Facilitating Problem Solving: A Case Study Using the Devil’s Advocacy Technique

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ABSTRACT

Numerous facilitative procedures have been developed and used by facilitators to assist groups with solving problems and making decisions. Working with a new student services work group at a university in Denver, Colorado, USA, I employed the devil’s advocacy approach, which programs conflict into a problem-solving procedure through alternate recommendations and critiques of possible solutions by two subgroups. Use of the procedure helped group members to develop a deeper understanding of an important problem—motivating the academic administration and faculty to set and publish accurate course rotations in a timely fashion—and to articulate a series of actions to solve it. This facilitation case study revealed several enabling and inhibitive facilitator behaviors that further the understanding of how this technique can be most effectively used. An agenda for research and application of the devil’s advocacy technique is provided in this paper to stimulate further use of it as a group problem-solving procedure.

KEYWORDS

Case Study, Devil’s Advocacy, Facilitation, Group Problem Solving

EDITORS NOTE

The role of a Devil’s Advocate can be a useful one for problem-solving groups to employ in testing to see if proposed solutions to a given problem are robust and likely to succeed. This article presents a discussion of the Devil’s Advocacy technique as a group facilitation intervention and identifies recommendations for how this technique can be most effectively used.

Task groups must sufficiently analyze the nature of the issues or problems that confront them and develop actionable, productive solutions to address those issues or problems. Unfortunately, sufficiently analyzing problems is often difficult in unfacilitated groups (see, e.g., Schwarz, 2002; Sunwolf & Frey, 2005), and other significant problems may arise in groups not using formal procedures, such as inefficient use of time, premature idea evaluation, conformity pressures, and unmanaged conflict (for a review, see Sunwolf & Seibold, 1999). As a result, many facilitation techniques have been developed to structure group interaction in ways that promote the effective identification and analysis of issues (see Table 1).
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<tr>
<th>Technique</th>
<th>Brief Description</th>
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<tr>
<td>6M Analysis</td>
<td>Using a worksheet, groups examine a problem’s causes from six points of view: person power, machinery, methods, materials, money, and minutes.</td>
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<td>Cognitive Map</td>
<td>Presents an alternative to linear outline formats for organizing information in a graphic form, such that relationships are viewed in a visual, holistic pattern; main points appear in the center and related ideas branch outward, with less important ideas at the edge, with arrows and geometric shapes indicating links among ideas.</td>
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<td>Delphi Method</td>
<td>A group of experts work independently in rounds, with individual ideas listed, reported to all, and individually ranked, followed by additional rounds where rankings are reconsidered in the same way.</td>
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<td>Devil’s Advocacy (DA)</td>
<td>One group member or a subgroup critiques a group’s (or another subgroup’s) plan by raising questions about the plan’s assumptions and consequences, but does not offer a counter-plan.</td>
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<td>Dialectical Inquiry (DI)</td>
<td>Involves successive rounds of creating plans and counter-plans, respectively, by two subgroups, as responses to an issue or problem.</td>
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<td>Expert Approach</td>
<td>Outside experts are brought in as resources to a group to provide advice and recommendations.</td>
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<td>Fishbone Diagram</td>
<td>Graphical technique that uncovers possible causes and effects of process problems by using a process of elimination to help a group focus on significant issues.</td>
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<td>Flowchart</td>
<td>Groups create a graphical representation of a step-by-step process outlining basic underlying structures and employing an agreed-on symbol system, such as rectangles, lines, circles, and arrows.</td>
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<td>Focus Groups</td>
<td>Gathers information regarding an issue or proposed solution from representative groups of people who would be affected by the proposed decision or change.</td>
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<td>Force Field Analysis</td>
<td>A group first formulates a statement of its goal, then analyzes each goal by noting what driving forces make it likely to be achieved and what restraining forces make it unlikely to be achieved, and then addresses how to increase or decrease those forces.</td>
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<td>Ideal-Solution Format</td>
<td>A group answers the following questions, one at a time, to analyze a problem: What is the nature of the problem? What is the ideal solution from the point of view of all involved? What are the conditions that could be changed to achieve a solution? and What is the solution that best approximates the ideal?</td>
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<td>Incrementalism</td>
<td>A procedure designed to incur less risk by exploring solutions that represent small changes from the status quo. It uses small steps that accumulate into meaningful change as a group lists only alternatives that differ incrementally from the status quo, looks for the proposal that offers the best immediate consequences without considering long-range goals, and votes on the best alternative.</td>
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<td>Interpretive Structural Modeling</td>
<td>Identifies relationships among specific items that define an issue or problem after a group has generated ideas by imposing order on the complexity of the items and how relevant items are related in paired comparisons.</td>
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<td>Is/Is Not Analysis</td>
<td>Uses a chart of questions to ensure focus on actual problems: What is/is not the area with the problem? What are/are not the symptoms of the problem? When is/is not the problem observed? Where does/does not the problem occur? and Who is/is not affected by the problem?</td>
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<td><strong>Journalist's 6 Questions</strong></td>
<td>Through these questions, groups quickly structure how a problem is defined by asking: Who, what, when, where, why, and how?</td>
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<td><strong>Mixed Scanning</strong></td>
<td>An incremental decision-making method that breaks down a solution into small steps that are implemented sequentially, with the least expensive and most reversible changes at the beginning, and incorporating a review procedure to identify problems as the solution progresses.</td>
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<td><strong>Multi-attribute Decision Analysis</strong></td>
<td>Aids groups in finding the most efficient series of questions to distinguish an object from a class of objects, by asking what sequence of questions yields the most efficient outcome.</td>
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<td><strong>Multidimensional Scaling</strong></td>
<td>Assists groups in comparing solutions against preset criteria with numerical ratings, with top-ranked items rated on specific criteria, such as desirability and importance, and then sorted into similar groupings.</td>
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<td><strong>Nominal Group Technique</strong></td>
<td>Group members work individually and simultaneously, using a facilitator, to privately list advantages and disadvantages of a plan, publicly list results, and privately rank listed items, after which the average scores are publicly reported.</td>
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<td><strong>Pareto Analysis</strong></td>
<td>Uses graphical diagrams and chart frequencies and percentages of problem categories at different points in time to measure change and identify trends.</td>
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<td><strong>Problem Census</strong></td>
<td>Often used at the beginning of a meeting to guide discussion by polling members to introduce, list, and rank problems for future consideration.</td>
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<td><strong>Program Evaluation and Review Technique (PERT)</strong></td>
<td>Develops a chart to structure which members should do what tasks at specific times to accomplish a specific plan.</td>
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<td><strong>Reflective Thinking</strong></td>
<td>Six pre-constructed questions (What is the problem? What are its causes? What are the solution criteria? What are possible solutions? What is the best solution? and What is the method of implementation?) are considered by a group.</td>
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<td><strong>Risk Procedure</strong></td>
<td>Designed to avoid premature implementation of decisions by asking members to individually identify major risks involved with adopting the preferred solution, with the collective list of risks then considered by the group.</td>
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<td><strong>Single-Question Format</strong></td>
<td>A group focuses on the one thing it wishes to accomplish, and then generates subquestions that must be answered before the group can answer the single question previously formulated.</td>
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<td><strong>Stepladder Technique</strong></td>
<td>Regulates members’ involvement by structuring the sequential entry of members and their ideas about a problem into a core group, beginning by having two members work on the problem, after which another member joins, presents a solution, and discussion occurs, followed by another member joining in the same manner, and repeated as many times until the entire group agrees that the problem is solved.</td>
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Note. Adapted from Sunwolf (2002), Sunwolf and Frey (2005), and Sunwolf and Seibold (1999).

