

**2006-665: “BREAKTHROUGH INTO PERFORMANCE”: HOW
UNDERSTANDING COMMUNICATION AS PERFORMANCE CAN TRANSFORM
TEACHING, LEARNING, ASSESSMENT AND CURRICULUM**

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“Breakthrough into Performance”: How Understanding Communication as Performance Can Transform Teaching, Learning, Assessment and Curriculum

Abstract

The Engineering Communications Program (ECP) in the College of Engineering at Cornell University is gradually integrating a new understanding of communication. That understanding is technical and professional communication as performance. It is particularly responsive to many of the difficulties related to establishing an effective communications curriculum. First, it offers engineering faculty a common understanding of communication. Second, through focusing on those elements shared by all communicative performances – genre, context, identity, and purpose – it enables faculty to adapt their instructional approach in ways that acknowledge the diversity of possible performances while maintaining coherence. Third, it allows faculty to employ a useful methodology, discourse analysis, for doing assessment as educational research. This paper presents communication as performance, offers discourse analysis as a methodology for researching those performances, and suggests how communicative performance, when matched with discourse analysis, can provide a dynamic model for a new communications curriculum that emerges from within the community of practice that is engineering.

Keywords: communication, performance, community of practice, discourse analysis, assessment, curriculum.

Communication as an Individual Skill

The metaphor that describes communication as a “skill” has dominated our ways of thinking about the teaching of communication, perhaps more importantly, communication itself for over a century^{1, 2, 3, 4}. Consequently, our academic institutions, to the extent that they address issues related to communication instruction – most notably, reading and writing, speaking (oral presentations) and talking (cooperative/collaborative group/team work) – make four assumptions:

- 1) that communication is an individual skill;
- 2) that that skill can be separated from the knowledge and/or understanding of a particular subject, area, or field;
- 3) that that skill is both discrete and generalizable; and
- 4) that, as a skill, communication can be mastered⁵.

Accordingly, we create distinct curricula with stand-alone courses (courses that are typically considered to be preparatory)⁶. We create a content for those courses that is separate from other discipline-specific courses (or is inclusive only in the most generally referential of ways)⁵. In them, we encourage individual students to focus on skill mastery (or, more likely, focus on remediating their failure to master)⁷. And finally, we choose to believe that once mastered – despite all our first-hand experience and research findings to the contrary – that individual skill will be completely serviceable⁴.

Most scholars of language and language use and especially those who study language learning and teaching would repudiate such an approach and would summarily reject all the assumptions listed above^{8,9}. Yet the communications curricula that embody these assumptions not only persist, they are the norm. The obvious question is “why?” The short and admittedly oversimplified answer is that once assumptions are embodied in an educational curriculum or in the common experience that a curriculum represents, then those assumptions can live on hidden in the everyday routines of teaching and learning. Thus, any real attempt at educational reform, innovation and change within education, not only means new assumptions, but a new curriculum as well.

In the Engineering Communications Program (ECP) in the College of Engineering at Cornell University, we are interested in innovation and change in relation to our assumptions about communication and the curriculum we devise to embody those assumptions. We have determined that if we are to enable undergraduate engineering students to communicate efficiently, effectively, and with efficacy as engineers both in the near and long terms¹⁰, then we need to propose and share a new understanding of communication generally, and specifically of technical and professional communication. We need to adopt a new metaphor. Such a new understanding represented through our new metaphor is *technical and professional communication as performance*.

Communication as Performance

Technical and professional communication as performance is a *kind of display*¹¹. Certainly, it is a display of competence – communicative competence, of course, but also competence in the subject or topic of the performance. Second, it is a display of one’s awareness of oneself as displaying that competence(s). And third, it is a display of one’s understanding of a specific professional community, indeed one’s appreciation of like displays along with the possible roles/responses of other participants in/to the performance of that competence(s)¹².

