

Static Products or Working Texts?

The Function of Communication Deliverables in Project Work

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Abstract

Today, much business activity is structured as specific projects—for example evaluating merger and acquisition opportunities or improving operational processes. Teams assigned to these projects follow a problem-solving process to deliver a solution. To prepare students for project work, many schools include action-learning projects in the business curriculum.

This paper reports on research exploring the role of written and oral deliverables in project work. Do these deliverables function primarily as static products—the “write ups” of completed work? Or does the process of producing these deliverables contribute to the problem-solving process and project success in integral ways—in other words, are they working texts? To address these questions, we studied 15 academic teams working as consultants on projects for companies. Data included questionnaires, follow-up interviews, observation logs, and the written deliverables themselves.

We believe this preliminary study has implications for understanding the relationship between writing and thinking, for integrating communication instruction in action learning projects in schools, and for helping project teams in business develop more effective working processes.

Introduction

Today, much business activity is structured as specific projects—for example evaluating merger and acquisition opportunities, determining when and how to launch a new product, reconfiguring the size and structure of a sales force, or improving an operational process. These projects are assigned to internal teams or external consultants, who follow a problem-solving process to deliver a solution.

Communication plays a substantial role in project work. Not only do teams need to communicate well to collaborate and execute the project, but teams also typically produce written and oral deliverables that define the requirements and terms of the project, report on their work, and deliver their solutions. These deliverables—including scoping documents, status reports, presentations, and final reports—serve a number of functions. They serve as evidence of work completed and sometimes they represent the completed work itself. They are often the key structural elements of a project—a deliverable’s due date usually constitutes a *milestone*, a specified point in the project at which a certain amount of work must be completed—and thus they serve as a means of keeping a project on track. And they are a

representation of the company's professionalism, so they must be "well written" and effectively presented.

Considering the importance of oral and written deliverables in project work, it is surprising that more research has not been done to explore project deliverables' wider performative role. The extensive work on collaborative writing in academia and the workplace provides a wealth of information on the collaborative process itself, its difficulties as well as methods and tools for process improvement (e.g. Locker, 1998; see Speck, Johnson, Dice, & Heaton, 1999, for a complete bibliography). Collaborative writing studies focusing on the role that deliverables themselves may play are fewer by comparison, and they suggest the value of further research (e.g., Ede & Lunsford, 1986; Rymer & Couture, 1991).

Similarly, while we did find a good deal of research about how the writing process affects cognition and learning, most of this research looks at individual writing processes—how an individual writer solves the rhetorical problems of expressing himself or herself better, particularly in academia (e.g. Flower & Hayes, 1981). Moving to top management journals, our search to date reveals extensive research on teamwork, but the role that deliverables may play in facilitating team processes and task completion is entirely overlooked.

Meanwhile, we know from our own work over many years with project teams in business and academia that many people perceive deliverables as the "write up" of work completed, a static product that is the result of work done. This perception is embodied in the familiar statement: "We have finished the work; now we just need to write it up." According to this view, the production of the report does not influence the results of the project, which is already completed. In fact, it has been suggested to us that one might simply hire a writer or editor to do the work at the deliverable creation stage. This view conflicts with our own experience as faculty and consultants in which we see the process of producing these deliverables contributing to the success of the project and team in integral ways. In our experience, the deliverables are not static products but instead working texts that affect the quality of teamwork and business results, a view suggested by some existing research on collaborative writing, as we shall see.

Because project deliverables are so important in the current business world—and because project-based learning can be so important in academia—our goal is to systematically explore the ways in which project deliverables add value to project results. In this preliminary study, the first in a series of planned research projects, we researched how teams perceived the impact of deliverables in a sample of projects in which we participated as faculty or consultants. In each of these projects, student teams served as consultants or designers for an external company, working on actual business projects that the companies proposed. Company executives or representatives were the ultimate audience for their project deliverables. Triangulated data included: (1) information on projects/teams/companies, (2) questionnaires that capture team members' perceptions, (3) communication observation logs, (4) follow-up interviews with team members, and (5) the written deliverables themselves.

We believe this study has theoretical implications for deepening our understanding of how texts function in the workplace as part of a problem-solving process. It also has practical implications for understanding how managers and how we, as communication faculty and coaches, can help teams get the most value from the project deliverables they produce.

What Does the Literature Tell Us?

The idea that “texts work”—that they operate as more than end products or static texts—is not new. Already decades ago, we find this idea in the “writing across the curriculum” movement in American education. Advocates argued that writing and learning go hand-in-hand, prompting new writing requirements across disciplines. Observing this, Zinsser concluded that “[w]riting could get into corners that other teaching tools couldn’t reach” (1988, p. 45):

Writing is how we think our way into a subject and make it our own. Writing enables us to find out what we know—and what we don’t know—about what we’re trying to learn (p. 16).

The sister movement among teachers of English called “writing to learn” investigated how different types of writing could lead to different learning outcomes – for example, analytic writing prompting deep reasoning and writing summaries leading to content generation (Langer & Applebee, 1987). As an outcome, research on collaborative writing has mushroomed, some of which suggests the performative aspects of texts in the workplace:

- Paradis, Dobrin, & Miller found that “document cycling” at Exxon ITD--the process of moving a piece of writing back and forth between a supervisor giving corrections and a writer making revisions--was “a collaborative, if sometimes, stormy, process of managing work” that helped participants learn what communication practices were expected and that also redefined projects (1985, p. 294; see also Van der Geest, T., & van Gemert, L., 1997).
- Katz (1998) shows that writing review sessions helped newcomers “to learn about the culture of an organization, to express their resistance to aspects of the organization they found questionable, and to gain the authority necessary to change aspects of the organization they found unacceptable” (1998, p. 3).
- Rogers and Horton’s (1992) experimental observations of 19 groups collaborating face-to-face on management memoranda, revealed that planning, drafting, and revising helped groups reach consensus about their rhetorical situation, scrutinize their language choices, and consider the ethical dimensions of their decisions (see also Horton, Rogers, Austin, and McCormick, 1991-92).
- Anderson (2004) examined the role of writing during an actual organizational change. Investigating speaking and writing practices of project team members, he found that writing had a ‘textualizing’ function, serving to document, fix, and “stabilize organizational reality to enable change to occur.”

