trade show; the management team is having a meeting; regulators are coming on site) rather than classroom exigencies (i.e., we need to get your state-of-company-report in before spring break). Just as Yates & Orlikowski (2002) found that an electronically-mediated group did better than a collocated group at using a ballot genre system, the students seemed to perceive themselves as responsible to the electronically-mediated genre system and (fictional) actors. Yates & Orlikowski speculate that this may be because the collocated actors in her study may have assumed that they could coordinate face-to-face but often in fact did not. In the Omega VLE, the students may have perceived the genre system as immersing them in a new chronotope and kairotic time that evoked greater responsibility than traditional classroom activity systems, in much the way interns often engage with job tasks more fully than with school tasks (intern cite).

Another way the chronotope and kairos of simulation time underlies (and is emphasized within) the Omega portal is through various public performative acts\(^1\) where students go on record as taking an action that alters their relationship with the organization and with the other participants in the simulation. Thus students can consider themselves as they were before and after the act in question. The best example of one of these acts is the non-compete contract, a very common genre in the corporate world, which students were asked to sign before they began working with Omega. This performative act required students to project themselves into a time-scale that extends (fictionally) beyond the fictional consulting engagement into their future professional work, and a genre system of legal requirements that must be negotiated now with consequences much later. This fictional agreement outlines expectations Omega has for its consultants and includes the following section that covers expectations for consultant's employment choices after the Omega agreement:

> Consultant agrees not to divulge and trade secrets or other proprietary information encountered during the engagement to competitors or entities Omega management deems potential competitors for two years following the consulting engagement.

The wording in this clause is problematic from the perspective of an individual who wants to seek work after the Omega engagement. Omega management can call virtually any company a potential competitor, if it wishes. While some students do not see an issue with this wording, others opt to modify the agreement. When students confront this document in class, the instructor (Fisher) begins by asking them to read and sign. He generally doesn't say

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\(^1\) Austen calls this type of speech act an illocutionary act. An illocutionary act is "an act which, if performed in the conformity with the pertinent conventions, has the potential to impact the social and moral order" (KAUFELD, 2001, p. 740).
anything else and waits to see if students raise issues on the document without prompting. In cases where no one in the class seems to have issue with the document, he begins to ask them questions about the agreement, especially with regard to the troublesome passage cited above. This technique is used throughout the simulation. Very often students will find issues that he had not considered without his prompting, but occasionally he finds it necessary to give them hints about things they should think about as they proceed.

Two examples of students' reworking of the non-compete agreement appear below (Figures 10 and 11). These are both samples from students who did not require prompting to find issues with the document.

The student who modified the preceding agreement talked frequently about the Enron scandal in class and was particularly concerned about ethical violations (with respect to accounting practices or with respect to the organisms themselves) that the company might commit. As a result, he indicated that his conditions for working for the company included the right to report these violations. He also wished for a more particular definition of "proprietary information" and so he elaborated this to include "methods" and "technology." Finally, he felt that two years was too long to ask him not to work for a competitor, so he changed the time to six months and specified that Omega would deliver a list of organizations they deemed competitors.

Another student, see Figure 10, was more concerned about the amount of work he would be required to do, as well as the compensation he would receive for that work.
In this case the student marks out the part of the introduction to the deliverables that says "but not limited to," calling it "open and vague." He also wants to ensure that "completion of these requirements guarantees an A grade for three credit hours." This student construed the genre as operating in both the genre system of the fictional organization and the class.

For each of the examples above, the instructor (in the role of an Omega human resources person) returned to the students a photocopied version of the marked up documents pictured above with additional feedback from the Omega representatives. In the case of the first document, he listed a number of companies Omega deemed direct competitors; and in the case of the second student, he briefly outlined the quality criteria he would have to meet in order to receive credit. The effect of this document cycling was, again, to get the students to think in terms of the simulation's chronotope, rather than in terms of a classroom chronotope.