So, and for example, the display of communicative competence happens when one engages with a subject sufficiently to be able to choose a genre appropriate to context and purpose; to choose an identity, an ethos/persona that, while also being a proper agent of purpose, emerges from both genre and context; and finally, to choose a purpose that is both relevant to context and foreshadowed by genre and identity. Genre, context, purpose and identity – none is more or less important for a display of communicative competence. All contribute. Indeed, a display of competence, both what and how, in the performance of technical and professional communication requires four kinds of knowing. It requires knowing a genre appropriate to a particular subject, or the customary form and substance of a certain type of communication and

their relation. It also requires knowing the communicative context. Who are the participants, the audiences? What are their relationships? And what are the characteristics/features of the situation? It requires knowing the genre identity, or the characteristics/features typical of that identity, or ethos/persona, and how those characteristics/features are revealed in the performance. And finally, it requires knowing the action(s) or purpose(s) that a particular genre is intended to enact. What are the needs to be served, resulting actions to be taken? Figure 1 illustrates the inter-relatedness of these four kinds of knowing in a performance model of communication.

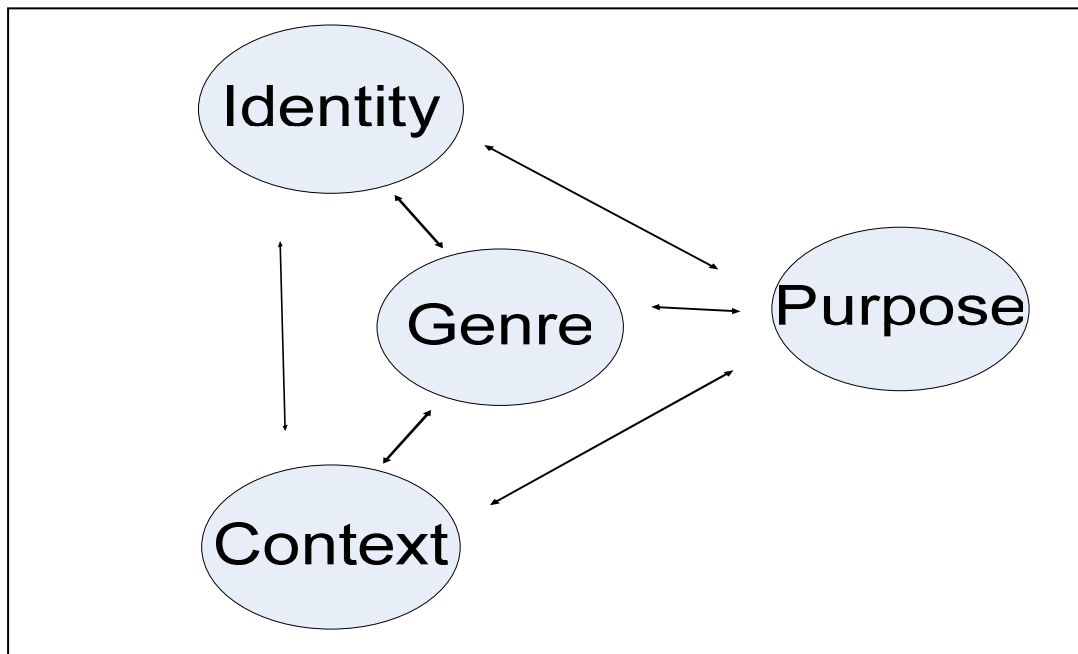


Figure 1. Performance model of communication

As well, an awareness of oneself as displaying competence happens when the above choices of genre, identity, and purpose, all relevant to context become apparent or better yet transparent in the performance. It is what separates “performing unthinkingly” from an awareness of one’s self as performing¹².

Finally, an appreciation of like displays happens when one acknowledges the importance of the community within which one hopes to participate and be a member. For example, acknowledging the importance of community suggests – in fact, requires – an acquaintance with a mental model or an ideal type of similar performances within that community as well as inviting discernment and an evaluative response from members of that community. In addition, success in performance requires that one display a familiarity with the conventions or the personal, social, and cultural ways of interacting particular to that community and with the experience or engagement in the practices associated with changing those conventions. Actually, familiarity involves much more than simple acquaintance. Familiarity involves both a thorough knowledge of the conventions and perhaps, when necessary, a creative application of that

knowledge in order to transform those conventions in the service of efficiency, effectiveness and efficacy.