But as Couture and Rymer (1991) found in their study of writing in an architectural service within a large health care institution, the value of working texts is little understood in the workplace. Supervisors and subordinates had very different views about the writing process. Supervisors viewed discussions about drafts as burdensome teaching; however, subordinates doing the actual writing viewed these discussions as critical for clarifying important issues that emerged from their work. The implications of this finding might have prompted follow-up research, but our review of management and business communication literature suggests that this investigative challenge remains largely untackled.

Text Gets Scant Attention in Management Literature

In contrast to work in composition and business communication, top-tier management journals include substantial research on team composition, managing teams, team leadership, delegation among team members, team interventions, and organizational influences on team learning. But there is little or no attention to working texts, be it “team talk” or the deliverables associated with teamwork. Some studies sniff around the edges of the idea that texts may contribute to the team’s work itself, such as Gibson and Zellmer-Bruhn’s (2006) conclusion that emphasizing “knowledge management” increases team learning, or Ericksen and Dyer’s (2004) finding that high-performing teams conducted *participatory* rather than *programmed* launch meetings (an oral text of some consequence, it appears).

Among management books, Donnellon’s *Team Talk: The Power of Language in Team Dynamics* (1996) strongly states that “talk is central to the work of teams . . . [and] is a tool for changing a team’s destination” (1996, p. 25). However, the bulk of this study of four teams focuses on management issues, like identification and power differentiation, with scant attention to how these issues might be enabled via talk.

As these examples suggest, management literature is largely blind to text itself, let alone the notion that texts may enable teamwork, including the project work of interest here.

Project Deliverables as Working Texts Not Developed

There are resources on project team deliverables themselves, mostly with a “how to” orientation. Books on project work, such as Bereaux’s (2008) *The Complete Guide to Project Management for New Managers and Management* and Corey’s (1990) *MBA Field Studies: A Guide for Students and Faculty* deal broadly with aspects like building relationships, contracting the project, assessing risk, scheduling, and data collection methods. Some details are provided on the oral and written reports that may be needed (see also Lock, D., 2007). Recently, Dow and Taylor’s (2008) *Project Management Communications Bible* treats project team deliverables similarly, but covers more of them -- such as status reports and presentations.

Resources are available on how to write particular deliverables (although not always for project work per se) (e.g., Klein, Rosario, & Holl, 2007; Netzley & Snow, 2002). What we have not found are materials considering project deliverables as a comprehensive set of texts or, more significantly, as texts that are an integral part of a problem-solving process, enabling various team activities to fulfill project obligations.

How Did We Conduct This Preliminary Research?

To explore the role of deliverables in project work, our preliminary research focused on projects for external professional clients that are performed by student teams in schools of business and engineering. These projects are part of a growing “action-learning” pedagogy intended to put student teams to work on projects for corporate or non-profit organizations (Brady 2007; Saatchi, 2008). Such programs are a kind of “test run” that allows students to apply the research techniques and analytical tools they have learned to solve problems or resolve issues confronting a client organization. For example, a team might be asked to recommend ways to improve a manufacturing process, or to develop

a strategy for selling a service more efficiently, or to determine whether and how a company should market a particular product.

Our preliminary research focuses on student teams, rather than industry teams, in part because student teams are easily accessible to us through action learning programs in our own schools. In addition, working with a small group of student teams allowed us to pilot and refine our research instruments before involving business teams in our study. Most importantly, however, we believe the results from this student-based research will be applicable to teams in business for two reasons:

- **The project teams in our sample are working on authentic business problems for business clients rather than classroom assignments.** The projects vary in duration between 7 and 20 weeks, not unlike some project work in organizations. The problems they address are real, complex, challenging, and important to the client. In many cases, they would be delegated to internal teams or professional consultants if the companies had sufficient resources. The teams are also expected to provide the same types of deliverables that internal teams would provide. In addition to interim deliverables that scope and provide updates on progress, student project teams present their analyses and recommendations to their clients in written reports and presentations during the final stage of the projects.
- **These project teams work with approximately the same amount of autonomy as workplace teams.** Teams work with a company liaison and a wide variety of other company personnel, much like an external consulting team. Faculty sit in an advisory position, ensuring that the teams operate within the school's requirements. Yet faculty allow the teams to function as self-directed and to organize their own work processes. Thus the project teams have the same opportunity as workplace teams to treat project deliverables as static products that emerge from their work or working texts that help them complete the work.

Our goal in this research is to understand how team members perceive the role of deliverables in their project work and to identify the value they believe they gained from working on each of the deliverables. If these deliverables are, in fact, working texts, we want a clear idea of the work they accomplish. This knowledge has implications for the structuring of academic programs, the role that communication faculty can play in client-based business projects, and best practices for managing project teams in the workplace.

Project & Research Teams

We studied 15 project teams: 11 graduate teams at the Ross School of Business and the Engineering College at the University of Michigan and 4 undergraduate engineering teams at Northwestern University comprising a total of 62 students. Our research team consisted of the three university faculty advisors for these teams (authors of this study). We each have more than 20 years of experience advising student project teams with corporate clients worldwide, leading teams in organizations, and consulting with organizations.

Data Collection

Our data for studying the project teams consisted of: (1) information on projects/sponsors/teams, (2) team member responses to a survey we developed for the study, (3) project logs kept individually by us to record critical incidents and observations, (4) notes from post-deliverable interviews with teams and (5) the written deliverables themselves. In writing our logs, we regarded critical incidents as highly stressed interactions involving the discussion or delivery of written and oral deliverables, such as a client's resistance to a preliminary recommendation in a status report. Survey data was also complemented by team interviews to learn more about why team members responded to the survey as they did. The information was logged in interview summaries. In this we were guided by Couture and Rymer who found such "retrospective interviews of interaction over writing are a powerful data base for interpretive analysis" (1991, p. 106).

Survey Design & Administration

We designed the survey to collect information from individual team members after a deliverable was completed. Most projects in the programs we studied followed a similar progression, closely aligned with a sequential problem-solving process: initiation and scoping; data collection and analysis; recommendation/solution development; and sharing results in a final report and presentation. All of the programs involved in our research specified deliverables as project milestones.

Based on our experience, we targeted five key deliverables as survey feedback points for our research as shown in Table 1. Requirements and nomenclature varied by program, but content expectations and timing were similar for these deliverables.

