FACILITATING CREATIVE PROBLEM-SOLVING GROUPS

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Introduction

If you were asked to name the inventors of the telephone, airplane or lightbulb, you would probably experience little difficulty in recalling the names of Bell, the Wright brothers or Edison. In contrast, many people experience difficulty in naming the "inventor" of the 747 jumbo jet, the 800 inward watts number or the silicon chip. Aside from the major differences of level of inventiveness and how much more current the latter three products are, a major difference between these two categories is that the more recent products have been the result of group creativity.

The growing importance of group creativity is being recognized by all types of organizations (Freedman, 1988; Kuhn, 1988). The need for organizations to be competitive, deal with increasing levels of complexity and change has forced managers, administrators, and others who are concerned with the future viability of our places of work to deal with innovation and creativity. Although many think of creativity as primarily an individual affair, there is a need to examine the application of this personal power within the context of groups. Creativity in groups and in individuals is not an either-or affair. When you are concerned with facilitating group creativity you must simultaneously be able to address the issue of promoting individual creativity.

Groups have been defined in many different ways. Most definitions point out that a group is something more than the simple sum of its members. The following definition, provided by Johnson and Johnson (1982), will be used for this paper:

> A group is two or more individuals in face-to-face interaction, each aware of his or her membership in the group, each aware of the others who belong to the group, and each aware of their positive interdependence as they strive to achieve mutual goals.

Hanson (1981) has indicated that "…as society becomes more complex and organizations become multi-faceted, decisions that affect many lives are rarely made by individuals alone. More and more decision making is done within the context of a group." This emphasis upon group creativity need not diminish the significance of individual creativity. Indeed, there are many occasions which call for the application of individual skills and abilities toward the development of creative solutions. This changing emphasis does, however, call for more involvement on the part of individuals working together to achieve efficiency and innovation. Lawrence and Dyer (1983) reviewed the abilities of organizations to structure themselves for innovation. They "…

found no instance of an organization's having a record of high efficiency and high innovation without evidence of active involvement throughout the organization."

Change, complexity and competition provide the impetus for increased creative collaboration. Gray (1989) indicated:

> Finding creative solutions in a world of growing interdependance requires envisioning problems from perspectives outside our own. We need to redesign our problem-solving processes to include the different parties that have a stake in the issue. Achieving creative and viable solutions to these problems requires new strategies for managing interdependance.

Leaders and managers concerned with the most productive means and guidelines for using groups have frequently attempted to gain some clear indications from research in the social and behavioral sciences. It is beyond the scope of this paper to review the relevant empirical literature on the use of groups in problem solving and planning for organizational change (see Bass, 1981; Hackman, 1990; Hackman & Morris, 1975; Hare, 1976; Hare, 1982; Hoffman, 1979; and Lippitt, Langseth, & Mossop, 1985, for more comprehensive treatments). However, it is important to recognize that the current status of this literature does not shed significant light on the subject. For example, Hackman and Morris (1975) indicated:

> In sum, there is substantial agreement among researchers and observers of small task groups that something important happens in group interaction which can affect performance outcomes. There is little agreement about just what the "something" is — whether it is more likely to enhance or depress group effectiveness, and how it can be monitored, analyzed, and altered.

Despite the lack of clear direction from research, groups continue to be important factors in organizational decision making and problem solving. Frequently, the necessary information for solving a problem is scattered in a group. In addition, the acceptance and comprehension of a decision by others is frequently as important as the actual quality of that decision.

If the empirical literature does not provide clear direction for those interested in the effective management of group problem solving, it will be important to identify alternative useful sources. There are a variety of developments which can provide some productive information and assistance. In a recent examination of the basic skills employers seek to be more competitive and to develop successful employees and organizations Carnevale, Gainer and Meltzer (1990) found:

> Increasingly, employers have been discovering that their work forces need skills that seem to be in short supply, skills over and above the basic academic triumvirate of reading, writing and computation. The skills that employers are looking for include problem solving, personal management, and interpersonal skills as well as the abilities to conceptualize, organize, and verbalize thoughts; to resolve conflicts; and to work in teams — all of these skills are critical but often lacking.

Their book provides a wealth of information on the sixteen clusters of skills they found employers demanding. A strong theme through all these clusters was the ability to work and solve problems effectively with groups. Employees need to develop skills which help them meet new challenges and make productive contributions when working in teams.

The movement to develop skills and abilities of teamwork, creative thinking and problem solving is not restricted to U.S. industrial or organizational settings. The movement is occuring on an international level (Colemont, Grøholt, Rickards, & Smeekes, 1988; Grønhaug & Kaufmann, 1988), throughout our educational institutions (Deal, 1990; Isaksen, 1988b; Isaksen & Parnes, 1985; Tuerck, 1987) and within the public sector (Merritt & Merritt, 1985). This increased attention on group creative problem solving has a high degree of relevance for school improvement initiatives, organizational effectiveness, as well as the quality and continuous improvement movement within organizations.

The purpose of this paper is to provide useful information for facilitators of creative problem solving, in other words those interested in using groups to understand problems and challenges, generate ideas and plan to put these ideas into action. This information will include a brief description of creative problem solving; the roles of facilitator, client and resource-group member; as well as a variety of group management issues. The paper will close with some suggestions for those who have recently learned CPS and would like to facilitate its use with others.

Creative Problem Solving

One of the ways to promote group creativity is through the effective facilitation of creative problem solving. Creative problem solving (CPS) is a broadly applicable process that provides an organizing framework or system for designing or developing new and useful outcomes. CPS enables individuals and groups to recognize and act on opportunities, respond to challenges, and overcome concerns.

CPS is not merely "problem solving." The creative aspect to CPS means the focus is on facing new challenges It means seeing these new challenges as opportunities; dealing with unknown or ambiguous situations and productively managing the tension caused by gaps between your vision of future reality and actual current reality. A few of my colleagues prefer to use the terms "Creative Opportunity-Finding" as opposed to CPS, but I feel the "creative" modifier means that we are not concerned with the reproductive, menial or mundane kind of problem solving. Learning and applying CPS is a means toward understanding and nurturing the creativity residing in each of us.

There are many creative problem-solving procedures designed to assist groups to solve problems and meet goals effectively (Egan, 1988; Isaksen & Treffinger, 1985; VanGundy, 1981). It is beyond the scope of this paper to review these procedures (see Isaksen, 1988a, Price, 1985, and Stein, 1975, for more information). Rather, this paper focuses on the notion that these procedures can assist the group in being more deliberate and explicit in better understanding the nature of challenges, opportunities and problems; generating options; and analyzing, evaluating and implementing them. These creative problem-solving techniques have been used in business and industrial settings (Basadur, Graen & Green, 1982; Basadur & Finkbeiner, 1985; Gryskiewicz, 1981) as well as educational organizations (Isaksen & Parnes, 1985). There are also many training programs in creative problem solving available through the Center for Creative

Leadership, the Center for Studies in Creativity, the Creative Education Foundation, the Center for Creative Learning as well as a host of other organizations.

There is an abundance of models and approaches to CPS (Costa, 1985; Gordon & Poze, 1981; Kepner & Tregoe, 1981; McPherson, 1968; Prince, 1970; Sampson, 1965). Some models are rather prescriptive in that they attempt to give the user a detailed map with a particular preplanned route highlighted for use. Other approaches tend to be rather descriptive in that they will provide the user a map or framework he or she can use to find their own way. Whether the model is prescriptive or descriptive all models attempt to outline the stages of thinking or problem solving and provide some indication of the techniques which might be utilized along these stages.