There is, however, a common misunderstanding of communication as performance and, in turn, of performance as display that needs to be addressed directly. The misunderstanding is that display or communicative performance is often thought of as *a mere show, a simple demonstration of competence, even something of a spectacle*. Something apart from, peripheral, not really the “work” of engineering. (Ironically, such a misunderstanding is more compatible with the skills metaphor.) Nothing could be further from the truth. There is always and everywhere an agency in display, action(s) and certainly purpose within performance, and doing by the performer(s). In fact, what is actually true is that technical and professional communication as performance is a display of both “**doing and showing doing**” on two levels simultaneously¹³. It is communicating and showing that one knows how to communicate **and** through that communication doing and showing that one knows how to do the work of engineering.

Engineering Practice and Communication as Performance

Engineering constitutes a community of practice¹⁴. Indeed, it is that practice which differentiates engineering from other communities – music, art, literature. And, it is that practice or rather the various collections of practices which allow engineering to partner quite readily with still other communities – chemistry, physics, biology. Certainly within engineering itself, there are significant differences between the various areas: Chemical Engineering, Industrial Systems Engineering, Computer Engineering, Ocean and Naval Architectural Engineering, and so on. However, all of these separate areas (and the numbers of them are growing) are still considered within the community of practice that is engineering. In other words, they all share regular patterns of action conducted by actors who act and interact with each other in situations and in ways that to other like actors are identifiable, routine, conscious, even reflexive. “Design under constraint” realized, of course, in many different ways is one example of those regular patterns of action¹⁵.

Similarly, engineers as actors in the community of practice that is engineering can identify those collection of practices that constitute performances of technical and professional communication. Perhaps a few of the most standard or traditional are abstracts, proposals, technical reports, journal articles, instructional, procedural, and computer documentation, and oral presentations. All are genre (and there are many more, even evolving ones) appropriate to an engineering subject or discipline as well as a context and purpose whose performance is indicative of someone who is an engineer. Furthermore, engineers are, indeed must be familiar with the enactment of those performances. That is, they **are not only aware of themselves displaying communicative competence, they are aware of themselves through those communicative performances displaying or doing and showing doing engineering**. Figure 2 attempts to represent the overall embeddedness of the community/communities that engage in the practice of engineering, the shared and yet also distinct practices that characterize the various disciplinary areas, and the communicative performances particular both to the general community as well as the different areas.