However, there were again constraints. The MyCase simulations required the instructor to be familiar with the roles, motives, and circulation of discourse in the activity systems represented in the simulations. Unfortunately, many academics have not (or not recently) been immersed in such environments. Indeed, one instructor who used a MyCase portal in his class made salient just such a constraint when he noted that in working with the numerous genres represented in the portal as well as the student work that sprang from them:
I can kind of sense now how a real executive might feel, you know, somebody who gets bombarded with stuff, and so if you’re going to communicate with me, can you really lay it out so I can see right away, so you and I can link up right away and I know where you’re coming from? (BUAll, p. 6)

This professor, a nationally known expert in management, indicates how the chronotope of the simulated organization has caused him to better understand the role of his counterpart in industry, in terms of corporate time versus academic time. He had become a participant in document circulation that characterizes the genre system evoked within the simulation.

In addition, the fictional chronotope of the simulation must interact with the real chronotope of classroom time, with its institutional constraints of grading deadlines, as the previous example suggests. MyCase simulations, like any professional educational environment, are inevitably involve trade-offs between the realities of work and school, and a contradiction between the genre systems of the two contexts. The question becomes how to make this contradiction productive by creating a dialectic between the two realities in their representations.

8. Conclusion

As we noted, Freedman, Adam, and Smart (1994) argue that it is very difficult for students to understand and practice workplace genres outside the workplace itself:

they will need to sense from the inside the nature of the social action entailed by these new genres: the instrumental and praxis-oriented social motives, the complex phenomena of multiple readerships (some remote in time and place), the different life-cycle of their texts, and the different literacy practices surrounding the texts (reading practices and collaborative composing strategies). (p. 221)

Based in part on their study of a class using the traditional case method, Freedman and her colleagues do not believe students can achieve this "sensing from the inside" within the bounds of the classroom as it is traditionally configured, even when case studies and practices like "wearing suits to class" are employed. Freedman (1994), however, does hint at what we might do to provide more immersive environments when she suggests that "teachers have a central role to play in setting up facilitative environments" (p. 200) in which the kind tacit learning necessary for participating in genre can take place. In doing so she also echoes a number of educational theorists like Dewey (1916); Schön (1983; 1987); Engeström (1987); Brown, Collins, and Duguid (1989); Bransford et al. (1990); Schank et al. (1993/1994); Cole (1996); and Jonassen (2000) who have theorized and attempted to enact such environments within educational institutions.

Our preliminary research suggests that the MyCase simulations were for many students a "transfer-encouraging" environment (TUOMI-GRÖHN & ENGESTRÖM, 2003, p. 23). When we analyzed student texts and transcripts of student focus groups (n=16), we found (1) students were much more likely to attribute their learning in these MyCase simulations to professional work than their learning in either traditional classrooms, traditional (paper) cases studies, or computer-mediated learning in environments such as WebCT or Blackboard. Students (2) specifically pointed to elements that simulated the genre system of professional work as leading them to those attributions: sharing work, feedback from fictional professionals, and so on. And (3) students constructed problems and responses to them from the interactions among diverse genres in the system (FISHER, 2006).
However, the potential electronic mediation has for setting up facilitative environments has just begun to be explored (JONASSEN, 2000). We have argued here that genre is a particularly important theoretical tool for understanding and creating electronic learning environments. Our experiments in representing work activity in electronic educational environments suggest that the problem is first of all one of the breadth of genres chosen, both for reception and production. Electronic environments make it possible to expose students in an efficient way to far more genres and more examples of each, and to represent them in organizational spaces in more complex ways.

But more importantly, electronic learning environments allow teachers and educational planners to take as a central problem the depth of genres—the genre system. This is because electronic media make it possible to create a genre system which represents activity both spatially and temporally. As we have tried to show, these electronic simulations afford genre recognition in relation to time and space. And here the concepts of chronotope and kairotic time are crucial.

In order for students to recognize and use genres in ways that may be more likely to prove useful outside the classroom—to see genres “from the inside”—the place of genres in a genre system operating in time and space can be represented using electronic media in ways that traditional classrooms (or traditional VLEs such as WebCT) cannot represent them. Bazerman (1994, p. 100, qtd. in YATES & ORLIKOWSKI, 2002) states, "Only by uncovering the pathways that guide our lives in certain directions can we begin to identify the possibilities for new turns and the consequences of making those turns." Electronic media, by allowing the representation of space/time in educational environments, can lay out these paths and their consequences for students—and challenge students to make new turns in a low-risk (and relatively inexpensive) environment.

References


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