Table 1. Five Deliverables Studied

<u>Deliverable</u>	<u>Definition</u>	<u>Program Application / Requirement</u>	<u>Timing in Project</u>
Letter of Engagement (LoE) (called "Project Proposal" for one UofM program)	Defines and scopes project engagement – outlines commitment to sponsor/client	Common to all UofM programs Not required for Northwestern program	Early – first few weeks of engagement
Mid-Project Review (MR)	Framing for final deliverables – usually includes a final report outline and preliminary recommendations	Required for two programs at UofM	Mid (½ way)-point of project
Recommendation Review (RR)	Presentation in which team discusses recommendations with advisors and communication consultant	Used for one program at UofM	Mid-late stage of project (2/3 -3/4 into project)
Final Report (FRpt)	Formal report documenting analysis and recommendations	Common to all programs	Final stage of project (last 1-2 weeks)
Final Presentation (FPrs)	Formal presentation sharing findings and recommendations	Common to all programs	Final stage of project (last 1-2 weeks)

Survey questions were developed based on a comprehensive listing and analysis of significant team activities. We compiled this list from communication and management literature, which we collapsed and edited based on our business and consulting experience and observations of project teams over many years. Survey questions were designed to ask respondents the extent to which each of these activities was enabled (or not) via working on a particular deliverable.

As seen in the Appendix, the resulting survey instrument included both scaled and open-ended questions falling into four areas:

1. Overall contribution/value of the deliverable
2. Impact of producing the deliverable on team output/project progress or 'task'
3. Impact of working on the deliverable on team process or 'team'
4. Learning and discovery in the deliverables process

The survey used a Likert 7-point scale with a rating from 1 (not at all) to 7 (very much). Some questions were designed to elicit information about how working on deliverables affected *task processes*. Example questions included "To what extent did working on this deliverables help the team... Generate Ideas, Identify Issues, Interpret Data, and Prepare for Client/Sponsor Interaction." Other questions were designed to elicit information about the effect of deliverables on *team processes*. Example questions included "To what extent did working on this deliverable..., Expose Areas of Disagreement, and Strengthen Team Dynamics." A few negatively worded questions were included to check respondent attentiveness, such as "To what extent did this deliverable... Detract from Team Progress." These responses also provided information on the potential negative impact of working on deliverables.

Surveys were administered either in person by one of the researchers, or via e-mail closely following the completion of each deliverable. Responses were received from a minimum of 50% (and up to 93%) of the possible respondents. Sample size for some deliverables was smaller than for others due to special circumstances; for example, one group of teams at UofM had not yet completed their final deliverables at the time of this writing, and some Ross MBAs had to leave immediately following the program to reassume jobs so the final presentation survey was not administered. And because the Northwestern teams produced only the final deliverables, data from those surveys was excluded from the total averages.

Data from each survey was coded and entered into an Excel spreadsheet and means and standard deviations were calculated. We then analyzed the survey data to identify respondents' perceptions of the roles that deliverables played in the successful completion of the project. For each deliverable, we were interested in analyzing the level and nature of contribution: in what ways did working on that deliverable impact the quality of teamwork and the quality of the business solution delivered to the sponsor or client? We then used qualitative data—observations and answers to open-ended questions—to enrich our analysis.

What Do These Data Tell Us?

This preliminary research indicates that, for project teams, the process of working on communication deliverables contributes substantially to the project results. Far from being products that emerge once

the work is completed, the deliverables themselves are dynamic working texts that help project teams at all stages of the engagement to organize their work, set priorities, clarify objectives, identify issues and gaps in their work, make decisions, and develop recommendations.

We begin by summarizing the findings as a whole, and then we discuss individual deliverables before concluding with data on how deliverables may help team members learn.

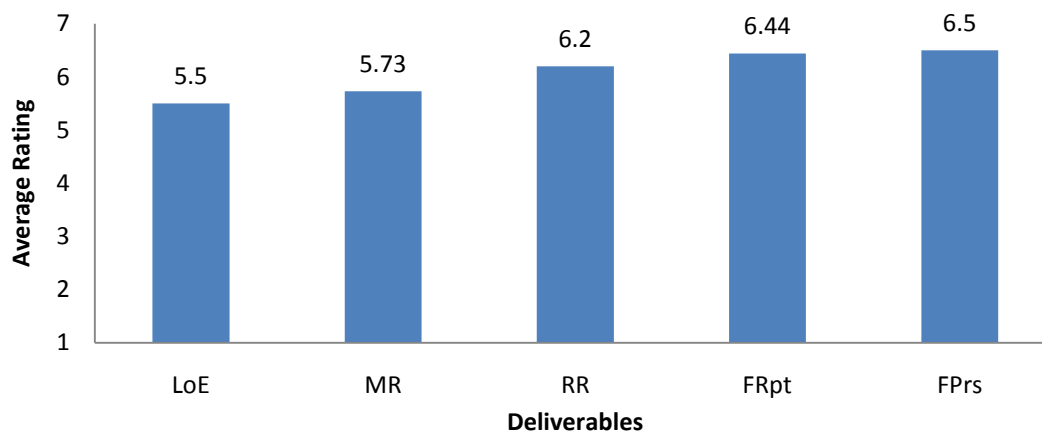
All Five Deliverables Contribute Significantly

We found it significant that respondents saw each of the deliverables as adding value in accomplishing the project. As Figure 1 shows, in response to the question “To what extent did working on this deliverable add value to accomplishing the project,” the average rating for each deliverable was well above the mid-point level of 4.

The perceived value of working on the deliverables increased as the project progressed; this progression may indicate higher overall value or simply reflect that the contributions feel greater as the end of the project comes into view.

Figure 1. Overall Value of Each Deliverable

Q1: To what extent did working on this deliverable add value to accomplishing the project?



Our survey data suggests that team members find some deliverables more valuable than others do. Tables 2 and 3 identify which deliverable was perceived as the most valuable (marked with an X) and which as the second most valuable (marked with a ✓) for achieving specific goals. Table 2 summarizes responses to survey questions related to project tasks; Table 3 summarizes responses related to teamwork.