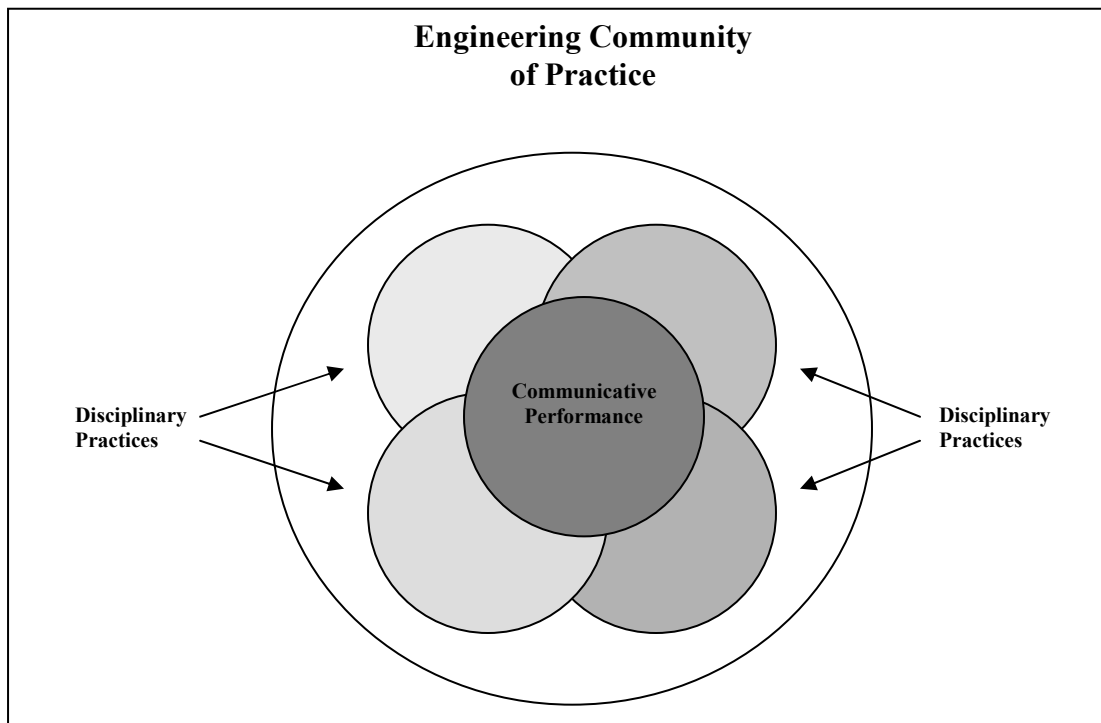


Figure 2. Engineering practice and communicative performance

Engineers, for example, communicate through abstracts, and, by communicating, show that they know that abstracts communicate certain things in certain ways to certain people in certain contexts for certain ends. They can even change their communicative performances. They can create abstracts that are responsive to emerging contexts, open to a promising purpose, even suggestive of a new sort of engineer. However, the community of engineers, those who share that collection of practices, must still admit two things. The first is that the performance of an abstract adheres to convention or to the personal, social, and cultural ways of interacting peculiar to the engineering community and the experience of engineers. And second, that that communicative performance is not only a doing and showing doing of the abstract, but of engineering as well, at least to the extent that abstracts do engineering work.

In the ECP, we believe that understanding communication as performance is both rich enough theoretically to unite the entire range of traditional and new communicative activities and events. As well, we believe that it is practically useful enough to be inclusive of the many sundry and emerging contexts – not only those contexts that span from the academy to the professions, but even those that span across and are apparent in the community of practice that is engineering. We believe that understanding technical and professional communication as performance allows us to think of communication instruction, indeed communication itself as a part of rather than something apart from engineering. And, we believe so for four primary reasons, also our assumptions.

First, technical and professional communication as performance, instead of defining itself as an individual skill, ***understands itself to be an ensemble achievement***. Indeed, it identifies itself as a collection of practices that are primarily social in nature¹⁶. Second, rather than understanding that skill as separated from the knowledge of a particular subject, discipline, or community; it ***locates performance within a particular community of practice***. It not only encourages, perhaps requires participation; in some instances, *it constitutes just that participation*^{17,18}. Third, instead of focusing on products, those supposedly discreet and generalizable skills; technical and professional communication as performance ***attends to processes of participation***. In effect, it offers an extremely useful heuristic that will enable students to continually learn to learn how to communicate, to develop strategies for learning from their participation both within and beyond the academy¹⁹. And fourth, rather than asking for demonstrations of mastery, typically a form of gatekeeping, technical and professional communication as performance ***invites participation that emphasizes inclusion and values diversity for the change that that diversity can make available***. It stresses, for example, giving novices (as well as the underrepresented) access to competencies through their experience of displaying, while providing an environment to explore new insights, perhaps apparent most often in new kinds of displays²⁰.

Actually, ours is not the first use of performance as metaphor in science – far from it. Robert Crease, for example, has used performance to better understand scientific experimentation²¹. Similar to Crease, we intend to use this metaphor as a means to identify the regularities inherent in every communicative performance or display. We intend that those regularities be seen as features particular to any single performance. So, genre, context, purpose, and identity along with an awareness of oneself as performing for a community in which there are established conventions and from which there will be an evaluative response – these are the regular features, the representations of recurring elements in all technical and professional communication. In addition, the metaphor of technical and professional communication as performance offers to engineering faculty and students alike a single, theoretically inclusive understanding of communication. At the same time that these regularities constitute features or elements that are particular to any single communicative performance; they are also applicable to all such performances possible across an engineering curriculum, even in the workplace. As a result, and unlike the skills metaphor that separates communication from the subject, discipline, or community; understanding communication as performance, like understanding experimentation as performance in science, allows us to integrate those performances with the subject, discipline, or community, allows us to understand them as collections of practices that comprise what is particular, perhaps even unique about that subject, discipline or community.

Communication as Performance and Change in Communications Curricula

In the recent and arguably most thorough survey of technical and professional communications instruction in US and Canadian colleges of engineering, we learn a number of things (not the least important of which is the “given” nature of the skills metaphor)²². We learn that the ability to communicate is considered extremely important. Not particularly surprising. We all know that communication is important. After all, we all use language to do things in the world. We learn that there is either not enough instruction or not enough of the right kind of instruction to bridge the “large gap between ... [the practice] needs [of professionals] ... and engineering graduates’ communication [competencies]”²². Or we learn that the skills metaphor is failing. Given that that

understanding has fallen from scholarly favor, such a discovery is not surprising either. However, what is surprising is that, Laura Reave, the author of the survey, suggests that the response of those providing opportunities for communications teaching and learning or the proper aim of communications curricula should be to offer more and more diverse communications instruction. This suggestion is surprising because, for as long as the skills metaphor has been dominant, we have seen a proliferation of writing and reading, talking and speaking courses, support services, programs, even departments. Always more and always more diverse. So, is she advocating simply that we do more of what apparently has not worked? At a time when engineering curricula are struggling (some might say wrenching) under the pressure, both internal and external, to increase requirements or to expand the range and increase the depth of the available opportunities for teaching and learning across the curriculum; doing more of what has not worked hardly seems a viable response.

In ECP, we are not proposing more communications instruction. In fact, the instances of and/or opportunities for communications teaching and learning across our curriculum (like most other curricula) abound! After all, and to repeat, communicating engineering is a part of, not apart from, doing engineering. Nor are we proposing greater diversity. As new subjects, disciplines, even relations with other fields develop; new ways of communicating will develop as well. Diversity not only already exists; it is increasing and will continue to increase! We do not need to offer more diversity, we need (or should at least try) to keep pace with it.

Instead, by proposing a new metaphor for communication, we, in ECP, are encouraging an understanding of communication that emerges from within the community of practice that is engineering. We are encouraging an understanding that, by focusing on those elements shared by all communicative performances – genre, context, identity, and purpose along with an awareness of oneself as performing and an appreciation of the community one is performing for – will enable us to create a single and across-the-curriculum scaffolding for student learning (and faculty teaching) able to accommodate the ever growing number and range of communicative performances. And, we are encouraging an understanding of communication that students can apply life-long in their effort to continue to learn to learn how to communicate as professionals. Finally, by proposing a new metaphor for communication, we are in addition to encouraging a new understanding of communication with all the above listed implications, we are also encouraging a new understanding of assessment.

While faculty by and large, including engineering faculty, seem to share the understanding of communication implicit in the assumptions of the skills metaphor; what a “skill” actually is, or whatever is identified as representing skill tends to vary enormously. As a result, any across-the-curriculum (even classroom to classroom) approach to assessing student learning becomes extremely difficult to fashion simply because we do not agree about what to count specifically, or more generally, what counts as evidence of learning. Furthermore, since the range of teaching and learning situations within which communication is taught and learned – traditional classrooms to student team competitions to service-learning projects – are radically different and growing increasingly so, that difficulty is certainly amplified. Then, add to this our hope and expectation that students will learn to communicate across cultural boundaries, to be cognizant of the impact that professional experience, gender, ethnicity, socioeconomic background (and more) have on communication; and assessment as a valid and reliable measure of outcomes

seems nearly impossible. Consequently, if it is attempted at all, assessment is reduced primarily to isolated and localized representations of peculiar outcomes or to anecdotal teachers' stories that while sometimes persuasive to our commonsense do not comprise either substantial or widespread proof of learning.

The real rationale for assessment, at least in an educational context, is to continue to learn more about how learning occurs in the interaction of teachers with students, the students with their peers, in the tasks, activities that students carry out, and how we might take full advantage of teaching and learning opportunities to enhance the learning for all involved. Assessment, so conceptualized, is never neutral. In fact, there is no position from which to inquire into learning that is unbiased or objective. Rather, we learn more about learning in order to teach better, which invariably means to advocate a particular approach to learning. And, while there is always a challenge to become as aware as possible of the limitations of any approach, the discovery and representational phases should be more promotional than descriptive, more activist than orthodox.

In the ECP, we think of assessment more as inquiry than evaluation, more as teacher-research than generating and measuring outcomes²³. That is not to suggest that evaluation or outcomes are “bad” or “unimportant.” Rather, because we understand communication as performance, emergent from within a complex community of participants, we understand that we must learn more about that community before we evaluate, to learn more about the communicative performances that do some of the work of that community before we determine the appropriate outcomes. Consequently, we expect that any systematic approach to assessment should follow a process similar to research. But what are we researching? If we understand communication as performance, as various collections of practices, in this case language practices, that allow us to do engineering; then discourse analysis, because it attends to what happens when people use language in order to do things in the world and because it is chiefly helpful in “taking things apart” in order to promote understanding, enables us to study those performances²⁴.

In what remains of this paper, we will describe what discourse analysis is, discuss briefly the relationship of communication as performance to discourse analysis and both then to assessment, and finally suggest what a communications curriculum so framed might actually look like.

Discourse Analysis

The focus of discourse analysis is generally understood to be language-in-use or, as we said in an abbreviated way above, “what happens when people draw on the knowledge they have about language, based on the memories of things they have said, heard, seen, or written before to do things in the world”²⁴. And because people use language in many, many different ways to do many, many different things, discourse analysis as a method for the study of language use is wonderfully ubiquitous. That is, with a very wide range of communicative performances, it offers a way or rather ways to “take things apart.” It offers us a way or rather ways to study an academic research article as well as a service exchange in a telemarketing phone call; small talk at a cocktail party as well as the design of a website; the tables, graphs and charts particular to the community of engineers as well as a TV commercial. The instances of language-in-use in each of the above examples are different. It is a written text for the academic research article and

scripted speech (at least for the server) in the service exchange. It is friendly “chatting” (generally about the weather, food, sports, fashion, family and children) in small talk and the complex interrelation of various semiotic systems (i.e., words, pictures, metonymic symbols, colors, maybe even sound) in a website. Finally, it is the visual re/presentation of data (which itself is a re/presentation of reality) and the video/film construction of product meaning.

As seemingly different as all of these instances of language use are (and while some may not be of immediate professional concern for engineers), they are all performances. That is, they are all displays of communicative competence. As such, they all are instances of a particular genre each within a context. They all have a purpose, sometimes even multiple purposes. They all create identities, ranging from the professional to the personal to the corporate. In addition, all require that the language user and/or users display an awareness of themselves as performing. Also, there are norms or conventions for how one should perform. And, there are consequences contingent upon “poor,” “adequate,” or “interesting even creative” performances. Discourse analysis enables us to look carefully at genre or to take apart the customary relation of form and substance. Discourse analysis enables us to look at or explore the influence of context on purpose and context and purpose on identity, and all on genre. And discourse analysis enables us to look at or investigate how an awareness of oneself as performing and an appreciation of the community one is performing for (and within) can and will most certainly effect, perhaps maybe even determine that very performance.

While the focus of discourse analysis is language-in-use, and the method offers a way or rather ways of taking things apart; its aims are both “descriptive” and “critical”²⁴. That discourse analysis is descriptive simply means that, when we take performances apart, we do so in order to better understand how language-in-use works, to better understand what happens or is happening when people use language in order to do things in the world. So, discourse analysis that is descriptive of an abstract for a technical report, for example, might help us to better understand how such an abstract works. It may help us to understand the particular “topics” that such an abstract must present, i.e., the problem or issue, methods of investigation, results, conclusions and/or recommendations. It may help us to better understand the particular “design,” or the relation of the above topics to one another and how that design is peculiar to abstracts for reports. Of course, the topics and design may change somewhat in an abstract for an academic conference or for a theoretical research article or in an abstract for a grant.

That discourse analysis is also critical is somewhat more complex. When we take things apart to better understand how language-in-use works, we do so not just because we want to understand language use. Specially, in an educational setting, we do so because we believe that that understanding will afford us a greater consciousness certainly, but perhaps also a greater control over the use of language. Again and for example, we may want to provide undergraduate (maybe even graduate) students more help in learning to write abstracts for technical reports. So, we take apart an abstract or abstracts, in order potentially to enhance their consciousness of those various topics and the design of their presentation. Clearly, we hope that such consciousness will enable greater control over their attempts at performing abstracts. That is our first sense of critical.

There is an additional sense. Not only do we want to enhance consciousness and enable control, we also want to foster the “ability to critique” or to be able to discern the professional even

ideological assumptions that underlie and inform the presentation of those topics in a particular order or design []. Indeed, experts' ability to critique, negatively and positively, often begins with those assumptions as those assumptions are re/presented and recognized in the various topics, their design, and their implications. That we associate experts with consciousness, control, and the ability to critique suggests that those characteristics oftentimes constitute membership within the engineering community and within the smaller communities of practice that we call the disciplines.

Communication as Performance, Discourse Analysis, and Assessment

By proposing a new understanding of communication, we, in ECP, are encouraging, indeed promoting a shared, common understanding of communication that, most importantly, emerges from *within* the field of engineering. When we identify the regularities inherent to all communicative performances, this understanding also provides an across-the-curriculum coherence to the different situations and diverse opportunities for performing communication. The primary strengths are that it is *social, participatory, progressive and inclusive*. These strengths are more true to what we know about language learning and teaching. It also allows us to foster *reflexivity*, an awareness of oneself as performing, and to locate that performance within a *tradition*, the particular professional and ideological values and beliefs (apparent often in the conventions) that frame all performances.

Furthermore, changing our understanding of communication from the unclear, even indefinable notions of skill to actual *instances of language-in-use*, specific communicative performances, then, allows us determine which of those instances and/or performances we think deserve special attention, are particularly crucial to the work of engineering. In other words, we can now choose to look at abstracts, for example, as they exist in all their complexity in the field of practice that is engineering, e.g., abstracts to research articles, abstracts for technical reports, abstracts for conference papers and so on. As performances, we can then employ a genuine research method, discourse analysis, to take those abstracts apart in ways *descriptive* and *critical* that, also in turn, will enable us and our students to become more *conscious* of those performances, and perhaps even when they attempt to perform them, will offer students greater *control*, maybe allow them to *critique* their own and others' performances. Indeed, we can study student performances, less to determine which are "good" or "bad," and more to discover if those students understand the communicative performance that an abstract is as well as the work that a particular kind of abstract does, or the various kinds of work that different types abstracts can do in engineering.

No longer the isolated and localized representations of peculiar outcomes or anecdotal teachers' stories that fail as "proof," assessment, through discourse analysis, focuses on language use or those communicative performances that do some of the work of engineering. It can and should include professional, expert performances as well as student, novice performances. It can and should compare those performances. Not only professional to student, but professional to professional and student to student. The comparison of professional performances will allow us to appreciate the variability that is possible, while acknowledging the recurring patterns of performance. Professional performances have real contexts, create real identities, attempt real purposes that will better help us to understand the particular work that they do. The comparison of student performances will also help us to appreciate both variability and pattern in

performance. However, it may also give us insight into their understanding of the engineering community that they hope to join, insight into their understanding of the performances as participatory, their processes of participation, even possibly into the ways that they might withhold their participation or understand their participation somehow in conflict with their participation in other communities of which they are also members.