One of these techniques, which capitalizes on the use of constructive group conflict—devil’s advocacy—has received substantial attention, primarily from scholars studying management, organizational behavior, and business communication (e.g., Chanin & Shapiro, 1984; Murrell, Stewart, & Engel, 1993; Schweiger, Sandberg, & Ragan, 1986; Schweiger, Sandberg, & Rechner, 1989; Schwenk, 1988; Schwenk & Cosier, 1980, 1993; Schwenk & Valacich, 1994; Valacich & Schwenk, 1995a, 1995b). However, recent research on this technique has lapsed, perhaps because this technique, along with a similar technique called dialectical inquiry, was developed and compared primarily in laboratory studies and was not directly applied to real-life organizational groups confronting bona fide problems about which they needed to make decisions. Subsequently the technique may also have been deemed
inconsequential. As such, the applicability of this procedure to bona fide groups (Putnam & Stohl, 1996) is largely unexplored and unknown. However, although research on the specific use of the devil’s advocacy approach to problem-solving has diminished, the need for solving challenging problems has not. Consequently, facilitators continue to employ various procedures to help groups effectively define problem causes, generate possible solutions, evaluate positive and negative consequences of those solutions, and select, implement, and evaluate solutions (Ghais, 2005; Hogan, 2003; Schwarz, 2002; Webne-Behrman, 1998). A study presented in this paper explores the efficacy of the devil’s advocacy technique to facilitate group problem solving with a natural work group facing challenging problems. The study applied the devil’s advocacy technique as a group facilitation intervention with a new work group at a university in Denver, Colorado, USA, to address a problem identified by the group as central to its operational effectiveness: motivating the academic administration and faculty to set and publish accurate course rotations in a timely fashion. The technique was employed to help group members develop a deeper understanding of the intricate aspects of this problem and to articulate a series of actions to solve it. This paper first explains and briefly reviews scholarly literature on the devil’s advocacy technique, followed by a description of the specific intervention conducted and an evaluation of its contributions to encouraging interaction in the work group. The paper concludes by setting an agenda for the study and application of the devil’s advocacy technique. In so doing, this case study of the devil’s advocacy technique serves three main objectives: (a) to reinvigorate interest in the devil’s advocacy technique in the scholarly and practitioner communities, (b) to explore the efficacy of the devil’s advocacy technique for practicing facilitators, and (c) to assist a real-world group in analyzing and managing a significant organizational problem.

The Devil’s Advocacy Facilitation Technique

The devil’s advocacy (DA) technique was developed, along with dialectical inquiry (DI), in the late 1960s as aids to corporate strategic decision making and complex problem solving in response to the leading approach to business planning at the time—the expert (E) approach. In Mason’s (1969) formulation of the E approach, members of a planning department or consultants provided “expert” advice as to what plans a company should undertake after, for example, conducting a SWOT (strengths, weaknesses, opportunities, and threats) analysis, examining its personal values and social responsibility, or identifying other relevant data. Mason, however, contended that many of the recommendations emerging from the use of this approach contained hidden assumptions, such as the privileging of economic ends over other social, political, and psychological ends that must also be considered by management, but are not disclosed to management or sufficiently addressed in determining strategy. In contrast, the DI and DA techniques reveal these assumptions and, thereby, offer a clearer perspective of the realities of a problem by structuring the development of and communication of opposing viewpoints. As such, conflict is central to these techniques, with these procedures deliberately creating group interaction through which conflict is expressed and harnessed.

Although several minor modifications of these group facilitation techniques have been devised, the central thrust of both approaches requires two subgroups to develop and critique recommendations, respectively, and then work toward solutions to address and alleviate the critiques. The DI procedure involves the creation of plans and counter-plans, respectively, by the two groups, whereas the DA technique encourages the creation of plans by one group and critiques of those plans by the other group. Both techniques facilitate work toward a final solution acceptable to both subgroups and, therefore, might be considered siblings in the family of group facilitation techniques. Given that I ultimately employed the DA technique in this study, this review focuses on its characteristics, associated research findings, and implications for its use in facilitating groups.

In general, the DA technique begins with a group identifying a recommended decision, plan, or action, which is then subjected to a critique that identifies the plan’s underlying assumptions and raises questions about them, but does not offer recommendations. The original group that recommended the plan then revises its plan and presents it to the other group, which, again, critiques it. This back-and-forth procedure continues until a solution that is acceptable to both groups is developed (Valacich & Schwenk, 1995b; see Figure 1 for a graphical representation of the DA procedure).