Table 2. Ways That Working on Deliverables Adds Value to Task Processes

	LoE	MR	RR	FRpt	FPrs
Generate Ideas	✓		X		
Clarify the Project Objectives	X		✓		
Identify Issues or Problems			X	✓	
Uncover Any Gaps in the Team's Work			✓	✓	X
Identify Potential Solutions-Recommendations			X		✓
Interpret Data			X	✓	
Make Project-Related Decisions			X	✓	
Prepare for Interaction with the Client/Sponsor			✓	X	
Reveal a Need for Follow-up with the Client	X		✓		

Key X = rated highest of all deliverables on this factor; ✓ = rated second highest

Table 3. Ways That Working on Deliverables Adds Value to Team Processes

	LoE	MR	RR	FRpt	FPrs
Get Organized		X	✓		
Set Work Priorities	X	✓			
Assign Tasks		✓			X
Reach Agreements	X			✓	
Establish Team Roles	✓			X	
Move Forward			X	✓	
Expose Areas of Disagreements	X				✓
Strengthen Team Dynamics			✓	X	

Key X = rated highest of all deliverables on this factor; ✓ = rated second highest

Not surprisingly, the first project deliverable—the Letter of Engagement—was perceived as the deliverable contributing most substantially to team processes. Working on that deliverable requires that the team literally get on the same page and reach consensus, overcome disagreements, and set priorities. As research on contracting (Blatt, 2009) and our survey results and research logs suggest, teams need milestone documents of this sort to reach consensus about project goals.

It was also not surprising that the final report was perceived to contribute almost equally to team and task processes. Coming as it does at the end of the project, the final report provided teams an opportunity to consolidate all of their thinking and problem solving on the process. But the final report also served as catalyst to mobilize the team as they prepared to present their recommendations to external clients and faculty advisors.

Midterm Deliverables Serve Different Roles

More surprising was the contrast in perceived value of the two mid-point deliverables: the Mid-Project Review and the Recommendation Review. Of all the deliverables we studied, the Recommendation

Review was perceived as contributing most broadly to the success of the project. It rated first or second for every dimension of task process, helping teams do everything from generate new ideas, to identify solutions, and make recommendations. By contrast, the Mid-Project Review was not perceived as contributing as substantially to the accomplishment of the task, though it did help the team get organized, set work priorities, and assign tasks.

Our experience with the teams and discussions with team members suggests reasons for this difference. The Mid-Project Review is an optional deliverable for one UofM program: teams are encouraged to prepare the document with a communication consultant but rarely share it with their corporate client. Meanwhile, the programs that require a Recommendation Review also encouraged teams to present this review to their external clients as a midterm milestone. This pressure to present to the client may explain the different perceptions.

The purpose and structure of these documents may also explain the difference. The Mid-Project Review presents information about the team's findings and outlines how the final deliverables will be structured. By contrast, the Recommendation Review forces project teams to switch from an informational perspective (which is central to data collection and analysis in the early stages of the project) to a promotional, rallying data and analyses in support of team conclusions and recommended actions. In this way, preparing the Recommendation Review may be a transformational team experience.

Take the example of a team investigating ways a German manufacturing company could produce automotive fans more efficiently and cost effectively. At the midpoint, this team remained focused on their new production-line scheme. Like budding engineers, they prepared midpoint presentation slides to explain meticulously how their scheme would work if implemented. At first they balked at the challenge to reframe and present their scheme as recommendations justified by their conversations with workers and trial runs. But converting to this change flipped their thinking and, in the end, their midterm presentation to the client was less informational and more designed to elicit feedback that helped the team make project-related decisions.

While these results are very preliminary and follow-up research is required, comparing the survey results and our own experiences with the Mid-Project Review and Recommendation Review suggests that the latter may offer more value to the teams and the clients.

Deliverables Make Specific and Holistic Contributions

When looking at the holistic value of each deliverable (Figure 1) compared to its specific contributions (Tables 2 and 3), we see that the Letter of Engagement and Mid-Project Review seem to achieve most of their perceived value by doing one or two things very well. As Figure 2 shows, the Letter of Engagement rated very highly as a means of clarifying objectives and getting organized. The importance of these two tasks clearly influenced its overall holistic rating. Similarly, the Mid-Project Review derived most of its value from its ability to help the teams get organized.

By contrast, the two final deliverables—the Final Report and Presentation—received higher ratings for overall value than they did for any specific contribution. This suggests that the value of the final deliverables is not influenced by any one contribution but by their ability to facilitate teamwork on all fronts.

The preliminary finding that early and midterm deliverables demonstrate their greatest value for particular activities, whereas final deliverables enable team activities across the board, seems logical. At the end of a project, teamwork is intense and comprehensive; there is little time for dissention, less tolerance of free riders, and a lot of work to be done. However, we believe there is more going on here: the Final Report and Presentation function as end products that represent the team's work as a whole in a way that is not expected of interim, internal deliverables, which are intended to get the project started and move the project along. These differences merit further investigation if we are to understand how these texts work individually and holistically.

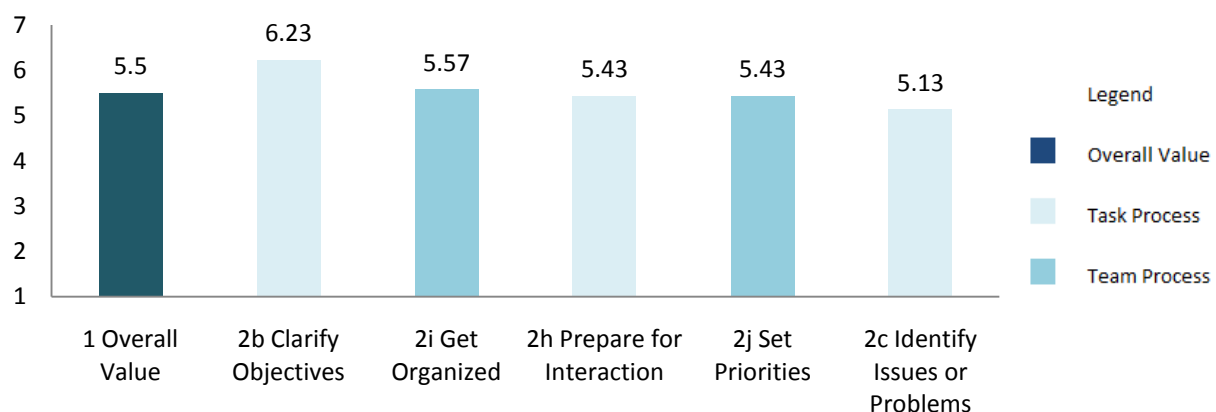
Individual Deliverables Contribute Differently

Our survey data, post-survey interviews, and research logs suggest some specifics on the function and value of each deliverable (Figures 2-6). From our survey data we highlight the highest-scoring team activities for each deliverable. Our interviews and logs allowed us to check and elaborate on these data and assess the contribution of each deliverable.