Communication as Performance and an Emerging, Evolving Communications Curriculum

Because technical and professional communication as performance offers a new metaphor, presents a new understanding of communication, we cannot be exactly sure what a communications curriculum based upon that new understanding might look like. However, whatever it looks like, it should manifest the primary strengths of that understanding. In other words, it should be social. That is, it should offer indeed solicit the cooperation of and collaboration with faculty across the entire engineering curriculum. That cooperation and collaboration may, for example, take the form of teaching partnerships between engineering and communications faculty. If there are stand-alone communications courses, they should be designed to support that cooperation and collaboration, not to make it less, or even unnecessary. It should be participatory. That is, to the extent possible, students in whatever writing and reading, speaking and talking they do, should be doing so as the “real work” of engineering. Case studies to team projects to service learning increase the degree of participation required. We must help students to realize through their experience the reason why communication is important. It is important because it is a critical part of that “real work.” The curriculum should be progressive. That is, it should offer students repeated opportunities to perform, and those opportunities must represent their increasing engagement – moving from novice to expert – with the practices of the discipline and the community. Coordinating the common experience of students in this way may require departments and colleges to think carefully about what communicative performances are important to participation and membership in the particular or more general community of engineers. It may require individual faculty to coordinate the teaching and learning experiences they provide with other faculty across the curriculum. Finally, the curriculum should be inclusive. That is, it should encourage variation in the communicative performances that it requires. It is in that variation that we will discover creativity and innovation. And we can be satisfied that, if we discover genuine creativity and innovation, then students are aware of the norms or conventions.

Just as we would want to foster reflexivity with our students, or their awareness of themselves as performing, so we should also want to foster reflexivity with our faculty concerning the curriculum. Faculty or curricular reflexivity involves both a descriptive and critical awareness of the communicative performances that we provide students. Assessment as inquiry or teacher-research and the way or rather ways of taking things apart through discourse analysis offers us the opportunity to enhance that awareness. As faculty responsible for curriculum, we want to be conscious, to control (to the extent that we can), and to be able to critique the common experience we offer students through the curriculum. Indeed, it is that ability to critique that will allow us either to welcome change as evidence of an evolving field of practice or to resist change as a potentially harmful deviation from the professional and ideological values that engineering should represent.

Communication as Performance and the College of Engineering at Cornell University

At Cornell University in the College of Engineering, ECP is just beginning to introduce this new understanding of communication as performance. For example, we have been and are continuing to integrate communication instruction with the goals and/or project objectives of CI (communication-intensive) courses throughout the curriculum. And in a more systematic way than most, we are inviting the participation of practicing professionals through the communication-intensive Co-op. Finally, and just this last, year we have debuted a new ECP web presence, *Engineering Words* (<http://eng-2k-web.engineering.cornell.edu/engrc350/EngrWords/>). *Engineering Words* celebrates communication performances by representing the diverse ways in which our undergraduate students use language as well as the diverse modalities (e.g., visual) they employ. We expect the site to become an invaluable teaching tool for depicting some of the more standard communicative performances (i.e., proposals, reports, oral presentations, instructions, procedures, memos, and letters) as well as for introducing some of the less standard communicative performances (i.e., magazine and journal articles, electronic mail interaction, imaging, and more). We welcome visitors.

Those communications curricula that align themselves with the skill metaphor tend to focus almost exclusively on explicit instruction in the “basics,” followed by demonstrations (or tests) of mastery. Whereas a communications curriculum that aligns itself with the performance/display metaphor tends to focus on immersion into the community of practice, experience performing, and the life-long development of those competencies and expertise necessary for continued membership in the community of engineers. There are no basics. Rather, there is only participation, and through that participation an on-going “learning to learn how.” The educational change we intend is to bring teaching more in line with “how people learn” and to prepare students to be active, adaptive, and strategic learners²⁵.

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