Through the DA technique, the contributions of each group member (suggested to positively affect group effectiveness by Mason and Mitroff, 1981) are emphasized, as members are placed in smaller groups where interaction among all group members is increased. The technique facilitates conflict in a structured way to interrogate plans as well as the assumptions guiding them in problem-solving processes. By engaging in structured conflict in this back-and-forth procedure, the DA procedure might require more time for problem analysis than other less structured problem analysis procedures, but promotes more careful identification and analysis of problems, and thereby, reduces the need to revisit the problem in the future.

The DA technique is built on the premise that conflict is positive for group problem solving (e.g., Dreu & Van de Vliert, 1997; Valacich & Schwenk, 1995b), most notably with regard to mitigating groupthink (Janis, 1972), in which groups value harmony more than critical evaluation and, therefore, gloss over important considerations essential for effective group decision making. The DA technique supposes that the inferences and
assumptions that survive the evaluation of other group members are more likely to be valid and worthy of basing decisions on (Mason & Mitroff, 1981). Several laboratory and field studies (e.g., Schweiger et al., 1986, 1989) have suggested that groups in which conflict is prevalent produce higher quality decisions than groups that employ consensus (C) approaches, in which participants are encouraged to discuss their assumptions and recommendations until a final decision is reached to which all members agree. To take advantage of the theorized and realized positive contributions of conflict in decision-making groups, the DA technique forces and formalizes argument and debate among decision makers to systematically evaluate recommendations, and their assumptions, and to promote greater understanding of the strengths and weaknesses of those recommendations. Although Schulz-Hardt, Jochims, and Frey (2002) found that genuine dissent, rather than the contrived dissent programmed by the DA procedure, is more productive in the group decision-making process, they also suggested that by establishing conflict in the group decision process through a facilitative procedure, such as DA, members might become more accustomed to engaging in productive task-related conflict and develop a culture of debate within their group decision-making processes.

At the same time, however, there are potential negative effects of conflict in groups, such as individuals feeling defeated and demeaned, increased distance among group members, suspicion and distrust of fellow members, and hindered teamwork (Schweiger et al., 1986). Consequently, some of the research conducted on the DA technique addresses the negative effects of conflict on group task outcomes, processes, and relationships (examined in the next section). In addition, Mason (1969) suggested that by focusing on problems with solutions rather than making better solutions, the DA technique is not as effective as other techniques, such as DI, which offers counter-plans instead of critiques. However, the research has not borne out that suggestion, as the results of using the DA and DI procedures are largely inconclusive in this respect.

Research on the Devil’s Advocacy Technique

Research primarily has compared DA against other problem-solving approaches, such as the DI, E, and C approaches (e.g., Cosier, 1978, 1980; Cosier & Alpin, 1980; Cosier & Rose, 1977; Cosier, Ruble, & Alpin, 1978). Over the years, results from laboratory and field studies have demonstrated that the DI and DA techniques are superior to the C and E techniques for producing higher quality group decisions, but that the differences between the DI and DA techniques are relatively insignificant (Chanin & Shapiro, 1984; Cosier, 1978; Schwenk & Cosier, 1980; Schwenk & Valacich, 1994). However, Schwenk and Cosier (1980) argued that DA may be superior to DI in some circumstances because “in many decision situations, the true state of the world may lie somewhere between the plan and the counter-plan” (p. 422). It is this “somewhere in between” that the DA technique helps to identify through the recommendation and critique pattern, especially when conducted with care to avoid negative, carping types of criticism (as opposed to balanced, constructive feedback). Negative criticism has been shown to lead to fewer solution alternatives considered, movement to a solution more rapidly, and lower solution quality (Valacich & Schwenk, 1995a).

Because many of the early studies mentioned above conceptualized the DI and DA techniques as processes of individual cognition rather than as group processes, and because participants did not contribute to developing assumptions, recommendations, and critiques (Schweiger & Finger, 1984; Schweiger et al., 1986), debate has ensued regarding whether findings from these studies are valid with regard to group processes. In response, Schweiger and colleagues compared the effectiveness of the DI, DA, and C techniques for group strategic decision making. They found through experiments conducted with MBA students (Schweiger et al., 1986) and 120 rapidly advancing middle- and upper middle-level managers from a
Fortune 500 company (Schweiger et al., 1989), that although groups using the DA or DI procedure performed significantly better than C groups with regard to recommendation quality and stimulating critical evaluation of their assumptions and conclusions, there were no significant differences between the DI and DA techniques on those measures, similar to the earliest studies. In addition, in a comparison of the effectiveness of the DI and DA techniques in face-to-face and computer-mediated contexts, Valacich and Schwenk (1995a) found that across both contexts, groups using the DA technique considered more alternative solutions and produced higher quality decisions than groups employing a DI or E approach. Accordingly, DA groups in the computer-mediated environment required more voting rounds than groups using either the DI or E techniques, which appropriated higher levels of evaluation, eventually leading to higher quality decisions.

Although these studies suggest that the DA and DI techniques are superior to the other techniques studied for solving several different task types, Murrell et al. (1993) explored the effectiveness of the DA versus the C technique for three types of tasks: (a) additive, in which group performance is determined by the aggregation of individual effort; (b) disjunctive, in which a group must select an optimal solution from several solutions championed by individuals in the group; and (c) conjunctive, in which success on the task requires coordination among all group members, with each member making a different contribution. They found that processes in groups using the DA technique enhanced decision accuracy and quality within a disjunctive task, hindered decision making with an additive task, and had no effect on conjunctive tasks.

In all, the programmed critique of the DA technique has been shown to enhance group decision-making performance, especially when a group faces an array of possible solutions championed by various group members. By subjecting possible solutions to continuing critique, the DA procedure promotes thorough and well-reasoned decision making.