Letter of Engagement (LoE)

The Letter of Engagement (also referred to as the Project Proposal in one UofM program) defines the problem statement, scope and objectives of the project. It is discussed with and sent to the client/sponsor for the project. Survey respondents scored the Letter of Engagement (LoE) highly on activities related to both task and team process. Writing the LoE involves reaching consensus on the project purpose and scope sufficiently to present a unified front in writing to their client. Related to task activities, the LoE contributed most to Clarify Objectives and Prepare for Client Interaction (see Figure 2). In fact, the LoE scored higher on Clarify Objectives than any of the other deliverables. Related to team process activities, the LoE scored higher than any other deliverable on Set Priorities, Reach Agreement, and Expose Areas of Disagreement.

Figure 2. Letter of Engagement Contributions



Coinciding with these numbers, typical responses to the open-ended survey question on the overall contribution of the LoE were:

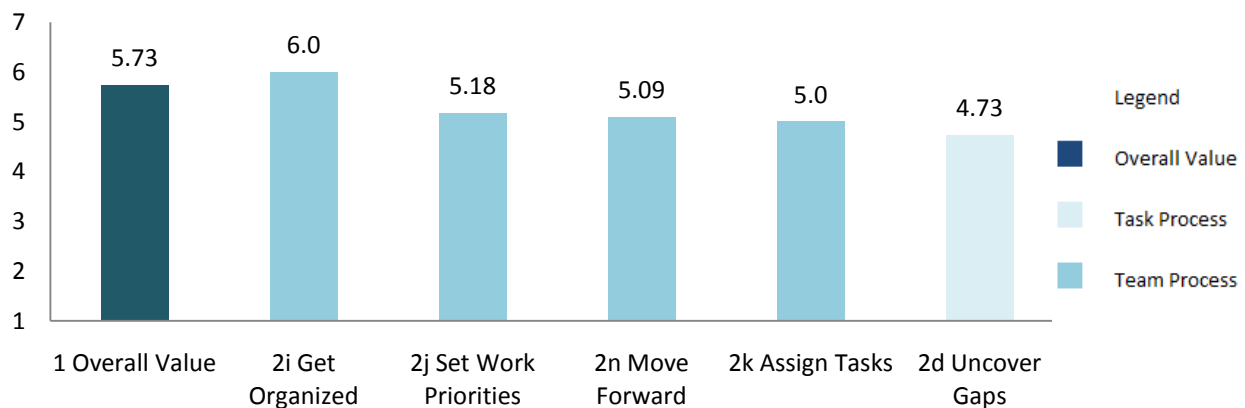
- “defines the scope of work with the project sponsor”
- “outlines shared understanding between our team and our client”
- “helps both sides understand clearly what the project will accomplish”
- “lays out deliverables and defines borders”

Interviewees expressed the same sentiment. As one UofM interviewee explained: “It helped us agree on proposed direction and determine questions to ask of the client,” supporting the relatively high contribution to Prepare for Interaction.

The Mid-Project Review

The Mid-Project Review (MR) is a deliverable that documents the structure of the project’s final deliverables (and for one UofM program is expanded to include a draft of the Final Report). The MR scored higher on team than on task activities. Four of its top five activities (see Figure 3 below) related to team processes. Activities scoring highest for this deliverable were Get Organized and Set Work Priorities. In fact, the MR scored higher on Get Organized than any of the other deliverables.

Figure 3. Mid-Project Review Contributions



The open-ended survey responses and post-survey interviews show what Get Organized actually meant. Getting organized proved to be a comprehensive planning activity outlining steps to get to the final report and presentation. This is quite different from the organizing activities respondents associated with the LoE, which also scored high on Get Organized.

According to the open-ended responses, the Mid-project Review:

- “provides . . . an initial framework to organize our thoughts”
- “maps out the future areas of activity”
- “makes it easier to divide work”
- “creates a coherent flow for the paper and presentation”
- “helped us organize our results/findings
- “provided a framework to support our recommendations”

Some of the more colorful comments from team interviews elaborate this further:

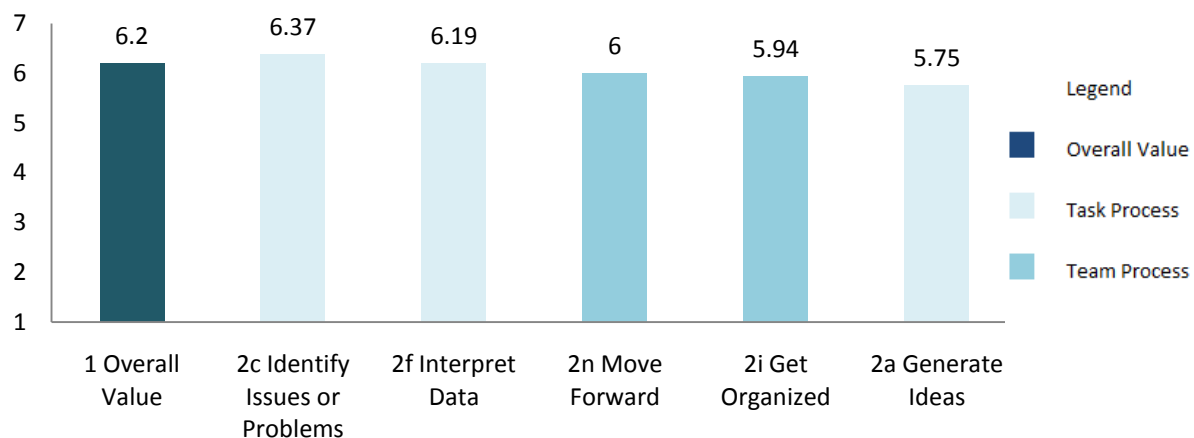
- “It helped identify big buckets of work to assign to team members”
- “We could then divide work and prioritize”
- “It provided a ‘data dump’ to capture what we’ve done up to this point,” and “got us familiar with the workload for the final paper.”

Recommendation Review (RR)

The Recommendation Review (RR) is a working session in which teams present their preliminary recommendations to faculty advisors and, in all the instances we studied, to their clients. Using a set of PowerPoint slides, teams wrestle through their recommendations one-by-one with their faculty and clients. It’s much like you might expect of a midpoint working session at a consulting company like McKinsey.

Interestingly, the Recommendation Review (RR) contributed significantly to more team/task activities than any other deliverable (as noted in Tables 2 and 3). Figuring prominently were Identify Issues/Problems, Interpret Data, Move Forward, and Get Organized (as noted in the breakdown of the top 5 highest ratings for this deliverable in Figure 4).

