

Developing Dialogue Skill— A Qualitative Investigation of an On-Line Collaboration Exercise in a Team Management Course

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Imagine that you and a colleague are sitting in a café discussing specific team-oriented problems or opportunities that you are facing at work. You are asking your colleague to help you identify the source of the problem and develop a solution. He or she is asking you for similar help. When the conversation shifts to your particular situation, you give your colleague as much detail about the situation as possible and respond to your colleague's questions with timely, thoughtful elaboration or clarifying answers. Your colleague will be responsible for asking questions that help clarify his or her level of understanding about the context, the team, and the problems. Together, you may be able to pull back the curtain on your situation and consider tactics that you can employ to capitalize on the opportunity or to solve the problem. The roles are reversed when the conversation shifts to your colleague's particular situation.

The preceding sample assignment is given to students in preparation for a Web-based dialogue activity. The activity described in it simulates a conversation taking place between a consultant and a client, a common situation in many professional endeavors. Software developers, architects, accountants, human resource managers, Web site designers, marketers, and others spend a consider-

ABSTRACT. Business managers, crossfunctional team members, and boundary spanners in organizations often face situations that require the application of dialogue skill, a process of inquiry to create shared meaning or shared understanding among parties. Previous research has suggested that dialogue skill can be developed through use of specifically designed on-line, collaborative activities. In this article, we describe the qualitative investigation of one such activity and Web-based software that can create an environment for developing dialogue skill.

able amount of time and effort collaborating with internal or external clients in an attempt to reach a common understanding of needs, situations, and goals.

Dialogue is one process that emphasizes the importance of communication in collaboration- or consensus-building situations such as the ones described in this activity (Bohm, 1989; Isaac, 1993). In this article, we report on a pedagogic application of on-line software that helps students practice dialogue-type behaviors.

Dialogue Skill

The term *dialogue* comes from two Greek words meaning "between" and "word"; this combination suggests a process of generating shared under-

standing or meaning (i.e., the words between us), rather than transmission of meaning from the mind of a sender to that of a receiver. Dialogue refers to a process whereby the various parties in a conversation create new or shared meaning. A business analogy to the creation of meaning is the creation of a joint venture by two organizations. The meaning that is created is the property of neither one party nor the other, but rather a separate entity created by all. An architect and a customer attempt to create a common vision of what a new home will look like. A software developer and a client attempt to create a common vision of functions that a new information system will perform.

Senge, Roberts, Ross, Smith, and Kleiner (1994) placed dialogue at one end of a continuum with "raw debate" anchoring the other end. According to these authors, one difference between dialogue and debate is that dialogue allows participants to maintain diverse views about how things should proceed. The emphasis is on listening, paraphrasing, questioning, honoring the words of others, offering interpretations, and agreeing on the basic assumptions that drive participants' perceptions of the environment.

Isaac (1993), in his work with dialogue in organizational settings, stated

that dialogue leads to coordinated action among participants by creating an environment in which shared assumptions are allowed to emerge and collective inquiry is valued over debate. Individuals in these settings are better able to listen and tend to direct their attention toward what others are saying rather than toward themselves and what they plan to say. Drawing from the dialogue literature, we can conclude that when dialogue is being performed, the following behaviors will be observed:

1. Questioning to gather information or clarify previous statements
2. Checking comprehension through restating or paraphrasing
3. Contributing insights or information to the conversation
4. Statements of respect, honoring, personal connection
5. Statements that shared understanding or agreement are emerging

On-Line Collaboration

Yogi Berra once said about his wife: "We have a great time together, even when we are not together" (Berra, 1998, p. 115). Though he made this statement before the advent of the Web, it is possible that he was thinking about instances when he and his wife were "together" on the telephone. If so, then we can say that the Web is a tool that provides some opportunities for bringing students together in collaboration-type activities even when they are not together in the same physical space (Leidner & Fuller, 1997). In addition, the Web has a number of useful characteristics that can enhance the process of assessment and learning of skills such as dialogue.

First, an on-line environment captures and stores information that would not otherwise be collected. In a typical case-analysis project, for example, the instructor is able to evaluate only a written or oral report of recommendations by an individual or a team. By requiring students to perform the information-gathering conversation in a threaded discussion, the instructor has the opportunity to assess the degree of consistency between information stored in the discussion and the findings or conclusions presented in the final report. Fur-

thermore, because the participants' statements and questions are recorded, the instructor is able to assess the extent to which the observed behaviors are consistent with those requested (i.e., in this case, dialogue behaviors).