In regard to interpersonal issues, such as group satisfaction and desire to work with a group in the future, however, comparisons of DA and DI groups to C groups have shown different results. Murrell et al. (1993) found that group members using a C technique rated the group atmosphere more favorably than those using a DA technique, and Schweiger et al. (1986) found that participants in C groups were significantly more satisfied, desirous of working with their group in the future, and exhibited greater acceptance of decisions than participants in both DA and DI conditions. The data suggests that programmed conflicted techniques may lead to lower member satisfaction and less decision acceptance. Thus, conflict in group process (as employed in the DA and DI techniques) seems to promote better decision-making quality (a good thing), but also lowers group agreement and satisfaction, which may compromise the implementation of such decisions. However, lower levels of satisfaction in DA groups may be an issue of self-fulfilling prophecy, as Priem and Price (1991) found that participants expected greater social harmony when entering C groups than when they entered DI or DA groups, less positive feelings among the members in DA groups than those in C or DI groups, and lower levels of post-decision confidence in the DA and DI groups than in C groups. As such, their study suggests that persons entering DA groups do not expect the group experience to be a positive experience but, instead one rife with conflict, negative feelings toward other group members, and a lack of confidence in decisions made. Consequently, the effective impact of the DA technique may be limited because of the potential for persons coming into such groups to thwart the potentially positive contributions and experiences by behaving in a manner that fulfills their negative expectations within the group.

As explained, research on the DA technique largely has focused on comparing its effectiveness with other decision-making techniques—most commonly, the E, C, and DI techniques. Although the DA technique generally is considered more advantageous than the E or C techniques for the quality of group solutions, the evidence of DA’s superiority over DI still is unclear. Given that the DA technique purposefully interjects conflict into the group process to encourage critical evaluation and generation of additional solution alternatives, it is not surprising that some studies have demonstrated lower group affect and satisfaction—common side effects of group conflict—in DA groups as compared to C groups, and that participants in DA groups expect social conflict and decreased group affect or solution confidence. One has to wonder if there is a chicken or the egg dilemma here in terms of which comes first—expectations of negative affect influencing the group process or actual negative feelings that result from group process.

Looking at the effects of other factors on the DA technique, such as the effects of the communication context (e.g., computer mediated vs. face-to-face), has received only limited attention, as has the tone of criticism employed during the DA critique. In addition, the vast majority of the studies referenced here have been conducted in the laboratory setting, severely limiting the application of this research to natural groups operating with significant challenges in real-world contexts. Many of these laboratory studies also focused on problem solving by individuals, and either did not study the DA technique with groups or did not address the effects of other group process variables on the DA technique within groups. Because of the problems demonstrated in these studies, several scholars (e.g., Murrell, et al. 1993; Schweiger et al., 1986, 1989) have called for further research on the DA technique, and this study responds to that call.
Intervention Utilizing the Devil’s Advocacy Technique

In this case study, I performed a consultation using the DA technique with a group of educational professionals facing a complex and challenging problem. I chose the DA technique for several reasons: (a) The approach seemed more straightforward (than the DI technique) to explain and present to a group inexperienced in complex decision-making procedures; (b) working toward one solution by building recommendations on critiques seemed to be more advantageous than two groups working simultaneously on different plans; and (c) the DA technique, because of its greater simplicity, could be conducted in a shorter time span, about the same amount of time (1.5 hours) as a regular staff meeting of the group. Using a modified DA technique, I facilitated the group to develop several actionable recommendations that could improve the group’s ability to meet its goals. The remainder of this essay describes the site, technique, results, and effects of the implementation of the DA procedure with this natural work group.

The Site

This intervention using the DA technique was conducted with several staff members of the Life Planning Center (LPC) at a university in the Midwestern United States during a regularly scheduled staff meeting. At the time, the LPC was the newest department at this university, the result of a university-wide reorganization of the academic affairs division during the summer of 2006. The LPC directs and provides a comprehensive set of academic and student services, including academic and career advising, disability services, and international student services. During the reorganization, the student development division was assigned to take over all academic advising and services to focus the academic division on faculty and learning issues, as well as to bolster the quality of academic services. Seeking to bring a fresh approach to the assignment, the Chief Student Affairs Officer convened a group of student life professionals (of which I was a part) to design, provide vision for, and launch the new department. The result was a brand-new 10-person office [one director; eight life planning advisors, (two for each class), and an office manager], who took over academic advising from the faculty, subsumed portions of two existing departments (career services and service learning, plus academic services), and developed a completely different paradigm for student advising, such that each student has one advisor who stays with that student throughout his or her entire time at that university. Bringing together all of the services under one roof and staff member (the former director of career services took over as LPC director) required a massive coordination of finding and aggregating students’ files; learning degree plans and course offerings in five academic schools; informing knowledge bases around the institution; hiring, training, and developing the new staff into a cohesive unit; combining numerous student services into one operation; and moving into a newly created office space.

From a staffing perspective, the LPC faced a number of challenges. First, the director of the unit, although extremely committed to student success, was quite inexperienced as a college administrator, supervisor of personnel, and change agent in a large and varied organization, such as this university. Although she oversaw a staff of nine people, managed a huge scope of academic and student services, and led a drastic philosophical change in the way that the institution advises and walks with students through their academic careers, her inexperience in working with various college personnel and information systems hindered the unit from solving its numerous challenges. Consequently, the staff sometimes floundered in their approach to solving problems and they faced difficulties addressing necessary challenges and maintaining relationships with other university personnel. This resulted in a lack of confidence among other university personnel in the LPC and its ability to handle its many responsibilities. Second, the staff members in the office, although quite experienced in various related areas that support the vision of the LPC, were relatively inexperienced in providing the specific academic services offered by the LPC, with several of them being very young employees, only a few years out of college. Thus, this youthful (both in age and experience) dynamic posed an interesting challenge—an extensive lack of experience in strategic decision making—for a group needing to competently address and solve complex problems, and to influence positive change across the campus.

Clearly, the development of this group into a competent and influential group able to fulfill its intended vision on this campus was (and continues to be) a work in progress, and a work under study by administrators anxious for growth in academic service provision. As such, this was a group ripe for direction, leadership, and, in this case, group facilitation.

The Intervention Process

Seeking experience in facilitating problem solving, I solicited a possible site for a problem-solving intervention during one of the regular Student Development Division Senior Staff meetings. At that time, the LPC director offered to think about potential problems in her department that might benefit from facilitation. The next week she posed two broad challenges to me for possible problem-solving facilitation in the next regular LPC staff meeting. In a pre-meeting conference, we collaboratively selected one of the presenting challenges—motivating academic administration to set and publish accurate course rotations in a timely fashion—as the focus of this facilitation, as the issue negatively influenced the LPC’s work and lent itself to a back-and-forth suggestion and critique process, such as the DA approach creates. Thus, during the next LPC regular 90-minute staff meeting, I utilized a modified DA approach modeled after Schweiger et al. (1986) to facilitate recommendation development. Only the director, office manager, and four advisors (half of them) were present for the
meeting; the others were out of the office for various personal reasons.

During the staff meeting, I first offered about 10 minutes of background information regarding why I was facilitating the meeting and the purpose of the facilitation. After that brief introduction, I led the group through the following process: (a) description of the devil’s advocacy technique, including reading a modified version of Schweiger et al.’s (1986) instructions on the DA procedure (see footnote 1); (b) definition of the problem; (c) identification of necessary characteristics of an acceptable solution(s); (d) establishment of two groups, one as the recommending group and the other as the critiquing group; (e) development of arguments and critiques by those groups; (f) presentation of recommendations and critiques, in that order; (g) revision of recommendations based on feedback and development of recommendations by the critique group; (h) presentation of recommendations by both groups; and (i) final selection of action points to address the problem through collaborative effort by both groups (see Appendix A for the agenda used). The following paragraphs describe these steps in more detail.

After reading the instructions for employing the DA technique, I asked if staff members had any questions about the process being undertaken. I asked, in part, because throughout the process, I sought to be sensitive to the needs of the group and to help members with their current challenges rather than simply pursue a research project. Next, before progressing through the steps of the DA technique, I incorporated the first two steps of Gouran and Hirokawa’s (1999) functional decision-making technique—defining the problem and establishing criteria for an acceptable solution—to help the group better understand the intricacies of the problem and to articulate group members’ values and desires as they tackled the problem. In addition, in our pre-meeting conference, the LPC director and I agreed that because of the nature of the problem, it could become very easy to focus on what others (academic administrators and faculty) could do to resolve the problem, given that they had failed to set stable course rotations, but we both wanted to focus the group on what it could do to motivate other responsible parties to take the course rotation problem seriously and fix it. By taking time to clarify the problem, the group realized the importance of staying focused on what it could do rather than on what others could do, and by identifying the necessary characteristics of an acceptable solution, members acknowledged what was important to them in terms of how the motivational techniques would be employed. The group specifically identified the problem as: (a) degree plans and course rotations often change because some courses are dropped due to low enrollment; (b) personnel are unaware of the importance of stable course rotations; or (c) those personnel forget that course rotations have been set but then make changes, and therefore, the institutional culture needs to change to support stable course rotations. In addition, the group determined that acceptable solutions would be: actionable, result in stable course rotations, include connection with and maintain relationships with faculty and academic administrators, influence faculty and academic administrators to desire stability in academic programs, and, ultimately, have positive effects on students.

After defining the problem and the nature of a satisfactory resolution, I broke up the 6-person group into two 3-person subgroups—one to make recommendations and one to critique those recommendations, according to the DA technique. I intentionally assigned members so that each subgroup would have at least one person in it who had worked at that university for at least 18 months (three people met this criterion and three others had worked there only since July or August of that year). The recommendation subgroup had only one person who had at least an 18-month tenure at the university, and the critique subgroup had two such people, one of whom was the LPC director. The recommendation subgroup took 20 minutes to develop a set of recommendations to motivate academic administrators to set and publish stable course rotations. The other subgroup used that time to develop potential critiques of any recommendations the first group might make, based on critical assumptions and data used by the other group. The recommendations subgroup then presented its recommendations and heard critiques from the other subgroup. Following both subgroups’ presentations, I summarized what was said by each subgroup and then sent the subgroups back to revise the recommendations (for the recommendations subgroup) and to develop further critiques and some recommendations based on those critiques (for the critique subgroup). Because there was a finite amount of time to complete the activity, rather than go through another full round of presentation, critique, and revision, I decided that this round of revision would be the last, and after the subgroup offered critiques of the revised recommendations, I asked the entire group to work together briefly to produce the final recommendations.

The revised recommendations included the following adaptations to the original recommendations: (a) Do more than just listen to other groups by telling our side of the story and soliciting assistance from faculty and academic administration, (b) look for an outside model from a peer institution and sell its merits to the responsible parties, (c) prepare for the degree audit program by cleaning up data, and (d) build credibility with outside partners in resolving this problem. The critique group then offered the following evaluative comments: (a) The suggestion to go to an outside school for a model program was good and (b) the customer-service vision needs to be defined because people are intentionally serving students poorly but believe that they are doing what they have to do. At that point, the critiques stopped and it appeared that the group was coalescing around several recommendations. I repeated what I had heard from the group, then I took off my ‘facilitator hat’ for a moment and added a few comments and recommendations. I believed I could offer a useful perspective to the problem as a person who had been involved in the cultural context for a...
significantly longer time than those in the group. The final recommendations were as follows (with my personal suggestions in parentheses):

1. Create listening/gathering support groups with faculty and academic administration regarding the course rotations problem, and use these groups to move toward taking actions to encourage stable course rotations. (During these groups, identify key personnel—faculty, administrative assistants and office managers, and administrators—who are sympathetic to the necessity of stable course rotations and can be influential in their particular areas to help make this change happen. I also mentioned to the group that during my years at that university, I was most effective when working with my middle-management peers across divisions rather than taking concerns to my supervisor and allowing him or her to battle the issue out at the executive levels. I thus encouraged this direction of finding partners in the academic offices rather than seeking an agenda with the vice-presidents. In addition, I suggested a review of Malcolm Gladwell’s 2000 book, The Tipping Point—regarding the role that certain types of people play in spreading epidemics—as a source of information on how to begin to change the culture at that university through relationships and bringing together those interested in a similar cause.)

2. Prepare for and implement, in its time, the Degree Audit program. First, get the data organized and then feed the new system with accurate data.

3. Identify and sell a model program from an institutional peer group of how stable course rotations affect student success and retention. (Using the group of key personnel that emerges from the suggestion under solution A, bring a committee together to select this model program, and sell a similar program to, and implement it in, one or two academic departments at that university. After successful implementation in one or two pilot groups, work with other departments on a one-by-one basis until all departments have adopted the program.)

4. Present the problem to appropriate administrators, addressing issues debunking the financial rationale behind dropping classes without a sufficient enrollment, and the effects on students of not having stable course rotations. (First research the problem and quantitatively and qualitatively assess those impacts on students and on finances, and, if applicable, build the case for how stable course rotations have a positive financial effect on student retention in spite of having to run some low-enrollment courses. Then present the data to administrators, as they are often interested in bottom-line statistics. Build an assessment program and begin to collect data regarding student and financial effects of unstable course rotations. Possibly combine the presentation of such research in the learning/gathering support groups described in A.)

5. Build the customer-service vision by first defining it with academic colleagues and then encouraging adherence to the common vision.

6. Build credibility so that academic colleagues embrace the LPC, as it suggests cultural change in the area of course rotations and its effects on customer service.

Through this process, I wanted to remain a neutral facilitator of the communication processes in the group, consistent with the International Association of Facilitators’ (IAF) Code of Ethics (2004), which states:

We practice stewardship of process and impartiality toward content. While participants bring knowledge and expertise concerning the substance of their situation, we bring knowledge and expertise concerning the group interaction process. We are vigilant to minimize our influence on group outcomes. (#6)

However, I felt prompted by the inexperience of the group to offer some insights because of the group’s newness to the culture at that university and my experience as an implementer of change within that university context. In so doing, I acknowledged my role change—from neutral facilitator to information provider—consistent with the IAF Code of Ethics, which states, “When we have content knowledge not otherwise available to the group, and that the group must have to be effective, we offer it after explaining our change in role” (#6). For the most part, members seemed to appreciate my comments, as they asked, again, for the book that I recommended, and several commented positively about the utility and impact of those suggestions (such evaluative comments are noted later in this essay). After my summary, I asked the group if I had accurately portrayed its final recommendations, and members indicated that I had.

Because time was running short, I began to wrap up the facilitation. First, I, again, explained why we had used a structured format—that the structure sometimes can help to work through problems in ways that bring to the table a variety of viewpoints and suggestions, and submit them to critique, hopefully to arrive at a solution that is beneficial to the organization. Second, I referred back to the list of characteristics of an acceptable solution, developed by the group near the beginning of the session (listed previously), and noted how the set of recommendations as solutions to the problem the members had developed seemed to meet those criteria. Third, I closed the facilitated session by asking members to offer me feedback both on the technique and my contributions as a facilitator, using a written evaluation tool I had given each group member (see Appendix B). The total time elapsed from the opening session to this point was about 95 minutes. The LPC director then asked the group to make some general comments regarding my facilitation performance and the technique itself. The evaluative
data follows, but it should be noted that the final step of the facilitation procedure involved sending the group a summary of the problem statement, distinct from the acceptable solution, and the final set of recommendations that the group developed.

**Evaluation of the Facilitation and Facilitator**

In addition to verbal evaluation, I used an evaluation tool that consisted of several open-ended questions and six statements regarding group affect, critical evaluation induced by the DA procedure, and members’ commitment to and satisfaction with the group recommendations and assumptions (see Appendix C). These statements were assessed using a 5-point Likert scale, with higher scores indicating increasing levels of agreement. While not intended to be statistical in nature, the evaluation feedback presents some useful indicative results. On the two questions that measured group affect, the average response was 4.5, and all scores were either a 4 or 5, indicating that members’ perceptions of group affect were consistently positive with regard to the critical evaluation of assumptions and recommendations. The average score of 3.67 for the item, “The group decision process made me critically reevaluate the validity of the assumptions and recommendations that I did not consider in my individual analysis,” indicated that the facilitation only marginally spurred critical evaluation of individuals’ recommendations. However, the average score of 4.5 in response to the prompt, “The group decision process uncovered valid recommendations and assumptions that I did not consider in my individual analysis,” suggested that the group process resulted in new potential solutions. Finally, members’ level of commitment to the group’s recommendations and assumptions was marginally consistent, with an average of 4, but the satisfaction with those recommendations and assumptions varied, with scores ranging from 2 to 4, and averaging 3.33. This lower level of satisfaction, compared to responses on other questions, may be explained by several comments that expressed dissatisfaction with the hurried nature of this technique, especially for solving a problem that is so multifaceted.

Participants submitted other comments about the facilitation technique as well. In terms of strengths of the technique, members reported: (a) “It definitely stops us from being stuck in a ‘groupthink’ process of problem solving”; (b) “organized, focuses on group dialogue, role-playing can be fun”; (c) “synergy and conflict always get us to better solutions; (d) “ability to critically evaluate and generated effective discussion”; (e) “gets people thinking and talking”; (f) “process was helpful in walking through decision making and felt [like this] was an efficient way of getting somewhere in discussion”; and (g) “conflict does force one to ensure their beliefs are concrete; when others critique you, it allows your plans to become stronger.” Regarding weaknesses, the following comments were offered: (a) “It was hard to be on the recommendation sub-group, having to develop possible solutions that we knew would be critiqued”; (b) “some do not like conflict and have a hard time when others try to dislodge their thoughts or beliefs”; (c) “I think there are ideas we haven’t come up with yet”; (d) “its too easy being [in the critique group] because there’s always ways to shoot down an idea”; (e) “may not be effective if group isn’t qualified to handle conflict or if members are personally tied to their ideas”; (f) “potential for destructive conflict if players don’t agree to play fair”; and (g) “[the procedure is not] a consensus builder; sometimes just a ‘feel-good’ process, narrows problems and solutions too quickly; lacks research in the process, relies of opinion mostly.” Interestingly, most of these comments would be expected in a process that deliberately creates conflict, which, metaphorically speaking, often steps on people’s toes yet helps a group that might flounder in free discussion to advance viable solutions.

Regarding my facilitation of the process, a good amount of constructive feedback was offered. In terms of facilitator behaviors that promoted the decision-making process, members identified the following: restating and summarizing what the group had said, positive tone and personable attitude, asking good questions, keeping the group on task through effective time management and focus on the task, writing down (on large papers, as well as personal notes) group thoughts and ideas, explaining process well, and giving ideas of how to come up with ideas and critiques but having the group do the work of battling through the DA process. In addition, two members commented on the helpful contributions of my knowledge of the context and related suggestions, stating, “good suggestions for assessment and research” and “I really appreciated the input post evaluation; Ryan’s ideas really pulled both sides together.” At the same time, however, some members offered feedback on my behavior that they believed hindered the group decision-making process: “perpetuated ‘old culture’ by saying how things have been done (or not able to be done) in the past,” “would be good to ask one more time if his summary is accurate,” and “slow down the process explanation.” As such, although some group members appreciated my foray into the group’s content, suggesting that my comments added helpful perspective and ideas for further research and assessment, others identified that my involvement actually acted against change by reinforcing status quo or an “old culture.” Hence, further attention to the IAF Code of Ethics, specifically, in regard to maintaining neutrality and taking great care to not influence the group’s outcomes, is necessary for future group facilitation.

Based on the feedback, I would make the following changes in using this facilitation technique: (a) Allow for more time so that group members do not feel rushed (especially when the task at hand is such a considerable issue), (b) be more careful and selective in offering personal insights about “how things have been done in the past,” and (c) be more deliberate and take more time in explaining the technique and ensuring summarization statements are agreed on by everyone throughout the process. Regarding the DA technique, the problem conceptualization and setting standards for an acceptable solution were positive
additions; consequently, I would include those steps again. In addition, I would extend the time (as mentioned above) to ensure that the development of recommendations was not rushed and that discussion was not squelched.

Conclusion

Although this was a large problem to tackle in a finite period of time, facilitation using the devil’s advocacy technique stimulated good group discussion, generated good ideas, and resulted in a set of recommendations that could be used to motivate academic administrators to set and publish accurate and stable course rotations in a timely fashion. Consequently, group members and I believe that this was a successful facilitation. Furthermore, the success experienced by this group utilizing the DA technique is evidence that this technique still offers value to groups seeking to solve problems by inviting conflict, critique, and creativity to create solutions to real-world challenges.

In addition, because of the problems evidenced in the literature review and the possibilities emerging in the present case study, I offer a brief agenda for the revitalization of the use and study of the devil’s advocacy approach in group facilitation. First, like all other research seeking to possess import for real-world groups (see Frey, 1994), future research on this technique (and other techniques) should occur in natural work groups (the emphases here are on natural instead of laboratory and on groups instead of individuals as the object of study). Simply put, the findings from the laboratory need to be tested in the field with groups of people who truly experience, and are responsible for, the difficulties and complexities of decisions in today’s corporate, government, and nonprofit sectors. Moreover, as Schweiger et al. (1986) suggest, longitudinal studies of groups utilizing the devil’s advocacy problem-solving technique would add richness to an understanding of the long-term effects of programmed conflict on groups. This new direction of study with natural groups over longer periods of time will not only further the development of theory but also advance the practical application of the devil’s advocacy technique to solve real-world problems and, thereby, serve as an applied communication tool.

Second, many of these studies are relatively old; in fact, most of the studies reviewed were more than 10 years old, showing that the academic investigation of the usefulness of the devil’s advocacy technique has waned. This research needs to be updated and understood within the ever-increasing cyber-culture, building on what Valacich and Schwenk (1995a) began several years ago with the exploration of using the devil’s advocacy technique in face-to-face and computer-mediated environments.

By controlling the communication channel, the applicability of the devil’s advocacy technique to novel environments, such as virtual teams, could be further understood, thereby moving theory, research, and practice forward.

Third, additional structures (e.g., time limits) regarding how the devil’s advocacy technique is facilitated need to be further explored. As workplaces become more and more competitive, time is often of the essence and quality decisions need to be made within very short time frames. Thus, experimenting with various timing restraints could enhance the applicability of the devil’s advocacy technique to various situations.

Fourth, the devil’s advocacy technique should be integrated into more comprehensive group decision-making models, such as Gouran and Hirokawa’s (1996) functional theory of group decision making (see also Gouran and Hirokawa, 2005). The technique appears to be most helpful for evaluating alternatives, but does not address, for example, clear conceptualization of the problem and the identification of standards for an acceptable solution. Thus, I suggest that these decision-making models need to interact with, and learn from one another. People employing the functional theory, or a similar procedure, could include the devil’s advocacy technique in the evaluation of alternatives stage. In addition, those using the devil’s advocacy technique could preface the programmed recommendation and critique stages with clear identification of the problem and characteristics of an acceptable solution, given that research has shown that attention to these two tasks is a primary determinant of high-quality decision performance (Hirokawa & Salazar, 1999). Such research and application would advance not only theoretical conceptions of problem solving and decision making, but also fuel and hopefully improve group facilitation.

Although the study of the devil’s advocacy technique has dropped off in the last decade, implementation of these future directions for research and practice hopefully can reinvigorate a latent area of study of group facilitation, and help practitioners to better analyze problems and make decisions. Group facilitators might employ the devil’s advocacy technique as a complete and distinct problem-solving procedure, such as done in this case study, or adopt the main principle of the technique, programming conflict into decision-making groups, through the use of other facilitative procedures. No matter how the devil’s advocacy technique is used, it promises to help groups systematically analyze problems and make high-quality decisions.

Appendix A
University Life Planning Center Staff Meeting
12/7/2006
Problem-Solving Session:
Motivating Academic Schools to Set and Publish Accurate Course Rotations in a Timely Fashion
Utilizing a Facilitation Technique: The Devil’s Advocate Approach
Facilitated by: Ryan T. Hartwig

Meeting Agenda

1. Background Information (10 mins)
   • Why I am here
   • What we hope to accomplish
   • Disclaimer
   • Devil’s Advocacy Approach (Read)

2. Define the Problem (10 mins)
   • Schools are not motivated to set and publish accurate course rotations in a timely fashion

3. Break Into 2 Groups (2 mins)
   • Group 1: Recommendation Team
   • Group 2: Critique Team

4. Argument Development (20 mins)
   • Recommendation Team Develops Recommendations
   • Critique Team Prepares Critiques by Discussing Problem
   • Both teams identify assumptions, key data, and facts

5. Presentation of Recommendations I (7 mins)

6. Critique of Argument (does not offer new recommendations) (7 mins)

7. Recommendation Team Develops Recommendations Based on Feedback (10 mins)

8. Presentation of Recommendations II (5 mins)

9. Critique of Recommendation (5 mins)

10. Final Selection of Plan (2 mins)

11. Evaluation of Process (5 mins)

Appendix B
Evaluation of the Facilitation Process

Please answer the following questions using the following scale (circle one for each question):
1 – strongly disagree, 2 – disagree, 3 – undecided, 4 – agree, 5 – strongly agree

I would be willing to work with this group on other projects in the future. 1 2 3 4 5

Working with my group was an enjoyable experience. 1 2 3 4 5

The group decision process made me critically reevaluate the validity of the assumptions and recommendations that I made in my individual analysis. 1 2 3 4 5

The group decision process uncovered valid recommendations and assumptions that I did not consider in my individual analysis. 1 2 3 4 5
I am committed to my group’s recommendations and assumptions. 1 2 3 4 5
I am satisfied with my group’s recommendations and assumptions. 1 2 3 4 5
Please provide your evaluative comments regarding the facilitation technique and facilitator:
What do you perceive as the strengths of this facilitation technique?
What do you perceive as the weaknesses of this facilitation technique?
What behaviors of the facilitator promoted the decision-making process?
What behaviors of the facilitator hindered the decision-making process?
Please provide any other evaluative comments regarding either the technique or the facilitator. Thanks.

References
Facilitating Problem Solving: A Case Study Using the Devil’s Advocacy Technique

Hartwig


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**Footnotes**

1. Because many of the research studies on DA, as well as the particular intervention reported on here, use instructions from Schweiger et al. (1986), they are included below (with minor adaptations made for the present facilitation noted in brackets following the original text):

   The devil’s advocacy approach develops a solid argument for a reasonable recommendation, then subjects that recommendation to an in-depth, formal critique. The critique calls into question the assumptions and recommendations presented to the devil’s advocate, and attempts to show why the recommendations should not be adopted. Through repeated criticism and revision, the approach leads to mutual acceptance of a recommendation. Proponents of this decision-making approach believe that good recommendations and assumptions will survive even the most forceful and effective criticism and that this approach is more likely to yield sound judgments or recommendations. Here are some guidelines and procedures to follow in using the devil’s advocate approach:

   1. Divide your four-person [total] group into two (2) two-person [three-person] subgroups. Assign one subgroup the formal role of devil’s advocate. Separate into your subgroups.
   2. Discuss the Leitch Quality Drugs case [identified problem related to course rotations] with your subgroup partner(s).
   3a. The subgroup that is not devil’s advocate then should develop a set of recommendations and build an argument for them, supported by all key assumptions, facts, and data that underlie them. Write the recommendations, assumptions, facts, and data as clearly and...
thoroughly as you can on the Subgroup I Recommendations form provided for this purpose.

3b. Meanwhile, the devil’s advocate subgroup should prepare for their critique by discussing the case and any critical assumptions, data, etc., which they can identify.

4. The first subgroup presents its written recommendations and assumptions to the devil’s advocate subgroup. The devil's advocate subgroup subjects the recommendations to a formal critique. The critique attempts to uncover all that is wrong with the recommendations, assumptions, facts, and data and to expound the reasons why the recommendations should not be adopted.

5. Following Step 4, the critique is presented to the first subgroup orally and on the Critique form provided. The first subgroup then meets separately once again and revises its recommendations to satisfy the valid criticisms of the devil's advocate subgroups.

6. Repeat Steps 4 and 5 until both subgroups can accept the recommendations, assumptions, and data.

7. Write the final recommendations, assumptions, facts, and data on the Final Recommendations form with which you have been provided. (pp. 58-59)

2 The name of the department has been changed to maintain confidentiality. Because of my association with the LPC and the university, in general, I understand the dynamics of the context of this facilitation with some degree of depth.

3 The following recommendations were presented:
A. Listen first to groups of faculty and academic administrators to understand from their perspective why course rotations are not stable.
B. Push degree audit program (an additional compatible module with the university’s enterprise-wide information system that is intended to automatically recommend and set course rotations based on enrollment in degree programs).
C. Identify a model (in terms of course rotations) academic unit on campus and communicate the merits of its program.
D. Present the problem of course rotations to academic administration and faculty in terms of impact on students and customer service.
E. Encourage a common customer service vision across campus that discourages certain departments from behaviors that result in poor service to students.

4 The following critiques were offered:
A. We cannot wait for degree audit—its development will take too long. In addition, the data in the system from which it will pull is still not good, so there will still be problems.
B. The plan does not address the financial implications that are probably at the heart of the reason course rotations are not set (e.g., courses being dropped because of low enrollment).
C. Programs have to make degree changes, so sometimes the changes in course rotations are mandatory.
D. There is not a model program on campus.
E. If we go to present, there is an interesting dynamic as we move from the student (as we have tried to just soak in information from various departments across campus) to the teacher. It is key to be able to develop credibility here.

5 I believe that this person was referring to my reference of having success in the past by working at lower rather than higher levels (mentioned in point A of the final recommendations).