Figure 4. Recommendation Review Contributions



The RR proved to be ‘critical incidents’ for many project teams—the RR exposes where team reasoning is weak, where more data collection is necessary, and what recommendations they might wisely drop or develop. These RRs proved engaging, wrenching, and a challenging climactic event for teams. One of our teams found that their company liaison lost interest in their project after hearing their preliminary recommendations, a consequence of their own failure to dig deeper into the meaning of the information they had collected. In a post-survey interview, one team member reported that their liaison reminded the team “he had an MBA too.”

Another team took stock of what they really had to offer their client and decided to focus their efforts on developing their theoretical model rather than to use the data from a survey they had administered, countering the advice of their faculty. At the project’s end, their client was sufficiently pleased to write

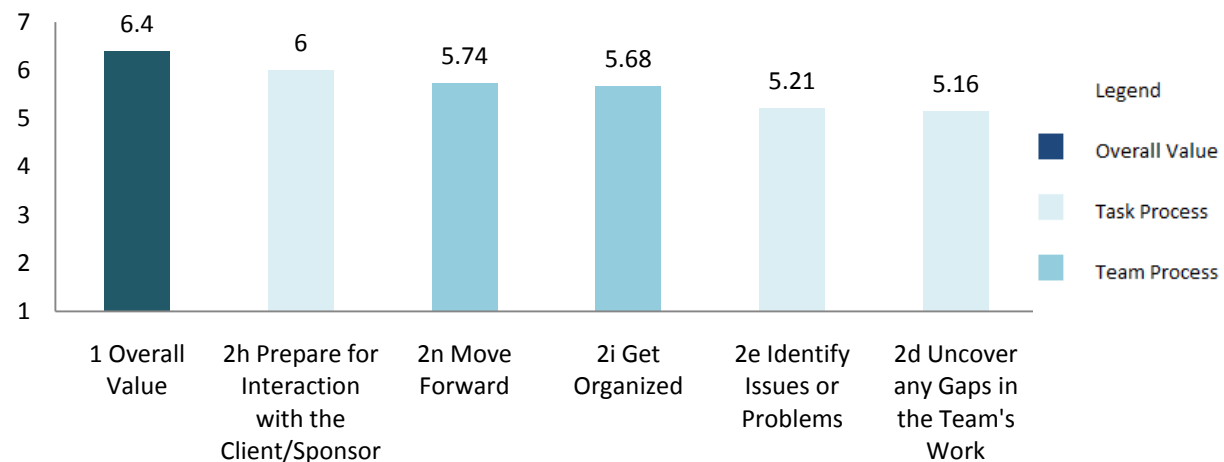
the faculty an email praising the team's efforts. For this team, the Recommendation Review not only helped the team define their final deliverable (thus contributing to the task) but it also solidified the team, since it required the team to reach consensus about what was in the client's best interest.

Final Report

The Final Report is a consulting report that includes a situation analysis, methodology, and recommendations with supporting analyses and evidence. The recommendation and support comprise the bulk of the content. Documentation and appendices tend to be extensive.

The Final Report scored highly on both task and team activities. As noted in Tables 2 and 3, of all deliverables, it scored highest on Prepare for Client Interaction, Establish Team Roles, and Strengthen Team Dynamics. As Figure 5 illustrates, teams also valued the Final Report for its contribution in helping them Move Forward and Get Organized. .

Figure 5. Final Report Contributions



Significantly, as Figure 5 also illustrates, teams gave the Final Report a higher score for its Overall Value than for any one specific contribution, something they did not do for any of the earlier deliverables. As one team member noted, this deliverable (along with the presentation) “determined whether there was any value in what we did as a whole.”

However, even though the Final Report represented the team's final product, its value clearly went beyond that. For example, our qualitative data suggests that “text-based negotiations” tended to be ongoing during the production of the Final Report. Teams debated various sections of the report sometimes with their faculty advisors breaking the deadlock. Other times they simply wanted to know our opinion. “We are the XYZ team,” wrote one team member. “I’ve attached two versions,” he continued. “If possible, could you kindly suggest which one is better for [the] reader?” Comments such as this suggest that the final report is not simply a write up of work completed. It is one of the means by which the team clarified thinking, made decisions, and, in fact, completed the work.

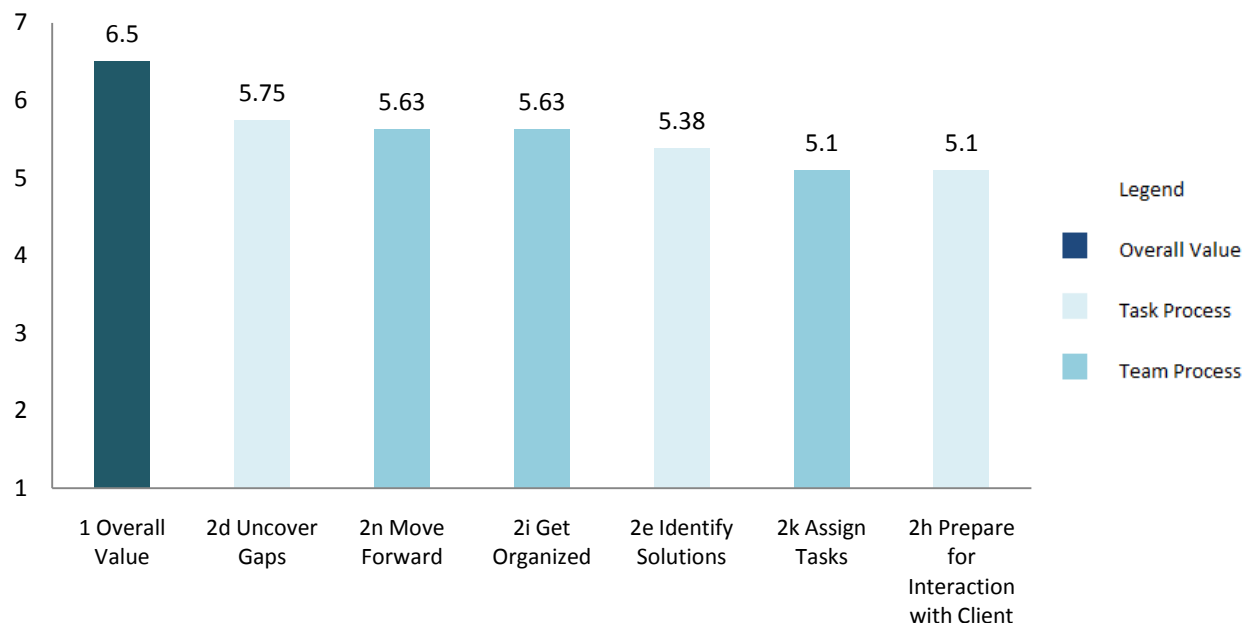
Other insights concerning the impact of working on the Final Report indicated that this deliverable:

- Forced the teams to focus on integrating project elements, especially those on which team subdivided work
- Required the team to articulate details that they had not needed to explain earlier when they were communicating primarily with internal audiences
- Helped teams became clearer on the ‘big picture’ of the project
- Made teams realize it was vital to test initial assumptions to validate and ‘defend’ to the client

Final Presentation

The Final Presentation is a formal meeting to present the team’s work to both the client/sponsor and the faculty advisors. Typically, the team uses a PowerPoint deck and allows significant time for Q&A. Some of the team members we interviewed described both the Final Presentation and the Final Report as important as final products, the fulfillment of a program requirement. As one team member put it, “The final presentation is key in the project. It shows our work.” This may explain why it received a high Overall Value score (see Figure 6), in fact the highest Overall Value score of any deliverable.

Figure 6. Final Presentation Contributions



But, as Figure 6 also illustrates, the Final Presentation—like the Final Report—was also valued as a working text. The Final Presentation helped the team with three important task processes: Uncover Gaps, Identify Solutions, and Prepare for Client Interaction. In other words, like the Final Report, it did not just represent completed work; it was crucial to completing the work.

We must admit that we were quite surprised by the high scores on these activities, which seem more critical in the early and midpoint stages of a project.¹ Uncover Gaps was high for the Final Report as well, which indicates that even at late stages of the project, teams are finding that they need to strengthen their research or explanations. It may be that when teams finally have to document and articulate their work, it forces them to think more thoroughly and provide clearer explanation for external audiences.

In a follow-up interview, one team member commented that the Final Presentation “was much more important than the paper because it was the primary way we communicated our findings to the client. The paper was geared towards satisfying the faculty and administrative requirements,” he concluded. In our experience, this varies project-to-project, company-to-company.

More than this, the sequence of working on the Final Presentation and Final Report seemed important for determining which was of higher value to the teams. One team member noted, “We worked on everything simultaneously and the report content followed the presentation quite closely.” Another said, “Our report was essentially written before our presentation was created and we pulled directly from it [for the presentation].”

What Did Teams Learn?

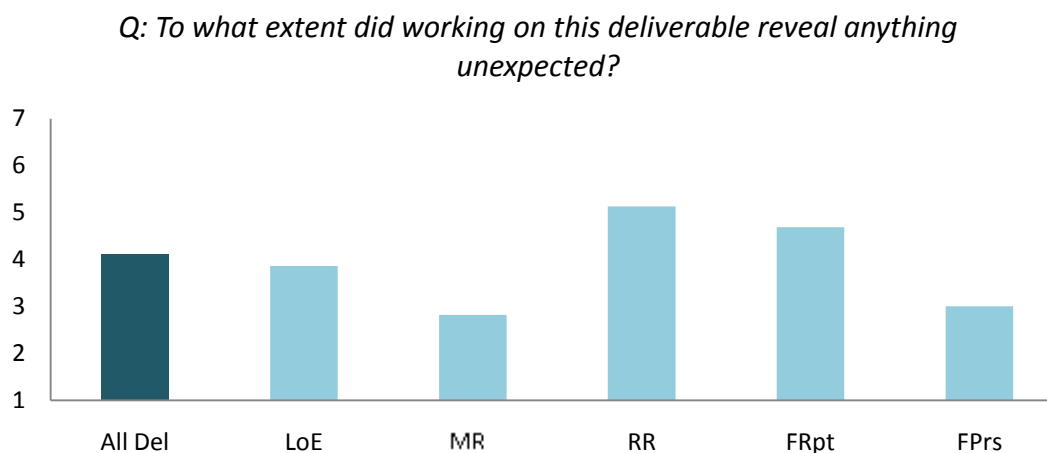
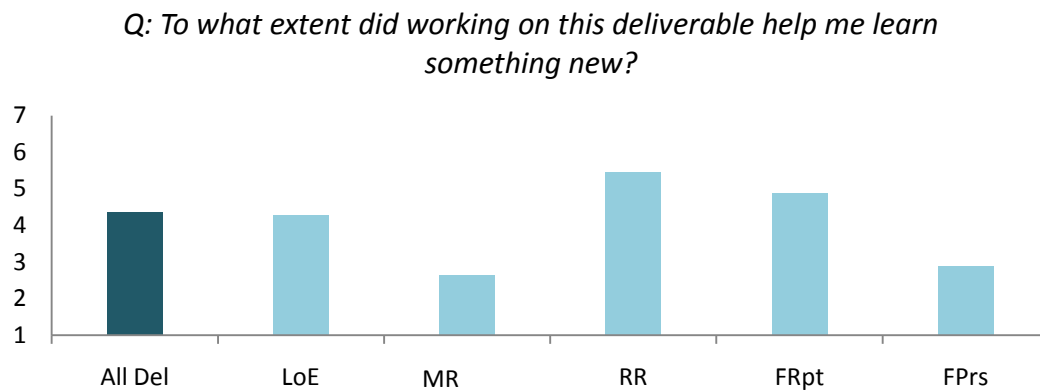
The last area of our survey asked team members about learning and discovery, specifically the extent to which a deliverable ‘helped them learn something new’ and ‘revealed anything unexpected.’ Survey respondents reported that the most learning and discovery occurred with the Recommendation Review and Final Report at the mid and final stages of their project work as shown in Figure 7.

This suggests to us the dynamic nature of these deliverables as working texts—teams are learning more as they translate data and findings into solutions they present to their client and faculty advisors. Based on our experiences working with the teams in our sample and with hundreds of others through the years, we also wonder if the Recommendation Review and the Final Report invite more text-based discussions of structure and content development among team members themselves and with clients and faculty advisors. These discussions lead both to learning and to unexpected results.