Second, by capturing discussions in an on-line space, on-line collaboration allows students to revisit the conversations as they attempt to link information from later conversations to earlier ones. This review allows them to identify themes or patterns in a series of recorded conversations that might be lost when the conversations are experienced as independent events or when recall is not perfect. When combined with a summary or integrative report at the end of the conversations, this aspect of the on-line environment has similar benefits to those that come from the use of reflective journals. Woodward (1998), for example, suggested that journals are useful for helping students develop "new understandings" (p. 2) when the journal format includes both a diary or record-keeping component and a reflective component. By collecting information over time and then stopping periodically to process and reflect upon the information, students can integrate information and make connections. We contend that the information-capturing characteristic of Web-based discussions is analogous to the diary-keeping aspect of reflective journaling. A final written or oral report can complement this by serving as the analogy to the reflective component.

On-line collaboration also provides an opportunity to create learning communities, develop relationships among students, and minimize feelings of isolation. In many applications of on-line collaboration, communication in early stages of a course are task oriented, with more relationship-oriented statements creeping in as the course proceeds (Baker-Eveleth, Sarker, & Eveleth, 2001). For example, early in the course students' statements are often limited to discussions about the assignment instructions, specific tasks, and desired deliverables. Later in the course, conversations include discussions about the weekend, spouses, children, and jobs before moving into task-oriented aspects of the conversation.

Finally, the on-line environment provides the instructor with an opportunity to focus students' attentions on the task of performing specific dialogue behaviors, thus making students take more notice of the behaviors. Controlling for the impacts of nonverbal cues, for example, is one method of highlighting the importance of attending to the words of a partner in a conversation.

Therefore, we can conclude that an instructor can use the tools in the on-line environment to simulate situations that require the use of dialogue, give students the opportunity to practice dialogue behaviors, develop students' collaboration skill, and sensitize them to the importance of dialogue. In the process, students are required to hear others' viewpoints, which in turn promotes understanding, agreement, empathy, and a newfound respect among professional associates.

Method

In this study, we investigated the performance of students in an on-line activity that required collaboration. Our focus was on whether the dialogue-type behaviors (i.e., questioning, checking comprehension, contributing, honoring, and reaching agreement) emerged. Participants in the study were graduate students in a team management course at the University of Idaho in Moscow, Idaho. The course, taught during spring 2001, included 18 students. Fifteen students were attending school part time while working full time, and three were full-time graduate students. The 15 part-time students attended at a distance, watching lectures either via live compressed video or through videotapes. The three full-time students attended on-campus lectures.

To develop an activity that involved dialogue behaviors, we had to create a situation in which the participants' goals were the development of shared understanding and in which the behaviors to be evaluated were consistent with the dialogue behaviors described above. We used the analogy of two people sitting at a table in a coffeehouse, as in the sample assignment at the beginning of this article. One student explains a specific leadership or team-oriented problem

(drawn from his or her current or past experience) to another student, who is being asked to help. Together, they work to create a common understanding of the problem and then to discuss possible solutions. Each student plays the role of client (the person with the problem) and the role of consultant (the person asked to help) once. Though we have tried variations, in the exercise discussed in this article, each student performed the role of client while being paired with one student and then performed the role of consultant while being paired with another student. This system allowed (a) two conversations to proceed in parallel if desired (at different tables in the on-line space) and (b) students to experience working with two different individuals.

We felt that by assigning consultant and client roles to the students, and limiting the goal to a shared understanding of the problem, dialogue would be necessary for effective completion of the assignment (i.e., the pressure for advocacy or debate would not be as great). Students were encouraged to think of the activity as a joint expedition. They were told that their evaluations would focus on (a) their behaviors during the expedition, (b) whether both parties ended up in a common location at the end, and (c) whether they used the course concepts in analyzing the situation.

In addition to the stated goal, the evaluation criteria that guided this activity were limited to topics that were covered in the course material. Thus, the emphasis was on team and leadership-related situations and problems. The client was asked to recall an unresolved problem from his or her experience (current or past). The consultant and client were required to discuss the problem, using course concepts to identify its potential sources. For potential sources to emerge, we expected that students would have to dedicate a large percentage of time to understanding the situation and agreeing on the facts and their meaning.

The students also were told that, though off-line conversation was possible, only dialogue captured in the on-line space would be graded. Furthermore, they were reminded that the recording of their conversation provided them with the opportunity to revisit earlier parts of the conversation if necessary to help

them process the information and move toward a common understanding.

To provide a space for the on-line collaboration and to document the conversations, we used Speakeasy Studio & Café software, a WebCT-like freeware developed by Washington State University. The dialogue between students at assigned threaded discussion spaces served as the data for our efforts to identify the themes related to dialogue.

To develop students' skills at using the technology and a good level of rapport among them before the dialogue case, we used the on-line software for other tasks before starting the dialogue exercise. Approximately one on-line task was assigned each week. Each task started on Sunday and continued through Saturday. Students were allowed to participate at any time during the week as long as they met the requirements of the task. Tasks included posting and discussing letters of introduction, a book-club type of discussion about a team-oriented project management book, discussions with on-line guest speakers, and a discussion about four archived public radio interviews on the topic of leadership. We gave them specific guidelines about the level and type of contributions needed for maximum points for participation. Reports were required for the book discussion and the guest speaker discussion; the other discussions were sources for take-home-exam questions.

A very transparent process repeated itself in each activity. The students read or heard information and then discussed it among themselves. Finally, they individually wrote about the information and the discussion, using course concepts. By the time the dialogue exercise began, they had performed the steps several times and should have been comfortable with the technology and the process. As with the earlier tasks, all discussions during the dialogue exercise took place outside of class. The primary difference was that 3 weeks were allocated for the dialogue discussions.

Early in the course, we presented a set of lectures on the topic of problem solving, collaboration, and dialogue. Lectures described the difference between transmitting information and reaching a negotiated or shared under-

standing of a situation or problem. We listed the specific behaviors identified as themes in the dialogue literature and presented examples. We asked the students to draw from this information as they considered how to perform the dialogue exercise.

We used two grading rubrics to assess individual performance in the exercise. One rubric was designed to help evaluate the conversations (i.e., how often and how well the students performed dialogue-type behaviors, how responsive they were to questions and comments from their colleagues, and how well the students attempted to apply course material to analyzing each situation). The second rubric was designed to evaluate the students' reports summarizing and integrating the conversations (i.e., the extent to which their papers identified and described useful themes from the discussions, made connections to the course concepts, and used the applications or implications that the discussions had for the students' current or future work situations). Before assigning the task, we posted copies of the two rubrics on the course Web site along with instructions. We encouraged the students to read through both. Thirty percent of the course grade was allocated to this activity.

Results

As described in the method section, students interacted on-line on a variety of tasks. In total, over the course of the semester, the 18 students posted 1,130 comments to the asynchronous space and 114 comments to the synchronous chat-room space, for an average of approximately 69 posts per student over the 16-week semester. Postings for the dialogue activity totaled 378 for an average of 21 posts per student over the 3-week period allocated for the activity.

We interpreted the conversations captured in the 378 postings with an ethnographic approach (Agar, 1986; Van Maanen, 1988) that entailed identifying the actions of the actors and then ordering them into plausible categories (Strauss & Corbin, 1998). Specifically, we looked for statements that (a) referred to questioning for the purposes of gathering information or

clarifying previous statements; (b) checked comprehension through restating, interpreting, or paraphrasing; (c) contributed insights or information to the conversation; (d) demonstrated respect, honoring, or a personal connection; or (e) showed that a shared understanding or agreement was emerging. We list some illustrative statements from the discussions in Table 1.

Among the 378 posts, we found statements and questions characteristic of those seeking additional information in an effort to clarify their understanding of a situation; for example, "I need clarification on one or two comments above. You mentioned. . ." We found instances of statements indicative of interpreting, restating, or paraphrasing behaviors. The following student statement, for example, clearly highlights an attempt by the student to stop the process briefly to check his level of understanding the situation by paraphrasing: "Let me see if I have a firm grasp of your case. . ."

We also found statements characteristic of a person who is offering new information or insight; for example, "In my own experience I (as an employee) have been. . ."; and "One of things we talked about early in the semester was the Pygmalion Effect. Have the general masses started acting as they think that the new owners want them to act?"

Though we found instances of contributing, interpreting, and clarifying behaviors, we also expected to find relationship-oriented behaviors characteristic of collaboration (rather than debate or advocacy-type behaviors). We found statements indicative of respect, appreciation, or empathy for the other party: "Sounds like you have had some interesting experiences"; "Hope that helps."

Because one role of dialogue is to reach a common or shared understanding, it is necessary to observe some indication that the parties in the dialogue are reaching or have reached that point. Most often in this study, statements of *agreement* were provided as evidence of conversations reaching or approaching a common understanding: "I am finding myself nodding my head as I read most of your comments in your e-mail (not nodding off to sleep, nodding in agreement)."

Discussion

Demands from university stakeholders have continued to place a special emphasis on the development of strong communication skills and, in particular, the ability to survive and thrive in a collaborative environment. Collaboration is essential in workplace activities such as working on crossfunctional teams, identifying user needs, and solving business problems. The development of dialogue skills in students through on-line collaborative software should prepare students for organizations that wish to develop climates that value collaboration and consensus building (Eveleth & Baker-Eveleth, 1999).

In this study, we found evidence confirming our beliefs that dialogue-type behaviors would be exhibited by students in an exercise that placed them in the roles of clients and customers attempting to understand a business problem. Students clearly exhibited behaviors representative of gathering information; clarifying previous statements; checking understanding through restating, interpreting, or paraphrasing; contributing insights or information to the conversation; making statements of respect, honoring, or personal connection; and arriving at a shared understanding or agreement. Our findings support the belief that the activity format and the use of an on-line environment are useful in helping students practice dialogue-type behaviors.

The Web environment, in particular, allows educators to hold constant the impact of nonverbal cues. Dialogue involves listening, paraphrasing, and questioning, and a Web-based medium encourages these activities by forcing the participants to "listen" closely to others' words and limiting many of the interfering cues that occur in a live setting. Clearly, eventually the students will need to perform these behaviors in the rich environment of a face-to-face meeting. However, at early stages of skill development, the ability to restrict the impact of other variables is an advantage.

Consider, for example, the training of a pilot for a major airline who has just been promoted from flight engineer to copilot of a Boeing 747. Before taking

flights in the actual aircraft, the pilot is trained in a simulator that allows her or him to focus on the systems and procedures with a limited number of external or confounding factors. Later, in more advanced simulations, the additional factors that complicate the task (e.g., weather, engine problems, approaching traffic) are brought into play. Finally, the pilot is allowed to finish the training in the actual aircraft. This analogy can be applied to the stages of dialogue skill development. The greater the emphasis placed on the words of the conversation, the greater the chance that participants will practice the skills needed to understand those words.

Summary and Conclusion

Educators have numerous tools to select from when trying to decide on the best ways to convey an idea, develop a skill, or alter student attitudes. These tools include blackboards and chalk, paper and pencils, overhead projectors and transparencies, and computer projectors and PowerPoint. The extent to which any specific tool has value to an educator depends on the tool's ability to enhance learning in a specific setting. Though threaded discussions may not be useful in every setting, the results of this study suggest that when the learning objectives are to increase collaboration among students (Kaupins, 2002) or to sensitize students to the types of behaviors necessary for effective collaboration, the Web may be useful. An investigation of how others have used it effectively should give educators the opportunity to assess the extent to which the Web can add value to his or her setting.

In recent years, we have included a dialogue-type exercise using an on-line environment in a variety of settings and courses. Our experience with this exercise and with Web-based software, in general, continues to provide us with opportunities to learn and adapt subsequent exercises. In our current system, we put together three people, rather than two, and give each triad the responsibility of using their allotted time to discuss two or three cases. Dyads will occasionally contain individuals with conflicting grade expectations, or individuals with similar expectations but only one useful

TABLE 1. Sample Statements of Dialogue-Type Behaviors

Themes	Illustrative examples
Questioning to gather information or clarify previous statements.	<ol style="list-style-type: none"> 1. Do the sister plants still manufacture the same products as your plant does, and do they just have a different process for doing so? Or does your plant have discrete differences that could set it apart? 2. Sorry to ask all these questions; I'm still trying to get the picture in my head. 3. I need clarification on one or two comments above. You mentioned. . . 4. Do your employees feel that their jobs are safe, or has all of the restructuring created an atmosphere of fear? 5. Who would you say is the biggest stakeholder? 6. I am unclear what that really entails.
Checking comprehension through interpreting, restating, or paraphrasing.	<ol style="list-style-type: none"> 1. Let me try to read back what I understood. 2. From the description of your team, I get the initial impression that it was more of a single leader work group with. . . 3. Let me see if I have a firm grasp of your case. . . 4. It would appear, without any further information, that you have a pseudoteam. 5. Your dilemma on working with older established engineers sounds all too familiar. 6. As I understand it. . . 7. O.K., it seems to be clear that this problem was not within the scope of. . . 8. I am currently pondering it. . . I am beginning to see a very complex organizational structure that you are working in. It looks like a matrix, but it also seems like there is deviation in the matrix. It also sounds like the challenge that you will be facing when you merge with the other group is how to fit them and your group together into a structure and to define a new unified purpose. 9. In your case presentation, you made the following statement. . .
Contributing insights or information to the conversation.	<ol style="list-style-type: none"> 1. One of things we talked about early in the semester was the Pygmalion Effect. Have the general masses started acting as they think that the new owners want them to act? 2. In my own experience I (as an employee) have been. . . 3. This sounds so familiar to me now; I have been a supervisor for about 12 years and have seen a lot of new supervisors, and we all seem to make the first initial mistakes. 4. I have found myself in a similar situation in my current job. . . The way I am dealing with it is to. . . 5. I can't help but wonder whether. . . 6. I understand your point about time. I know I feel stretched to the limit most days, but it could be important to ask your members. . . 7. I think your idea of extending officers' terms is great. We did this. . . 8. These are just my thoughts. Any comments? 9. I read into it that your sister companies actually compete against you? It seems that you would each maximize your capacity to match the demand. 10. I actually have a real-life example of this situation in my agency.
Statements of respect, honoring, personal connection.	<ol style="list-style-type: none"> 1. This sounds like an interesting dilemma. 2. I think your idea of extending officers' terms is great. We did this. . . 3. Very interesting problem. 4. Hi. I've been out of town the last week, so I apologize for not getting to this. 5. Now I know how my wife feels when I come home from work and she is asking me all sorts of questions about my day, and she complains about my lack of motivated responses. 6. Sounds like you have had some interesting experiences. 7. Hope that helps. 8. I could really appreciate your perspective. . . 9. Hopefully we can take the opportunity to visit.
Statements showing that shared understanding or agreement are emerging.	<ol style="list-style-type: none"> 1. I am finding myself nodding my head as I read most of your comments in your e-mail (not nodding off to sleep, nodding in agreement). 2. You are correct. 3. I agree whole-heartedly that the organization functions as a pseudoteam 4. Anyway, real interesting case and I can see your problem. 5. I think you did a great job of grasping what I was trying to say. I found your questions thought-provoking and insightful. 6. I appreciated the input; your analysis and recommendations were correct. 7. I agree with many of your points and think your recommendations are great. 8. I will use your advice in my discussions with. . . 9. I agree with the ideas about goals, and I think that this falls heavily on the purpose area of the class concepts. 10. This reality check has been a great opportunity for me. 11. You seem to have hit the nail squarely.

case to discuss. The use of triads and the freedom to discuss two or three problems has helped us overcome such frustrations.

A second conclusion that we have drawn from our experience is that Web-based discussions can consume a significant amount of an instructor's time if they are not planned appropriately. First, the choice of software is critical. Though we were happy with the SpeakEasy Studio software, we recently switched to WebCT because it is supported by our university's help desk, which eliminates the need for us (the instructors) to perform the help-desk function for students. In addition, because the university supports WebCT, many students have some experience with the software before starting the course. This familiarity minimizes the time needed for training students in the use of the software and allows them to help one another. With unique or unsupported software, the instructor is often the only expert available for problems and training. Transferring this role to another university department and relying on built-in student experience save considerable time for the instructor.

Another factor that affects the amount of time that an instructor must dedicate to the on-line environment is the instructor's description and performance of his or her role in the on-line discussions. Instructors often place

themselves at the center of the discussions. For example, in a "hub-and-spoke" communication system in which the instructor acts as the hub, students learn that all conversation needs to go through him or her. However, we have found that students respond well to a model of communication that is less instructor-intensive if they are told what it is and why it is useful to them. At the beginning of this article, we presented an assignment using a café setting. We share this analogy with the students and tell them that our role is like that of the café manager and not like that of a customer. Specifically, we use the following statements in course material when describing our role: "The manager of the café is always present, arranging the tables or planning the discussions, but rarely does the manager sit at the tables or get involved in the discussions. The emphasis is on the students, their tasks, and their relationships." We follow through by limiting our urge to dive into the middle of an interesting conversation. To let them know that we are watching, we occasionally will make a contribution to the discussions, send an occasional off-line e-mail to each student praising or questioning something from the discussions, or make reference to specific discussions during subsequent lectures. As a result, discussions proceed in a self-directed manner and the instructor has better control over the

amount and timing of his or her involvement in the discussions.

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