Our view of CPS (Isaksen & Treffinger, 1985) outlines three main components for CPS. The first component includes seeking opportunities and establishing goals for problem-solving efforts, examining the challenge or concern from many different perspectives, and considering many possible problem statements to gain a better understanding of the problem, challenge or opportunity. The second main component includes generating many, varied and unusual ideas and the identifying those ideas which are promising or have interesting potential. The third component is concerned with planning for action. Criteria for analyzing and refining promising possibilities are identifed and then chosen to select, strengthen and support the promising tentative solutions. In addition, emphasis is placed on considering possible sources of assistance and resistance, as well as formulating and implementing a specific plan of action. These three components are used in any order and in any way necessary to help the client(s) meet goals and achieve oportunities.

The important point is that there are many methods and techniques which can be used by a group facilitator to help the group be more effective in balancing creative and critical thinking to provide a more effective type of group problem solving. Our current approach to CPS requires the use of both divergent and convergent thinking to generate and communicate meaningful new connections as well as to analyze, select and develop new possibilities. Knowing and applying these group procedures is a significant challenge for the trainer, teacher, manager, supervisor, executive, or anyone interested in utilizing group resources.

There are many factors for the facilitator of CPS to consider when planning to productively utilize groups. Knowledge of the actual procedures and how they work is the primary set of competencies upon which to build. This knowledge and personal experience in applying the techniques can strengthen the facilitator's understanding of why certain methods may result in certain types of outcomes. Over time, this facilitation expertise can be expanded upon and shared more deliberately with others.

CPS provides a unique context within which to examine leadership and group dynamics. Hackman (1990) sets forth three basic attributes which must be present if the lable 'work group' is to be applied. Groups using CPS are real groups in that they are intact social systems with boundaries, interdependence and differentiated roles among members. They have specified tasks to perform and responsibility to produce outcomes. CPS groups operate within a larger social context in that there is usually clientship for challenges and opportunies on which CPS is

applied. These clients have responsibility to implement and use the outcomes provided by the group. Although effective application of CPS is not limited to groups, some of the most powerful benefits of using CPS can be materialized with small-group application. Consideration should be given to readiness of the group to use various techniques.

The facilitator role: Group-oriented leadership

There are many views and approaches to understanding the concept of leadership. One of the earliest was to focus on the attributes, traits and characteristics of effective leaders. Another approach examined the style of leadership or the balance between concern for task and concern for people. More recently, we are searching to understand the situation and contingencies for the productive application of leadership. Whatever your approach to studying leadership one thing is clear: leadership is related to followership. Gardner (1990) indicated:

> Leadership is such a gripping subject that once it is given center stage it draws attention away from everything else. But attention to leadership alone is sterile - and inappropriate. The larger topic of which leadership is a subtopic is *the accomplishment of group purpose,* which is furthered not only by effective leaders, but also by innovators, entrepreneurs and thinkers; by the availability of resources; by questions of morale and social cohesion; and by much else...

If a decision is made to involve a group in creative problem solving, it is helpful if the style of the leader is consistent with the notion of group participation. It would be counterproductive if the leader were to autocratically order all group members to participate and to insist that they enjoy it. It is also important to understand the unique style and skills necessary for effective facilitation. This special type of group-oriented leadership role focuses on the release and effective utilization of group resources.

During a typical creative problem-solving session, a group is led by someone called the facilitator. The facilitator is the person who takes primary responsibility for the process and procedures with which the group will be involved. The facilitator structures and prepares the environment, acts as a catalyst for releasing and focusing the efforts of group members, uses appropriate methods and techniques, and is sensitive to the variety of group dynamics. For more information regarding the role and responsibilities of the facilitator see Firestien & Treffinger (1983a), Isaksen (1983) and Treffinger & Firestien (1989).

The responsibilities of the facilitator are rather complex. The effective CPS facilitator must also be an excellent trainer or teacher as well as a situational leader. When groups first get together to use CPS some energy must be invested in helping them understand the basic groundrules, roles, and specialized "language" associated with CPS. As the group members become competent and committed, the facilitator can move them into the application of CPS. It is when the group is actually working on a specific task where the facilitator has a highly complex challenge. When the group is actually working in context it becomes very difficult to keep the focus on process. The group will naturally focus a great deal of their attention on the content of

the situation. The facilitator will need to be the one person (or perhaps along with a "process-buddy") who is commited to focusing on the process in which the group is engaged.

Characteristics of an effective CPS facilitator

There are many attributes of the effective facilitator of CPS. Parnes (1985) used the term facilitator to identify:

> ...the leader who draws out, reinforces and facilitates the creative learning, development and problem solving of the people with whom he or she is working. The person facilitating creative behavior is aware of the creative process and first understands it in himself or herself, and then is able to help others see and strengthen it in themselves.

The word 'facilitator' means a variety of things to different people. For those of us concerned with the learning and application of CPS, the concept of facilitation has a special meaning. One of the best ways to describe the concept is to identify those important attributes or qualities it contains. The following characteristics have been identified as key abilities and skills associated with effective facilitation of CPS. The following list is in no particular order of importance, nor is it presented as complete.

Has process awareness and expertise

Aside from all the other abilities and skills that would help the facilitator communicate and effectively manage the interaction between a variety of individual roles, the awareness of a variety of methods and techniques for use during a creative problem-solving session is an important attribute of a CPS facilitator. Having the ability to use a diversity of tools provides the facilitator with an efficient means of meeting the needs of a client by fully utilizing the resources of the group.

The CPS facilitator possesses a clear and productive understanding of the conceptual framework of CPS. This would include knowing the specialized CPS terminology and guidelines, the subtle differences among the concepts of the CPS framework, components, stages, phases and tools. In addition, the facilitator will need to make decisions about the effective application of the many CPS tools. It is also quite helpful to have a number of other process languages at your disposal. For example, it is very helpful to be able to make connections between CPS and Targeted Innovation, Synectics, or Kepner-Tregoe. Some people may not have had direct training in CPS, but have had some experience with another process model.

While the group is learning about CPS, preparing to apply the tools and actually engaged in problem solving, the facilitator must be able to maintain an awareness of the group process and dynamics as well as keep an eye on the time, energy, and client's needs. In short, the facilitator must be able to juggle quite a few issues at once. The major expertise necessary for CPS facilitation is the ability to set an appropriate environment by removing barriers to effective use

of personal and group creativity and accelerating progress toward the end in view. Having awareness and expertise with the CPS process helps to remove barriers and improve the environment for creativity.

Is clear about role

The facilitator also has the responsibility of managing productive interaction with both the client(s) and the resource-group members. In theory, there is a sharp and clear difference among the three social roles of facilitator, client and resource-group. However, when groups are engaged in CPS, these roles become less clear and manageable. The role of the CPS facilitator ecompasses teaching and leading as well as managing the other social roles of client and resource group.

In a sense, the facilitator must function as a 'participant-observer' within the group. When needed, the facilitator provides the necessary process intervention from a content and CPS perspective, but must always have the clear awareness of the purpose and goal of the session.

Has people skills

The CPS facilitator must feel comfortable with a social role which involves a great deal of interaction with other people. Facilitators need to be able to deal effectively with group dynamics, interpersonal skills and communication. Handling those sudden changes of course which groups often provide offers a constant source of challenge to those who choose to work with others. An effective facilitator knows how to observe and utilize the interest and motivation of others toward productive outcomes.

Manages content-process balance

It is important for the facilitator to be able to listen to a client and understand the context enough to comprehend the nature of the problem or challenge. In a sense this means being a 'quick study' for the main ideas and key data within the domain of the client. It is probably quite helpful for the facilitator to have a broad background and a good general vocabulary to help acquire knowledge from a variety of contexts. More importantly, managing the balance between becoming an expert within the specific problem domain and offering appropriate process interventions is a major area of judgment for the CPS facilitator.

Leverages personal experience

The effective CPS facilitator can draw upon a wealth of personal experiences which illustrate key learnings about the process. Some of the most learnable moments occur when a CPS facilitator can share with others specific interactions and events and the rich key learnings they provide. These actual examples really help others learn the value and most productive use of CPS technology. Providing these examples illustrates that it is necessary to have trust in the

process. Sharing these experiences also provides a role model of healthy intellectual competence coupled with genuine and personal disclosure.

Not only is it necessary to have access to past experiences, making good use of current learning opportunities is one of the best ways to insure future productivity. It is possible to learn from current programs and process interventions provided by the facilitators.

Manages divergence-convergence balance

A central dynamic to manage when facilitating CPS is knowing how to diverge as well as how and when to stop diverging. Bringing divergence to a close is not synonymous with convergence. Making the transition to productive application of convergent thinking is a key challenge. Having a deep understanding of the guidelines for generating options as well as analyzing, developing and refining options is a key initial step.

If there is one technique which is the most widely known, it surely is brainstorming. However, it is also quite clear that many people equate brainstorming with the entire CPS framework. It is important to maintain conceptual as well as practical balance when learning and applying CPS. It is nearly unbelievable that many creativity practitioners are still hung up with equating creativity with divergence! Most organizations with which I am familiar have no shortage of ideas, they do have tremendous needs for focus and follow-through.

Has appropriate personal qualities

There are a wide variety of specific personal qualities associated with effective CPS facilitators. I am certain that there is no particular mold from which all excellent CPS facilitators will be formed. However, there are some broad personal characteristics which are likely to be held in a diversity of individuals and in unique ways. Some include: being able to show enthusiasm and having a genuinely-optimistic attitude; having positive beliefs about creativity; having enough belief-in-self to be able to ask the group for help (self-confident enough to indicate how much you don't know!); having a sense of humor; and a high degree of personal integrity.

Manages logistics

A major responsibility of the facilitator is the establishment and management of a productive learning and thinking environment. Being able to manage the planning of a wide range of details is very helpful. Some of these logistical issues include: having a variety of available resources; arranging the sitting so that there is adequate eye contact; preparing people to dress casually (where appropriate); demonstrating to those involved in the training and group sessions that their needs have been considered and many others.

Dealing with logistics is often minimized as an important quality of effective CPS facilitators. The larger issue is maintaining an appropriate balance between strategy and tactics. There have been sessions that have not worked as productively as they might have because no

one was concerned with making sure there was a flipchart or markers or had the ability to hold an effective planning meeting.

Can teach and train

Before the facilitator can engage individuals and groups with CPS, they must be certain that they are as prepared as possible to benefit from the process interaction. One of the most important roles a facilitator can perform is that of educator...bringing out that which is within.

Before groups are in the position to apply CPS, they must know the language, guidelines and tools. Often this means providing very individualized approaches to learning the necessary prerequisites. It can also mean designing and providing very explicit and deliberate large-scale training programs.

Matches style to situation

The facilitator must be able to manage the transition from teaching and training to actual engagement on a real challenge. This requires that those involved know enough about what they need to do and are ready to apply CPS. This requires a series of assessments regarding the competence and commitment of group members to effectively use CPS. One of the worst mistakes to be made is to assume that because everyone knows how to brainstorm, that they are ready for effective application of CPS technology.

A situational approach to providing leadership is absolutely necessary. Moving individuals and groups from a learning mode to a doing mode, and then reflecting on that which was done takes a special level of expertise and lots of practice.

Managing the client(s)

It is important for group members to know that their efforts have some meaning and relevance. This can be achieved only if someone within the group has a sincere interest in implementing the solutions the group generates. Thus, the facilitator interacts with a client. This is the individual who has decision-making authority or ownership over a particular situation or challenge. The role of client in CPS groups supplies content-related expertise and provides convergence and decision making during the group's session. The client helps to keep the group on track by clarifying the situation, choosing directions and approaches, and participating in the group's session. In the final analysis, it's the client who needs to have a problem solved or an opportunity reached. Therefore, the role of client is an important one in determining the effectiveness and productivity of the group's effort. (For more information on the client's role see Firestien & Treffinger, 1983b.)

Clients need guidance from the facilitator for making choices and judging at appropriate times, and they need to have support for permitting, encouraging and participating in the

divergent activities of the group. Clients must demonstrate sincere interest in working with the group and process to bring about change. For clientship to be present, there must be room for a new approach or fresh idea which the client is willing and able to implement. The client must also have enough clear influence to implement the outcomes of the CPS process. This type of ownership builds commitment to the group process and helps in the development of effective groups.

The role of client helps to provide the group access to a clear definition of the task at hand. The client shares the most important background data and provides other information the group needs to know before proceeding. Elements of the client's task must be specified and have clear connection to his or her responsibilities. In short, the client provides much the expertise necessary for productive problem solving.

Many times it is possible to identify one clear client. At other times, the ownership is distributed within a group. More broadly, there are some challenges and opportunities that have widely distributed ownership. For example, all of us are currently concerned about global warming or the threat of nuclear destruction. Managing group clientship provides the facilitator an even more complicated challenge. Usually, group clientship requires special attention to the convergent aspects of CPS. It may be necessary to modify the process technology, the time-frame within which the group will work, and other factors when working with more than one client.

Characteristics of an effective client

First, a distinction must be drawn between client and clientship. A client is a person who has a particular social role before, during and after a CPS session. Clientship is synonymous with ownership. Ownership implies that there is: sufficient motivation or interest to work on the problem or challenge; there is sufficient authority, responsibilitiy or influence to take action; and there is a need to consider novel approaches which require the use of imagination. In addition to ownership, there are a number of other characteristics held by many of the most effective clients with whom we have worked. A few of the more important of these characteristics are described below.

Genuinely interested in taking action

Effective clients are interested and motivated to deal with the problem situation. They display a positive attitude and commitment by attending all and actively participating in planning meetings and group sessions as well as by taking action on the outcomes of meetings. They actively seek involvement and contribution from others.

Has authority and responsibility for problem situation

Effective clients have the authority and responsibility to take action on the problem situation. They are able to engage in CPS, see value in its use and take action on its outcomes. It is possible for a client to be a 'sole proprietor' as well as a 'stakeholder.' Ownership may be closely held or widely distributed. In either case, the actual level of responsibility and breadth of accountability for implementation must be clearly identified.

Willing to change or modify paradigms

Effective clients are willing to change or modify existing ways of doing tasks. They consciously seek novel and imaginative outcomes. They promote the involvement of 'outsiders' as resources to assist in providing a diversity of novel perspectives.

Committed to the use of CPS

Effective clients understand the value of CPS and are willing to provide the time, energy and planning necessary for productive outcomes. They see value in all three CPS roles (client, facilitator and resource group) and take the responsibilities associated with their role seriously. They actively collaborate with facilitators to plan, deliver and debrief the CPS session.

Trusts CPS process

Clients often become involved in CPS activities with which they may not be familiar. Effective clients trust the process in that they follow the guidelines and principles necessary to provide the desired outcome or result. They remain open to the generation of novel and unusual perspectives and tolerate the ambiguity which might accompany the use of certain CPS principles and techniques.

Flexible in thinking and perceptions

It is often necessary to 'shift gears' and pursue new avenues or directions. Effective clients remain open to the changes in direction. They listen and accept different approaches taken during various stages and phases of CPS. They stay open to the fact that they might 'change their mind.'

Has good people skills

Effective clients have the ability to make others feel at home and supported. They 'read' the facilitator and resource-group members and know when and how to respond. They maintain an appropriate level of eye contact with others, listen carefully to options, their non-verbal

behavior matches the purpose of the session as well as their verbal comments; and they provide an appropriate level of encouragement without smothering or controlling the session.

Has integrity

Effective clients have a strong set of beliefs in the value of diversity and the importance of unleashing human creativity. They see value in working with people to identify and solve problems. They see people are part of the solution, not the problem. They are honest in dealing with others and themselves. When the possibility of a 'hidden agenda' emerges, they are able to identify it openly and find productive alternative approaches.

Has expertise in the problem area

Productive CPS outcomes can often be influenced by the knowledge level and experience of the client. Effective clients are knowledgable in the problem area to the point that they can communicate the nature of the situation in a simplistic and understandable manner. In effect, they know their area so well that they could describe it to an eight-year-old child. The client's knowledge and expertise is often necessary for making some sense out of the novel perspectives generated during CPS. There may be special applications of CPS with groups of experts within a particular content domain. Generally, however, if there must be an expert in most CPS sessions, it should often be the client.

Has process awareness

Effective clients are willing to learn and understand the CPS process. They have a general level of awareness of the roles of a CPS session, how the techniques will operate, and can effectively communicate with the facilitator and the resource group using CPS language. After applying the process, they often engage in a post-session meeting designed to provide feedback about the general level of productivity, identify the outcomes which were most useful and intriguing, how the techniques generated the variety of outcomes, and able to identify if and how the application of the CPS process added value.

Effective clients often take the responsibility for communicating these learnings to the facilitator and the resource-group participants. They see the entire affair through a systems approach. They actively seek out productive learning from the investment everyone has made in the CPS session.

Client-Facilitator Planning Meeting

One of the most important ways the facilitator can manage the CPS client is to design and manage an effective client-facilitator planning meeting. The purpose of the client-facilitator planning meeting is to establish the direction for the creative problem-solving session or activity.

The focus is upon identifying the desired outcome and establishing the appropriate process agenda. It may be helpful to consdier the following suggestions when approaching this special kind of meeting.

Clarify roles and expectations

The meeting between the client and facilitator is very important to insure the appropriateness of using CPS on the client's task. CPS is not a panacea, so the facilitator needs to determine the match between the CPS process technology and the actual challenge upon which the client will work. It may be necessary to refer the client elsewhere, provide additional planning time or simply advise against using CPS. There is no magic to the productive application of CPS. This meeting provides the opportunity to brief and coach the client to increase the likelihood of a successful outcome.

• The facilitator and the client meet to discuss their respective roles and responsibilities.

• Client and facilitator agree to use CPS as a road map and common language to address the challenge, problem or opportunity.

• Facilitator checks the advisability of using CPS on the client's challenge and determines, with the client, the next steps.

Identify outcomes and obstacles

The client-facilitator planning meeting also provides the opportunity to become familiar with the client's context. While listenting to the background provided by the client, you have the chance to check out the orientation of the client as well as the outlook on the situation. Depending upon the time-frame of the meeting, you may wish to obtain more specific and detailed information on orientation and outlook, but it is most important to the purpose of the planning meeting to help the client see a variety of possible perspectives on the situation or challenge.

• The facilitator and client work together to generate a variety of outcomes and obstacles.

• The facilitator uses a variety of invitational stems like WIBNI or WIBAI to generate many varied and unusual options.

Select a direction and establish ownership

After assisting the client in examining a variety of pespectives on the challenge, it is important to converge on a preliminary area upon which to develop an appropriate process plan.

This direction will be the focus of the CPS session and provide the context or framework to identify data, criteria and elements for the plan of action.

• The client converges on those outcomes and obstacles for which he/she   has ownership.

       -       Does the client have influence?
       -       Does the client have interest?
       -       Is the client willing and able to use imagination on the task?

• The facilitator helps the client to formulate a clear statement of the particular desired future state (broad, brief and beneficial) for the situation.

• The facilitator works with the client to understand that the selected statement describes a general direction to pursue; not a specific statement   of the problem. (That happens later in the process.)

Plan to use process

After the direction is set and the context is determined, the next step is to develop a specific plan for applying the CPS process. Since CPS is a broad framework, it is necessary to tailor its use within a specific context. An outcome of this meeting (or another meeting, if time does not permit) is a specific plan to brief the resource group on the results which help them understand the client's direction. Although the resource group members do not necessarily need to be experts, they need to know enough about the context and direction to be helpful. It is important to use the client's expertise on the problem or opportunity to develop the most productive CPS process intervention.

• The facilitator provides the client with an overview of the CPS Process   and its components.

• The facilitator working with the client determines and designs the appropriate process agenda.

• The facilitator and client work together to determine the appropriate utilization of groups in the process design.

• A plan is devised to communicate the results of the session with resource   group participants (memo, video, graphics, samples, etc.).

Plan for session and logistics

There are many additional things you can do to increase the likelihood of a productive CPS session. One of the most tangible ways to prepare for the seesion is to think about the actual physical arrangements for the meeting. This is especially important if you will be using group resources. A convenient way to deal with these concerns is simply hire a meeting planner. If this is not an option for you, please consider the following information.

• The facilitator helps the client prepare for the actual session (To include   the use of audio-visual aids, charts or pictures, etc.).

• The facilitator and the client discuss the criteria for group membership   and the appropriate limits for diversity of perspectives.

• The facilitator coaches the client regarding the appropriate behaviors to be   used during the CPS session.

• The facilitator briefs the client on the technology to be used during the session.

• Resource-group participants are invited and informed of the purpose,   time and location for the session. The memo may also provide a brief   summary of the client's direction, key data, and rationale for using CPS.

• Room arrangements should be made to be conducive to the purpose of the   session (visibility of flipcharts, eye contact with group members, etc.).

• Support materials should be arranged (including technique handouts,   post-it pads, markers, etc.).

• Facilitator and client should establish and agree upon an appropriate   time line.

Plan to debrief the session

One of the most productive ways to learn from the investment of time, energy and other resources which were used during the CPS session is to plan to capture the key learnings and identify the most and least productive or valuable aspects from the experience. This will be very helpful in your future work with that particular client and with many future clients.

• Check points for monitoring and evaluating the outcomes of the session   should be prearranged between client and facilitator.

• Goals for the session should be made explicit in order to determine if the   session was a success.

• A plan should be developed for handling the output of the session.

• The issue of giving feedback to participants is discussed. If required, a   plan to deliver feedback is developed.

• An actual debriefing session is planned to identify key strengths and areas   for improvement.

Tips for client-facilitator meetings

• **Listen Carefully** - This is your opportunity to check out the client's perception of the challenge and insure their comprehension of the planning process. Encourage your client to say back in their own words what you are sharing.

• **Be willing to "just say no"** - Negotiate the session very carefully. Sometimes the best thing you can do is identify that CPS is not the most effective approach for the client. It is often helpful to build in some incubation time after a client-facilitator planning meeting to enable you to determine of CPS is appropriate and if your are the person to facilitate the session.

• **Make it a real meeting** - The client-facilitator planning meeting should not be sandwiched between two more important meetings or given a lower priority than the typical stream of work that confronts any busy professional. After conducting a few meetings, you may find it helpful to develop your own personal protocal including a special form to be filled out or a checklist to share with the client. Keep it deliberate and explicit.

• **Be prepared** - Be ready to share some examples of successful sessions and identify what you think made them work so well. You may also find it helpful to have a few worst-case examples to show what can happen if certain aspects of planning are not dealt with successfully. It may also be useful to provide your client a list of references of the actual clients in these examples. (This is another reason for the importance of debriefing and making this kind of arrangement with your clients.)

• **Use a process buddy** - It can be very important, especially for the first few times, to ask a more experienced (or equally experienced) facilitator to join you for the planning meeting. Just having another pair of eyes and ears can help avoid some of the pitfalls and maximize the value of time invested.

• **Bring support materials** - You may it very helpful to have some key handouts you used when learning about or applying CPS. Do not consider this cheating, just excellent evidence of preplanning. Key handouts or graphics can help you make your point and help to keep you on track. Try assembling your own personal facilitator survival kit.

General tips for managing clients

• **Keep the ownership where it belongs** - Sometimes clients may want to share the actual problem with you. Watch out for the monkey being placed on your back. Although clients can

be very desperate and need to use CPS very much, care needs to be taken that they do not use you to "whip the group into shape" or "do the dirty work."

• **Don't be afraid to call a 'time-out'** - If your client presented a false front during the planning meeting and pulls out a few major surprises, you may need to create the opportunity for an honest revisit of the expectations you set. Calling a 'time-out' is infinitely better than trying to run the wrong session.

• **Check the credibility of your client** - Almost anyone can present a facade for an hour or so. It may be very helpful to check your perceptions with a few savvy insiders prior to the session. The client may play favorites with the selection of the resource group, may be known for certain inappropriate behaviors which you would want to prepare for, or could be known to be uninterested in self-awareness and couldn't have prepared you for these planning aspects.

• **Check, check and recheck ownership** - If there is one most important factor in a successful CPS session is that it must be real. If your client has a list of things that would never work, does not appreciate 'soft science,' or has no intention of acting or responding to the outcomes of the session you may need to walk away, postpone or renegotiate.

• **Stay down to earth** - A client can sometimes see your process expertise as magic and treat you like a magician. This can often give you quite an ego lift. Watch out for playing into this one! Although it may be hard and you may have a great deal of charm, charisma or other talent, try to keep your work in the arena of what is natural, deliberate and repeatable. I remember a session where I was talking about God's creativity and while I was talking (in a tall observation tower) I told the group that I reserved the number ten for the kind of creativity that God provides. At that very moment, the lightening struck and thunder roared. A few people in the group asked me if I could do that again! It would have been very sad if I had actually tried!

• **Try to reward good client behavior** - In building an effective relationship with your client find opportunites to:

    - Say thank you: write thank-you notes, just say thanks, have their boss   send thank you letters or memos. etc.

    - Remember their needs: send them articles or resources as follow up to   your session, practice some networking to connect others to your client, etc.

    - Talk about them to other groups: spread the work about their productivity.

    - Drop in for an informal visit to just say 'hi.'

The Resource Group

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Facilitating Creative Problem Solving
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The other members of the creative problem-solving group are called participants and they function collectively as the resource group. These group members suggest options and provide a wide range of alternatives during the session. Effective resource-group members show an interest in the client's content, but do not make decisions for the client. They support the decisions the client makes and provide a divergent range of possibilities from which the client can choose. In short, they practice effective listening strategies and find ways to make productive contributions to the problem-solving session.

Resource group members provide energy, diversity of experience, and a variety of viewpoints. The facilitator's challenge is to capitalize on the group's assets and limit their liabilities by providing the necessary balance of creative and critical thinking processes in meeting the needs or goals of the client. Effective use of CPS requires a dynamic balance between using deferment of judgment to diverge and generate options and using affirmative judgment to converge, analyze and develop options.

Another major challenge to the facilitator of creative problem-solving sessions is to effectively balance and reinforce the roles of facilitator, client, and resource group. Part of this responsibility includes making these roles explicit for all group members so that everyone knows what is expected of them. Although it is beyond the scope of this paper to thoroughly examine the functional roles of group members (see Benne and Sheats, 1948; Isaksen, 1983), these three roles provide the basic interpersonal framework for the facilitation of creative problem solving in groups.

Deciding to use a group

Many people who have attempted to use groups for developing novel and useful alternatives find out that using groups is not always easy, pleasurable or effective. Using groups has both positive and negative aspects.

In considering whether or not to use a group for obtaining a better understanding of the situation, generating options, or making a decision the facilitator needs to pay attention to a number of key factors. These factors include: aspects of group development; the skills and styles of leadership; the roles of client and resource group; group orientation, composition and size; process technology; and the structure of the environment. In addition, the facilitator may need to consider the required quality of the outcome as well as the needed level of acceptance from group members.

The following table, describing assets and liabilities of using groups, has been developed by weaving together the work of Maier (1970), Vroom (1974), Van Gundy (1984):

Table 1

Potential Assets & Liabilities of Using a Group

Potential Assets of Using a Group	Potential Liabilities of Using a Group
1. Greater availability of knowledge and information.	1. Social pressure toward uniform thought limits contributions and increases conformity
2. More opportunities for cross-fertilization; increasing the likelihood of building and improving upon ideas of others.	2. Group think: Groups converge on options which seem to have greatest agreement, regardless of quality.
3. Wider range of experiences and perspectives upon which to draw.	3. Dominant individuals influence and exhibit an unequal amount of impact upon outcomes.
4. Participation and involvement in problem solving increases understanding, acceptance, commitment, and ownership of outcomes.	4. Individuals are less accountable in groups allowing groups to make riskier decisions.
5. More opportunities for group development; increasing cohesion, communication and companionship.	5. Conflicting individual biases may cause unproductive levels of competition; leading to "winners" and "losers".

When considering the use of small groups for CPS the facilitator needs to evaluate the existence of the liabilities and assets. The goal is to maximize the positive aspects of group involvement while minimizing the liabilities. For example, as the facilitator can increase the the productive use of diversity the likelihood of individual dominance should decrease. In general, if there is a need to provide for participation to increase acceptance, if the information is widely held, if there is a need to build on and synthesize the diverse range of experiences and perspectives or if it is important to develop and strengthen the group's ability to learn, you may choose to involve a group in CPS.

Group Development

Once the group leader has decided that the resources of a group should be convened, there are a number of dynamics to consider. One of the first of these is the notion that groups go through certain phases of development (Bales & Strodtbeck, 1951; Lacoursiere, 1980; Tuckman, 1965). Groups are not static. Like individuals, they are unique, dynamic, complex living systems, capable of learning and development. Figure 1 depicts the Jones (1983) model for group development. According to this model, the stages a group goes through while moving toward some desired goal are relatively predictable and controllable. In reality, it is quite clear that in practice these stages are not necessary linear and sequential. Some groups seem to skip stages, others will approach them in reverse order. Still others will reach a level and need to begin all over again because a new member has joined the group. One of the classic leadership dilemmas is getting the work done while at the same time maintaining positive human relations. It is this essential tension which is nicely displayed below within the context of group development.

Figure 1
A Model for Group Development
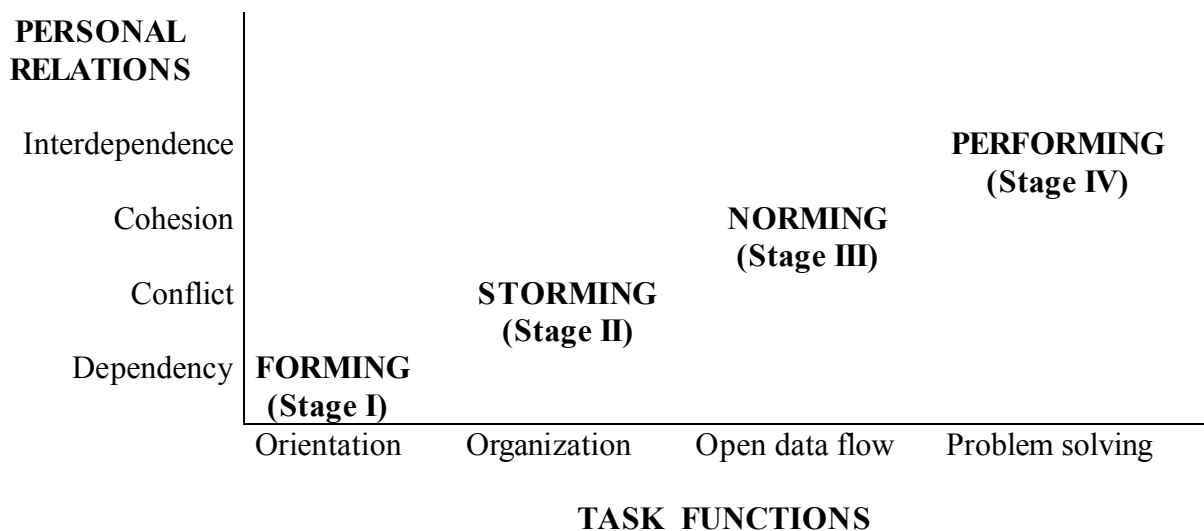
Understanding where groups are and where you want them to be can be helpful in planning for maximum effectiveness and productivity. The two dimensions of the model are personal relations and task functions. In other models these dimensions go by other names, but a number of people involved in group development have identified these two dimensions as being central to the process. The classic leadership dilemma is getting the work done while at the same

time maintainting positive human relations. Some balance is sought between concern for people and concern for task (Blake & Mouton, 1964).

The personal relations dimension refers to the development of the 'human side' of the activity that occurs in the group. Whether it is a task group or a growth group people progress in development from individuals to group members to people who feel some attachment to each other and finally to people who are able to link up in creative kinds of ways. Personal relations involve how people feel about each other, how people expect each other to behave, the commitments that people develop to each other, the kinds of assumptions that people make about each other, and the kinds of problems people have in joining forces with each other in order to get work done. The assumption is that the kinds of groups that are referred to here are all organized for the purpose of achieving goals, tasks, production, etc. and that personal relations refers to the human component in the accomplishing of this purpose.

The other dimension is task functions. Characteristic behaviors can also be identified in the different stages of group development with regard to task. A group comes together, learns what the task is, mobilizes to accomplish the task, and does the work. So the two dimensions, personal relations and task functions, form a matrix in which there is an interaction between characteristic human relations and task-oriented behaviors at the various stages of group development. Of course, no two-dimensional model can completely subsume all the data of group interaction without a loss of some precision. The purpose of looking at group development in this relatively simplistic way is to underline the importance, not only of the two dimensions —human and task— but also to provide a common language whereby group members can explore the emerging characteristics and parameters of the group.

Stage one: Forming

In the initial stage, called forming, personal relations are characterized by dependency, and the major task functions concern orientation. In the beginning of the group's life, the individual members must resolve a number of dependency problems and characteristic behaviors on the personal relations dimension. They tend to depend on the leader to provide all the structure: the group members lean on the facilitator, chairman, or manager to set the ground rules, establish the agenda, and to do all the "leading." The parallel stage in the task function to be accomplished is the orientation of group members to the work that they are being asked to do. The issues have to be specified. The nature of the work itself has to be explored so there is a common understanding of what the group has been organized to do. Common behavior at this point is questioning why we are here, what are we supposed to do, how are we going to get it done, and what are our goals?

There are clear implications for the CPS facilitator when the group is at this stage of group development. This is the stage where the skills associated with training and teaching are critical. The CPS facilitator must take charge long enough to provide a basic orientation for the group and lay out basic groundrules for operating together.

Stage two: Storming

Stage two is characterized by conflict in the personal relations dimension and organization in the task functions dimension. It is referred to as "storming" because interpersonal conflict inevitably ensues as a part of small group interaction. It may be that the conflict remains hidden, but it is there. We bring to small group activity a lot of our own unresolved conflicts with regard to authority, dependency, rules, and agenda, and we experience interpersonal conflict as we organize to get work done. Who is going to be responsible for what; what are going to be the rules; what are going to be the limits; what is going to be the reward system; what are going to be the criteria? The variety of organizational concerns that emerge reflect interpersonal conflict over leadership structure, power, and authority.

When learning and applying CPS, members of groups will often have different perspectives on the use of techniques or guidelines. Often questions are put forward regarding the value or appropriateness of CPS. On the one hand, it is important for this type of disagreement or questioning to occur. On the other hand, it must be met with effective answers, explanations and modeling. The CPS facilitator must be able to respond effectively to this kind of storming. Identifying the three roles, having a good understanding of the needs of the client and selecting the group members carefully can often pay dividends during this stage of group development. Managing interpersonal tension regarding options or ideas is critical at this stage. Keeping this kind of tension separate from personal tension where individuals might attach the person to the idea is also important. Groups must often be helped through this stage or they will not form into a more cohesive unit capable of high-level performance. This is the stage at which effective application of situational leadership is needed. Some members will be done with storming at different times.

Stage three: Norming

In stage three, the personal relations area is marked by cohesion, and the major task function is data-flow. It is during this "norming" stage of development, assuming the group gets this far, that the people begin to experience a sense of "groupness," a feeling of clarification at having resolved interpersonal conflict. They begin sharing ideas, feelings, giving feedback to each other, soliciting feedback, exploring actions related to the task, and sharing information related to the task. This becomes a period during which people feel good about what is going on; they feel good about being a part of a group, and there is an emerging openness with regard to task. Sometimes during stage three there is a brief abandonment of the task and a period of play that is an enjoyment of the cohesion that is being experienced.

When CPS groups reach this stage, it will be important for the facilitator to provide some recognition and celebration of the success of the group. It would be analogous to the feast following the hunt or the song after successfully managing a boat through the whitewater. A major challenge for the facilitator is to channel this positive energy onto the client's task. It is often at this stage that facilitators begin to feel the energy and weight of the group whereas at earlier stages the goal structures were more individualistic and competitive. Now the group may want to cooperate on every task and get hung up when they can't be "...all for one and one for all." Maintaining the focus on the CPS process while encouraging the meeting of the client's need is the major task for the facilitator. The challenge is to let the celebration of consensus last long

enough to recharge and refocus the group, but not too long so as to invest unnecessary energy in managing the group for the group's own sake. CPS groups are not formed necessarily or solely as social support systems.

Stage four: Performing

Stage four is rarely achieved by most groups. This fourth stage is called "performing" and is marked by interdependence on the personal relations dimension and problem solving on the task functions dimension. Interdependence means that members can work singly, in any sub-grouping, or as a total unit. They are both highly task-oriented and highly person-oriented. The activities are marked by both collaboration and functional competition. The group's tasks are well defined, there is high commitment to common activity, and there is support for experimentation and risk-taking.

This is the stage at which the CPS facilitator can 'push the boundaries' on applying the process. In a sense, if the dynamics have been managed well, the CPS framework ought to help more groups get to this stage of development. The performing stage is what really fits the effective application of CPS. This is the stage where the facilitator's challenge will be more focused on selecting the appropriate techniques to 'ride the wave.' Observing the energy of the group, keeping them focused on the task while understadning the reactions of the client become significant challenges for the facilitator.

It is during the performing stage where individual members are both empowered and aligned. They have a shared vision for why they are together and how they are operating. It is at this point where it is appropriate to use the label 'team.' It is important to remember that groups will not stay at this stage forever (nor should they). During the norming process, the group has very probably formed around an implicit set of assumptions. Occasionally, the facilitator will need to test the boundaries or even question their existence.

Applying the model of group development

When applying the model it is important to remember that this is not a static description of how groups develop. In other words, it is highly unlikely that a particular group would work their way through this process in a systematic manner. Groups will continually develop. Each time a new member joins or a new task is introduced, the development process begins anew.

Understanding some of the dynamics and patterns that occur within groups is essential if a leader wants to diagnose and describe the current status of any group; predict what might occur in the future; and provide behavior and influence which might help the group move on to a more productive level of development. For the leader of CPS activity, it is important to provide appropriate leadership strategies to move the group beyond learning basic skills and how the CPS techniques can be organized around components and process. The aim is productively applying these learnings to real challenges and opportunities. Group development combined with an appropriate understanding and application of leadership strategies can help CPS groups reach higher levels of application (Carew, Parisi-Carew & Blanchard, 1984).

Managing groups

There are many challenges to the effective management of groups. We have all seen groups that have 'gone wrong.' As a group develops, there are certain aspects or guidelines which might be helpful to keep them on track. Hackman (1990) has identified a number of themes relevant to those who design, lead and facilitate groups. In examining a variety of organizational work groups, he found some 'trip wires' that could lead to major mistakes when managing groups. In addition, from our own experience, we have identified a number of key contingencies to consider when managing CPS groups. These are identified below.

Group versus team

One of the mistakes that is often made when managing groups is to call the group a team but to actually treat it as nothing more than a collection of individuals. It is important to be very clear about the underlying goal structure. Organizations are often suprised that teams don't function too well in their environment. Of course, they often fail to examine the essential ingredient of competition in their rating or review process.

If a team is important, then a cooperative goal structure will be more appropriate. The group must be accountable for its outcomes. Reward and recognition systems need to built around different perspectives. If one wants the benefits of teamwork, then teams must be built and developed.

Ends versus means

Managing the source of authority for groups is a delicate balance. Just how much authority can you assign to the team to work out its own issues and challenges? For the CPS facilitator, the authority issue is handled primarily by the charge given by the client. The outcome of the client-facilitator planning meeting ought to be a clear direction for the problem-solving efforts of the group.

The group should not be told exactly the kinds of problem statements to generate or the precise qualities of the ideas to be generated. However, group members should be given a clear understanding of the general direction in which the client needs to move. The end, direction or outer limit constraints ought to be specified, but the means to get there ought to be within the authority and responsibility of the group.

Structured freedom

It is a major mistake to assemble a group of people, tell them in general terms what needs to be accomplished and let them work out the details. At times, the belief is that if groups are to be creative, they ought not be given any structure. It turns out that most groups would find a little structure quite enabling if it were the right kind. Groups generally need a well-defined task,

they need to be composed of an appropriately small number to be manageable but large enough to be diverse, and they need clear limits to the group's authority and responsibility.

In terms of facilitating CPS, the well-defined task can be the result of client-facilitator planning and the preparation of the group to deal effectively with the process technology. We generally recommend that group size be no fewer than five and no more than seven. The extent to which resource-group members need to be diverse depends greatly on the nature of the task. Finally, the roles within the group insure an adequate understanding of the expected behaviors and responsiblities of the group members.

Structures and systems supportive of teamwork

Often challenging team objectives are set but the organization skimps on support to make that objective a reality. In general, high performing teams need a reward system which recognizes and reinforces excellent team performance. They also need access to good quality and adequate information as well as training and educational support. Good team performance is also dependent on having an adequate level of material and financial resources to get the job done.

Assumed competence

Many organizations have a great deal of faith in their selection systems. Facilitators cannot assume that the group members have all the competence they need to work effectively as a team. Often it has been a technical set of skills and abilities which has put someone in a position for inclusion within a CPS group. Members will undoubtedly need explicit coaching on skills they need to work well in a team. Coaching and other support interventions are best done during the launch, a natural break in the the task or at the end of a performance or review period. It appears that the start-up phase is probably the most important time-frame to provide the necessary coaching or training.

Group orientation

All group members need to have some basic information regarding what they are expected to do. Agreement is necessary regarding the procedures and methods used for group activity. It is also very helpful for group members to be aware of their strengths and limitations in using various process technologies, as well as the kinds of personal and situational blocks to creative thinking which may surface during the session.

Composition

Some deliberate decisions need to be made regarding the number and type of human resources to be a part of the session. Heterogeneity of perspectives and experiences as well as homogeneity of levels of power should be considered. Generally, CPS groups should be informed of the criteria used in member selection.

Group size

Depending on the purposes of the session, a certain number of participants should be specified (generally 5-7). Larger groups should provide additional facilitators to allow an equivalent ratio. The facilitator may also want to consider the levels of expertise necessary in dealing with the client's task and insure adequate input and deliberation during the planning meetings prior to group sessions.

The structure of the environment

The climate or environment within which the task occurs needs to be conducive to creativity. Group members need to have a certain degree of trust and safety to make contributions and engage in open communication. The facilitator has a special challenge to establish a social climate which is characterized by psychological safety and encourages the participants to obtain an internal or intrapersonal climate which overcomes barriers to effective problem solving.

Some attention must be focused on assuring that the necessary equipment and resources are assembled for the session. This means setting up visuals, flipcharts with plenty of paper and markers, and a means for affixing these papers in a prominent place for all to see. In addition, the group should be assembled in a place where it is possible to be comfortable to share ideas and engage in effective communication.

The purpose of the session, as well as the amount of time to be scheduled, should be explicitly identified for all group members. Is the purpose of the group meeting to identify the initial statement of the problem, to generate ideas, or to develop and evaluate options? A specific process task should be identified and an appropriate amount of time should be set aside for the accomplishment of that task.

The environment may provide some indications regarding the level of quality needed for the decision, as well as the level of acceptance required for implementation. If the leader lacks the necessary information and other group members have that information, the leader can increase the quality of the outcome by involving a group. The same is true if the leader does not know what type of information is required or where it is located.

Involving group members in problem-solving sessions that affect them increases acceptance of the outcome or solution. The facilitator who can analyze the environmental considerations to structure the appropriate climate can be assured of a greater degree of success in utilizing group resources.

Getting Started with CPS

When the facilitator is planning to apply CPS with a group it may be helpful to consider the aspects of orientation, outlook, outcomes and obstacles, and ownership. Before jumping onto any process design for creative problem solving, we have found it useful to work through some fundamental issues on the "front end" of the process. This is often handled during the client-facilitator planning meeting but can also be approached in a variety of ways.

Facilitating Creative Problem Solving

Before actually applying the techniques within the context of the client it may be worthwhile to understand the orientation of the individuals within the group. Understanding the creative thinking and problem-solving abilities and skills of the client(s) as well as the resource-group members can help you in planning the amount of time for basic preparation before actually engaging in problem-solving processes. Having the opportunity to determine the styles of creativity, decision making or problem solving of the group members can also be fruitful in managing and appreciating differences in how people will approach the task and process. Determining the levels of expertise of the client(s) and resource-group members provides an indication if you will need to spend time and energy on data gathering and information search before, during and after group interaction. Finally, providing all group members some information about their barriers to effective problem solving can help the group manage around them.

It will also be productive to get some idea about the outlook of the client(s) before engaging in CPS. It is possible to determine the view of the culture which is operating within the current context of the problem-solving efforts. Having the client use hindsight to describe the culture or key past experiences which may be related to the current situation gives you some idea about the broad context within which the client will need to operate. It may also be helpful to assess the current personal perception of the climate within which the client (and resource-group members) operates. The current view of the situation or prevailing trends may be different from the view of the past culture. Ultimately, you need to determine the client's vision of the desired future state for the situation. This foresight will help you determine the process strategies to employ and the kind of approach to take.

It is sometimes useful to ask the client(s) and resource-group members to generate a variety of statements which describe the desired outcomes and the obstacles to be avoided or overcome. When stating these it is productive to keep them broad, brief and beneficially stated. If you are utilizing a group to generate these it is quite possible to collect a wide variety of statements within a short time frame. This could provide the client(s) a rich array of different perspectives on the concern or challenge.

Before actually engaging the group in CPS, the most important consideration is the level of ownership on the challenge or concern. You must know if you have a single client or if the challenge is owned by many clients. Influence, interest and room for imagination must be present and elements of the client's task must be specified and have clear connection to the responsibilitites of the real owner.

Conclusions

This paper has attempted to present some key considerations for facilitators interested in effective utilization of group resources during creative problem solving. The paper should be considered only a beginning point in discovering the various aspects of group-oriented leadership for creative problem-solving groups. Facilitating CPS is an activity which can draw upon the knowledge and expertise of a wide array of disciplines and areas of work. The challenges of

facilitating CPS are of high future value in that they deal with a new frontier of human understanding: how we use the human imagination to improve the quality of our existence.

General Suggestions for Applying CPS

There are many opportunities to learn about the effective facilition of CPS. There are also some 'trip wires' to avoid and some suggestions which might be productive. One of the first things to avoid is calling the group together and identifying them as a 'problem-solving team' but failing to adequately distinguish their special roles and responsibilities to the group. Group leaders need to encourage team members to accept responsibility and accountability for their roles and tasks. The CPS facilitator does this by ensuring real clientship for tasks on which the group works. Also, the facilitator does not assume that all group members understand all that they need to know regarding their roles and the process procedures to be employed. Some deliberate time and energy must be invested in teaching the participants their roles and a few basic process guidelines and techniques. Organizations that demonstrate the effective application of CPS usually have a strong emphasis on learning.

The following suggestions may be helpful for those who attempt to facilitate CPS sessions after learning some basic approaches and techniques.

Use personally to show effectiveness

Convince yourself first of the value and effective use of the techniques. Participants who go out and practice the use of the tools usually feel more confident in their use and are more effective at sharing with their colleagues. It really helps to have a variety of personal examples from which to draw!

Demonstrate benefits

It is helpful if you are able to document the benefits of using methods and techniques which add value to you, your team and your organization. A participant who was able to record the cost savings on her job was able to attend more training sessions paid for by the management.

Use soon after training

You are probably better off if you make specific plans to apply your learning early, rather than delay use for "the perfect opportunity." Participants report that it has usually been better for them to use the tools soon after the training experience while their memories are still fresh.

Continue your learning

Usually, these courses are very brief in duration compared with an entire semester or program of structured learning which can last a few years. Such programs are good opportunities for general exposure and some limited application. It makes sense to continue learning through

reading, attending additional coursework and personal study. In short, consider it a challenge to extend your knowledge base!

Debrief your use of CPS

Many excellent facilitators of CPS use a process journal or notebook in which they make notes about their learning and application. They are able to review their progress and clarify their learning accomplishments and needs. They are able to consider the things they seem to be doing well and the questions they have for self improvement.

Use process flexibly

Although you may currently see CPS as a general system which contains three components and six stages, the most appropriate use of CPS is flexible and dynamic. Participants who search for the opportunity to use all three components and all six stages may never find the perfect chance to use the CPS process. CPS is designed to be personally helpful in meeting challenges, attaining goals and overcoming problems. Use pieces or parts of the process where you think they may be useful. Perhaps it may only be necessary to use one technique with a group; or even use the tool personally and share only the outcomes with the group.

Use on low-risk challenge

Many participants have reported that it is helpful to initially try using CPS on something that does not mean life or death, or is job threatening for you or others. It may be helpful to be in the position to be playful or at least to freely explore novelty for early application of learning.

Integrate its use

One of the strongest messages participants have shared is how important it is to weave CPS tools into the work they do. Rather than establish a special learning or application situation, it seems to be important to use CPS on every day challenges and tasks. This is an effective way to show how CPS relates to real business or organizational needs.

Find a sponsor

It is helpful to identify an important client or someone who is really interested in improved productivity (or for that matter anyone in a position of providing support who is dissatisfied with the current reality). Offering the application of CPS on something this sponsor wants to change or improve can be very helpful in gaining support or "permission."

Find a safe group

Many participants have indicated the helpfulness of having a small group of people they work with who were personally supportive as they initially attempted to use these strategies.

Sometimes it was a matter to offering to share a technique with this group and then experiencing a small degree of success that made the difference!

Team up

Many people have been trained in CPS. You may find support by teaming up with alumni of this course or facilitators or others in the network of those who know and use CPS. Having someone else in your group who knows the language and can offer you support can increase your effectiveness and learning.

Use outside experts

Many participants have found it helpful to bring in a few outsiders to get the ball rolling. These people, just because they come from somewhere else, seem to offer a low risk way to get some attention focused on using CPS and may "prime the pump."

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