It was interesting to note that less learning was perceived to occur with the Final Presentation than with the Report. We suggest two possible reasons for this result. First, it may result from the the sequence in which teams completed these two deliverables—many teams completed the report first and then presented their findings. Second, the presentation time is limited and tends to focus teams on the strongest recommendations. By its nature, the presentation forces teams to consolidate what they know rather than learn something new.

¹ The low number of survey responses on this deliverable [n =8], makes these results suspect. They will need to be validated or challenged in future phases of our research.

Figure 7. Contribution to Learning



What Are the Implications of This Preliminary Research?

This preliminary study of 15 teams suggests that team project deliverables play a significant performative role. They function as much more than end products related to project milestones for clients. The project teams we studied reported that deliverables helped them clarify their goals, negotiate and re-negotiate their priorities and tasks, organize their ideas, discover gaps in their analyses, deliberate on what their findings meant, and recommend solutions to client problems. We believe that these results are rich enough to suggest implications for project teams, academic programs, communication faculty, and future research.

Implications for Project Teams

Our survey data, follow-up interviews, and observations strongly suggest that teams *need* deliverables to keep a project moving forward. Deliverables prod teams to “work it out” in various ways. Our data suggest that *all* the deliverables added value to both team and task processes, although the specific contribution of each deliverable varied. For example, the Letter of Engagement helped teams clarify

their objectives, enabled them set their work priorities, and aided them in unearthing and resolving areas of disagreement in the early stages of the project. The Final Presentation aided teams in assigning tasks and revealed gaps in their work during the later stages. These findings lead us to wonder whether project teams, both in the workplace and in school, might benefit from training elaborating how the deliverables will help them.

Teams may also benefit from coaching and training about how to distribute the writing responsibilities across the team. Project teams are sometimes tempted to treat writing as a specialized task, delegated to one or two “good writers.” However, doing this may undermine the team’s ability to use the deliverables productively as tools to clarify objectives, analyses, and solutions.

Implications for Academic Programs

Many pre-professional and professional academic programs have adopted project-based action learning as part of the curriculum. However, not all programs require students to produce a full range of communication deliverables, from Letter of Engagement through Final Presentation. In some programs, for example, students produce only final deliverables at the end of the project. Programs may have good reasons for this choice. More deliverables such as the Letter of Engagement may mean students spend less time on the research, analysis, and other problem-solving activities; it may also mean more time is required for faculty to grade student work.

However, our research suggests that project results will benefit if students produce each of the five deliverables, as project milestones. Each deliverable plays a unique role and offers a significant and unique value that is not duplicated by the other deliverables in this set. In fact, based on this research, the authors have decided to recommend that some of their programs expand the set of deliverables required. The Northwestern project teams studied here have not been required to write Letters of Engagement; this will change in academic year 2010-2011. At the University of Michigan, not all MBA project teams have been required to prepare a Recommendation Review, but we are considering proposing that this deliverable be required, particularly if our findings here hold true when we look at a larger sample of survey responses in future research.

Implications for Communication Faculty

The research also has implications for the role of communication faculty in action-learning projects. Some programs in our peer institutions do not include communication faculty in action-learning project teams; other schools assume that the communication experts will primarily work to help students edit documents, as if those documents were simply final texts. However, our research suggests that if texts are working documents that help a team perform, then communication faculty can serve a valuable role as facilitators and coaches, helping students get maximum value from the deliverables.

Similarly, this research raises important questions about how we, as communication faculty, should approach grading deliverables in project work. Should we be grading deliverables solely as static products that document work completed, measuring them against a rubric of text qualities? Or should we be grading how effectively the team used the deliverable as a working text to move the project forward?

Implications for Future Research

Finally, it should be noted that this research had two significant limitations: the research focused on a small number of teams and all the teams were academic. Future research should address both limitations. We need to study more teams, from more institutions, to validate and extend our findings. In addition, we need to extend the research to include project teams in the workplace. Do workplace teams, including teams in consulting companies, produce similar sets of deliverables? Do those deliverables serve similar functions and make similar contributions to teams' task and teamwork activities? Is there anything we can learn from workplace teams that will help our academic teams thrive?

Years ago, the writing-across-the-curriculum and the writing-to-learn movements grew out of the strong conviction that working on texts can help individuals find out what they know and what they need to know about subjects. We found this to be the case for the project teams we studied: producing the oral and written deliverables at every stage of project work contributed to both task and team activities. This preliminary finding challenges us to learn more about the potential of project deliverables, not only as a teaching tool but also as a management tool in the workplace.

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Appendix: Project Deliverables Questionnaire

This anonymous questionnaire provides feedback on team work on project deliverables. Thank you for your input.

Circle or name the deliverable(s) just worked on (engagement letter/project proposal, outline/recommendation review/mid-point report or presentation, final presentation or report, etc.)

_____ **What does this deliverable contribute to your overall project?**

For each item below, circle (or place an X by) one number on the 1 – 7 scale to indicate the extent to which it applies.

Not at all *Very Much*
1 2 3 4 5 6 7

1. To what extent did working on this deliverable add value to accomplishing the project?

	1	2	3	4	5	6	7
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Comments:

2. To what extent did working on this deliverable help the team:

Generate ideas	1	2	3	4	5	6	7
Clarify the project objectives	1	2	3	4	5	6	7
Identify issues or problems	1	2	3	4	5	6	7
Uncover any gaps in the team's work	1	2	3	4	5	6	7
Identify potential solutions-recommendations	1	2	3	4	5	6	7
Interpret data	1	2	3	4	5	6	7
Make project-related decisions	1	2	3	4	5	6	7
Prepare for interaction with the client/sponsor	1	2	3	4	5	6	7

Comments:

Get organized	1	2	3	4	5	6	7
Set work priorities	1	2	3	4	5	6	7
Assign project tasks	1	2	3	4	5	6	7
Reach agreement	1	2	3	4	5	6	7
Establish team roles	1	2	3	4	5	6	7
Move forward	1	2	3	4	5	6	7

Comments:

3. To what extent did working on this deliverable:

Reveal a need for follow-up with the client/sponsor	1	2	3	4	5	6	7
Expose areas of disagreement	1	2	3	4	5	6	7
Detract from team progress	1	2	3	4	5	6	7
Strengthen team dynamics	1	2	3	4	5	6	7
Weaken team dynamics	1	2	3	4	5	6	7

Comments:

Help me (or the team) learn something new	1	2	3	4	5	6	7
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Please briefly describe what you learned that was new:

Reveal anything unexpected	1	2	3	4	5	6	7
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Please briefly describe what was unexpected: