

Toward a Model for the Facilitation of Creative Problem Solving*

INTRODUCTION As the need for people skilled in creative thinking and problem solving increases, so does the demand for leaders whose specialty is releasing the creative potential in people. These leaders might be teachers, trainers, professors, authors, speakers or parents — anyone who interacts with others and may help them come to know and apply the skills of creative problem solving.

There are varying conceptions of leadership, and what makes for leader effectiveness. No single definition or approach provides a comprehensive application. Specific situations call for particular types of leadership. Creative problem solving (CPS) (Osborn, 1963; Parnes, Noller & Biondi, 1977) is a situation in which interaction leads to an original and useful solution and, therefore, requires a facilitative type of leadership.

The need for people skilled in helping others use creative problem solving is increasing. Since society changes ever more frequently and knowledge is growing geometrically, the importance of creative thinking and problem-solving skills is being recognized. These skills cannot be simply “transmitted” — gained through reading, watching films or attending lectures. These skills need to be permitted to nurture in all individuals. We need leaders whose specialty is releasing this creative potential in people from all walks of life.

BACKGROUND Approaches to leadership have varied over time and have

*The development of the model presented in this paper, along with the specific objectives for facilitation, were reviewed and discussed with several colleagues. Donald J. Treffinger and Roger L. Firestien provided many useful suggestions I have employed here.

referred to people, positions and processes. Each shifting viewpoint has emphasized different theories of what makes leaders effective. The study of leadership has been undertaken through three general approaches: the trait approach, leadership style and the situational approach.

The first can be likened to a search for the "super leader." This early research focused on the empirical investigation of the personality characteristics and unique qualities of prominent leaders. This initial method of examining leadership is referred to as the trait approach. The emphasis of this research was to identify the traits that made a person a leader. These factors include height, weight, appearance, intelligence, personality characteristics and others which might differentiate leaders from followers. The recognition that personality traits are influenced by the situation in which they are displayed, explained why the trait research yielded relatively inconsistent and confusing findings.

The search for the most important attributes of a leader has not been totally abandoned but it has been incorporated into a more complex view of leadership. A comprehensive review of this approach is provided by Stogdill (1948, 1974) and Bass (1981).

The second major approach to the study of leadership was an examination of leader behavior. The emphasis was on the examination of patterns of effective versus ineffective leader behavior. This research on patterns of behaviors is referred to as the leadership-styles approach. Much of the early research in this area was conducted by the Personnel Research Board at Ohio State University and concentrated on the identification of roles which leaders assumed. Stogdill (1953) and his colleagues found that, by and large, the behaviors of the leaders he studied were influenced by certain organizational constraints. One of the classic studies was conducted by Lewin and Lippitt in 1938 where the autocratic, democratic and laissez-faire styles of leadership were investigated. Many other styles of leadership have been identified and studied but no single type has been suggested as superior in all cases. Perhaps the best explanation for this is that the style of a leader cannot be separated from the situational variables the leader must deal with.

In 1981 Bass pointed out the overlapping dimensions of leadership style and stated:

To some degree, all research on leadership styles can be conceived as about democratic, autocratic, or laissez-faire leadership, taking us back to where it all

began in 1938 with Lewin and Lippitt's seminal experiment.

The third and more current view of leadership takes the other two approaches into consideration, as well as a variety of other factors. In examining leader effectiveness many situational factors must be studied to determine their relationship with the leader's traits and styles. These factors, such as environment, maturity, skill, knowledge and organizational climate provide a much more complex concept of leadership. These multi-dimensional considerations are exemplified in the Situational Leadership Model developed by Hersey and Blanchard (1982) and the transactional approach advanced by Hollander in 1978.

Application of leadership research was meant for the military, management, and business and industrial organizations. However, if one views leadership as interaction between group members to improve their ability to solve problems and/or attain goals then it should be obvious that the concept of leadership does not belong to any particular segment of society. In fact, the study of leadership practiced by business and industry provides many parallels with leadership as found in the educational arena.

The search for characteristics of the "super teacher" can be related to the trait approach to leadership. One of the most comprehensive research studies of the traits of effective teachers was provided by Ryans in 1960. This educational approach was limited by the same circumstances that limited the interpretation of its "trait" counterpart regarding the study of great leaders. Again, situational and other constraints influence effective teaching and leading. In examining "what constitutes effective teaching?" it was generally concluded that effective or ineffective teachers cannot be described in one or two overall groups with accuracy because their individual work varies widely. In addition, what constitutes desirable teaching objectives is a value-oriented concept. Teacher behavior, it was assumed, is a function of the characteristics of the individual teacher in a variety of situations. As a result of factor analysis, Ryans suggested that teacher behavior may best be described in terms of a limited number of major overlapping and bipolar dimensions. He used X, Y and Z to characterize understanding and friendly, responsible and systematic, and stimulating or imaginative classroom behaviors.

In a sense, education has not gone much farther than the trait approach. However, work by Torrance and Rogers and others provides evidence that a facilitative role is conducive to

creative learning. The recommendations and descriptions they provide appear to be closely related to the situational and transactional approaches to leadership.

In 1962 Torrance provided much information and guidance for those interested in facilitating creative learning and expanded on the topic in Torrance and Myers (1970). This work outlines the elements of interaction between teacher and learner as they relate to situations conducive to creative learning. After examining these and other sources, the following twenty suggestions provide a representative synthesis for developing an atmosphere conducive to creative growth.

GENERAL
SUGGESTIONS
TO SHAPE AN
ATMOSPHERE
CONDUCTIVE TO
CREATIVE
GROWTH

1. Recognize some previously unrecognized and unused potential.
2. Respect an individual's need to work alone; encourage self-initiated projects.
3. Allow and encourage an individual to succeed in an area and in a way possible for him.
4. Permit the curriculum to be different for various individuals; voice the beauty of individual differences.
5. Reduce pressure and provide a nonpunitive environment.
6. Tolerate complexity and disorder, at least for a period.
7. Communicate that you are "for" the individual rather than "against" him.
8. Support and reinforce unusual ideas and responses of individuals.
9. Use mistakes as positives to help individuals realize errors and meet acceptable standards in a supportive atmosphere.
10. Adapt to individual interests and ideas whenever possible.
11. Allow time for individuals to think about and develop their creative ideas. Not all creativity occurs immediately and spontaneously.
12. Create a climate of mutual respect and acceptance among individuals so they will share, develop and learn from one another as well as independently.
13. Be aware that creativity is a multi-faceted phenomenon; it enters all curricular areas, not just arts and crafts.
14. Encourage divergent activities by being a resource and a provider rather than a controller.
15. Listen to and laugh with individuals; a warm supportive atmosphere provides freedom and security in exploratory and developmental thinking.

16. Allow individuals to have choices and be part of the decision-making process; let them help control their activities.
17. Let everyone get involved and demonstrate the value of involvement by supporting individual ideas and solutions to problems and projects.
18. Criticism is killing — use it carefully and in small doses.
19. Encourage and use provocative questions; move away from the sole use of convergent, one-answer questions.
20. Don't be afraid to start something different!

In 1979, Rogers provided some guidelines about learning and its facilitation. While they are similar to those already discussed, they broaden the role of the facilitator. Table 1 compares the "Rogerian" concept of facilitation with the more traditional characteristics of leaders.

This table typifies the continuum commonly referred to as task vs. human relations. Most models for group development deal with the classic leadership dilemma of getting the job done without ignoring the human elements. Jones (1973) outlines this as concern for task functions and concern for personal relations. He also warns that "no two-dimensional model can completely subsume all of the data of group interaction without a loss of precision."

What is needed then is a model reflecting the current research and literature about leadership and the facilitation of creative learning. This model should focus on a specific creative problem-solving activity so definite objectives can be identified. Until now those concerned with the facilitation of creative problem solving have engaged in a confusing array of descriptions, platitudes and assumptions. In developing such a model, the primary concern was to provide a common language and framework to view our efforts to help others learn how to use creative problem solving. No attempt should be made to view the model as final or comprehensive.

Elements of
the Model

The model presented in Figure 1 has three major components: the facilitator, the client(s) and the task, or the actual CPS session.

One aspect of the model includes the client of the individual who owns the problem to be solved. The client may be an individual who in a sense has sole proprietorship over the challenge. The clientship may also extend to two or more individuals who share some ownership of the problem. In addition, some problems have diversified ownership where many individuals have varying degrees of concern with the

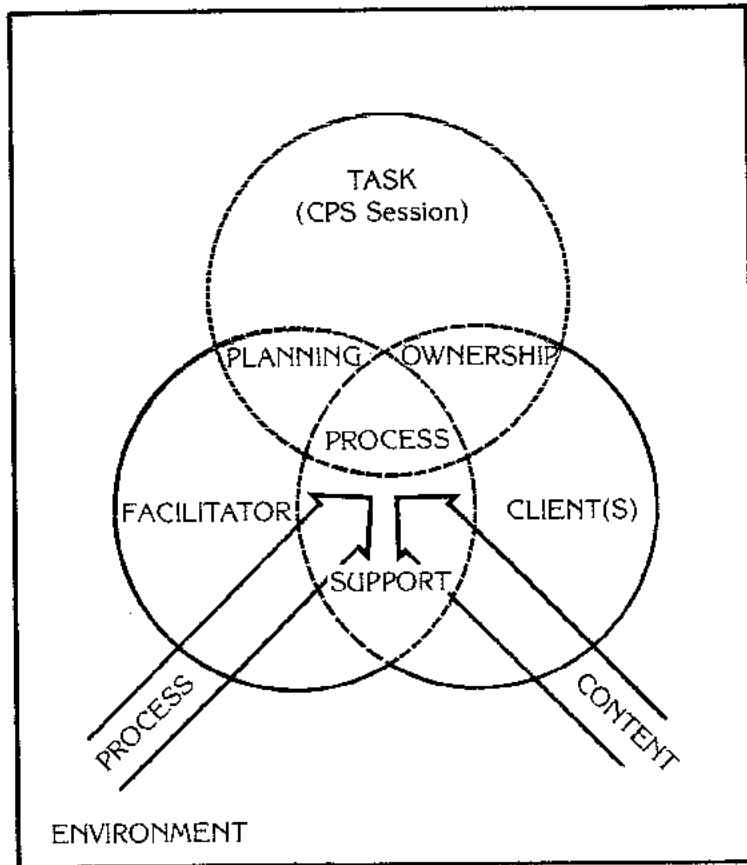


FIGURE 1

situation. In these cases, the problem owner provides much of the content such as facts, information and values for the session. The client will also be instrumental in the needed convergence and will serve as the content expert in the situation. Consideration of the client's skills, needs and abilities is of utmost importance when facilitating creative problem solving. This importance remains constant regardless of the facilitator's purpose. For example, even if learning about creative problem solving is the major objective as opposed to actually solving a problem, it is still important to view the learners as "clients" who have some ownership of the objective. This does not mean that if you are asked to provide hour-long overview of CPS you are absolutely certain that every person in a 400-

TABLE 1 A comparison of a facilitative model of leadership with more traditional approaches to leadership.

Facilitator	Other General Leadership Characteristics
Involved in setting climate	Concerned with conveying the task
Elicits and clarifies purposes of individuals and groups	Tells the members what the purposes are
Relies on desire(s) of member(s) as motivational force	May use power and authority to get things done
Organizes and makes available wide range of resources	Controls and allocates resources
Is a resource to be utilized by (group) member(s)	Works and decides alone; prefers to be "lonely at the top"
Responds and accepts content and attitude of expressions	Cuts through group-process concerns to assure task completion
Moves toward becoming a member	Searches for more efficient means of control
Remains alert to expressions of feelings	Concerned with supervision of activity and more aware of increasing potential power

member audience solves a real problem. Simply, your remarks concerning CPS ought to have some meaningful relationship to the audience. On the other hand, in dealing with a specific client on an immediate problem the emphasis will be on solving the real problem and not on the theory or background of the process.

The facilitator provides the second major element of the model. This is the person who helps another with the CPS process. The facilitator may "work alone" and interact solely with the client or there may be more than one facilitator by being a "resource group."¹ Although these individuals may not have access to all the client's data, they may assist by

¹ For more information on the use of a resource group, see Treffinger, Isaksen and Firestien (1982).

bringing new views and input to the situation. The facilitator should be prepared to plan the most effective utilization of the resource group as a facilitative influence on the situation rather than simply expecting everything to work out.

The knowledge, transmission skills, style, abilities and needs of the facilitator provide characteristics of importance. These assets provide the material the facilitator must use in his interaction with the client. Essentially this interaction will inevitably, but not always distinctly, fall into the categories of process and support. When the facilitator and client interact and are actually engaged in the problem-solving process, they are "in process." When the primary interaction provides some human relations emphasis, the term "supportive role" is used.

The facilitator maintains the primary emphasis on the process during the session and capitalizes on the client's awareness of content. This holds true even for a training event where the facilitator knows and shares the CPS process by using the client's meaningful content.

In fact, the facilitator should make every effort to remain free of overinvolvement in the client's content so process awareness remains possible.

Interaction between the facilitator and client must occur somewhere and this situation will influence the effectiveness of the problem-solving efforts. The task element is the actual CPS session. This may include the immediate physical surroundings and everything accomplished during the task.

Of course, all these elements occur in a larger environment, but the session or task element focuses on the most relevant and meaningful aspects of this environment. During an institute, the building and its classrooms may be part of the general environment but may not be relevant and meaningful to a particular interaction between a facilitator and client. However, this relationship is not static and when conditions change, the importance to the specific case may increase. A simple example would be if the fire alarm sounds, this element of the general environment would also become an essential ingredient related to the task.

Part of the facilitator's work goes beyond the in-process time with the client and relates to planning for the interaction. The planning sequence involves:

1. Identification of goals and objectives, based on awareness of needs.
2. Formulation of activities.
3. Conducting and experiencing activities.
4. Debriefing the activity.

This process is cyclical and nonlinear. It is also linked to the effectiveness of in-process time. The planning actually done with the client becomes part of the in-process segment of the model.

The supportive interaction between the facilitator and client may fall outside the actual CPS session, but still is an important part of the relationship. It represents the human relations side of the classic and constant leadership "trade off" between task and relations. It should be recognized as the balance between task and relations. The balance between "in-process" time and the facilitator's supportive role will be in a constant state of flux. Much like the earlier example, if the situation suddenly includes a fire alarm, the facilitator's task of getting everyone out of the building may take priority over the relationships with group members.

It is also necessary to recognize the importance of maintaining the crucial component of deferred judgment during the session. Being in a supportive role does not mean judging ideas or contributions of the client or group. The supportive role emphasizes group dynamics and sensitivity to the human relations side of the interaction. This may include some encouraging communication but not at the expense of deferred judgment where it is appropriately applied.

In an attempt to make the model operational these goals were developed, using the model as an organizing center. They provide the framework for a program to improve the facilitator's ability to help others using the CPS process (see Table 2).

Implications and
Researchable
Questions

The model presented is not the result of empirical validations. However, the hope is that this framework is rich in its implications for researchable questions of hypotheses.

For example:

- Within each of the three general components, which elements are the most significant or have the most impact on other areas?
- How can problem-solving effectiveness be increased by using this framework?
- Is there a balance between time "in process" and time in a "supportive role"?
- What are most appropriate methodologies for observing potential strengths of facilitators and/or appreciating differences in approaches?
- Could/should some reliable and valid instrumentation be developed in relation to the goals and objectives?

TABLE 2 Goals and objectives for a leadership development program.

 THE FACILITATOR WILL DEMONSTRATE THE ABILITY TO...

Establish and Maintain a Supportive Environment

1. ...build confidence in client's or participant's creative ability by reinforcing successes.
2. ...distinguish, give examples and demonstrate appropriate use of:
 - a. empathy: understanding of surface and underlying feelings
 - b. respect: belief in participant's ability to deal constructively with the problem given appropriate facilitation
 - c. warmth: accepting the participant as a person, sharing joys, aspirations, depressions and failures; valuing participant as a person, separate from any evaluation of behavior or thoughts
 - d. concreteness: ability to discuss all personally-relevant feelings and experiences in specific and concrete terms
 - e. genuineness: being real, honest or authentic (closely related to respect and warmth)
 - f. self-disclosure: appropriateness of revealing personal information, encouraging deeper, more thorough self-exploration by the participant
 - g. confrontation: informing the participant of discrepancies between what the participant has been saying about himself and what he has been doing
3. ...encourage trust among group members by viewing trust as a characteristic of a situation where it is expected that the word, promise or statement of another is reliable.
4. ...being adaptable to various constraints and flexible enough to modify plans accordingly; being open to the needs of the group.
5. ...provide guidance and direction for the client, emphasizing the process while allowing the client to maintain ownership of the content; the client should feel free to use the resource group as limited partners in the content of the problem.

TABLE 2 Continued...

6. ...communicate to others personal confidence in the effectiveness of the CPS process.

Define, Differentiate and Internalize the
Facilitator's Role and Responsibilities

1. ...master the basic terminology of CPS.
2. ...know, select and use appropriate process strategies to elicit progress at each step of the process.
3. ...plan and obtain necessary resources, material and equipment for each session.
4. ...give evidence of increasing familiarity with theory and research of CPS and the nature and nurture of creativity.
5. ...know and apply group process skills such as group building and warmups.
6. ...know and apply effective communication skills such as active listening or paraphrasing.
7. ...define appropriate activities for a resource group and instruct group members accordingly.
8. ...handle "curves" and deal with the unexpected.
9. ...function effectively as an individual or as part of a leadership team, in relation to:
 - a. planning and preparation
 - b. identifying goals and objectives
 - c. formulating activities
 - d. conducting and experiencing activities
 - e. debriefing to review, modify and evaluate activities
10. ...define and distinguish your own style through an understanding of a variety of leadership and facilitation styles.
11. ...develop and evaluate your own facilitation style and strategies.
12. ...demonstrate the principle of "deferred judgment" in a leadership role.
13. ...to be receptive and open to feedback from:
 - a. clients and participants
 - b. other facilitators and resource group members
 - c. leaders or supervisors
14. ...demonstrate appropriate changes in behavior on the basis of constructive feedback.
15. ...model internalization of the process by using it in your personal life.

TABLE 2 Continued...

16. ...demonstrate appropriate timing in pacing presentation of material.
17. ...lead others through the CPS process with smooth, comfortable transitions from step to step.

Define and Differentiate the Client's
Role and Responsibilities

1. ...verify the client's ownership of the situation being considered to ensure that:
 - a. it is a real challenge or concern
 - b. the client has responsibility for implementing the task
 - c. the client has decision-making authority
 - d. the client is willing to examine challenge through use of process
2. ...assist the client in choosing appropriate information, ideas, criteria and actions during the process.
3. ...enable the client to assume responsibility for content decisions in solving the problem.
4. ...inform the client of principles and behaviors conducive to effective problem solving.

Specify Task Dimensions

1. ...identify and deal effectively with task management functions:
 - a. preliminary planning with client and resource group
 - b. provide resources and materials for all sessions
 - c. clarify and set task priorities and session objectives
 - d. arrange for an appropriate physical arrangement of the group
 - e. flipchart and facilitator are visible
 - f. clarify steps to be completed
2. ...differentiate resource group tasks from client tasks.
3. ...make judgments regarding the relative potential of various tasks... searching for those which offer originality and reliance:
 - a. considers group size variables
 - b. aware of special physical/emotional needs of group members
 - c. considers various criteria for appropriate group functioning
4. ...identify and apply effective time and resource management skills.

TABLE 2 Continued...

Understand the Dynamics of all the Elements of Facilitation

1. ...provide an effective balance between socio-emotional support and "on-process" time through role differentiation and sensitivity to the Task-Person dichotomy.
 2. ...be aware of group dynamics and utilize effective principles of communication and interpersonal relationships.
 3. ...consider standards of ethical practice in your work.
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- What, if any, relationships exist between the skills, abilities and needs of the client and those of the facilitator?
- How do various environmental factors affect interaction between group members and the facilitator?
- To what degree do various planning processes impact the facilitator-client interaction and outcomes of the CPS session?
- Are some CPS techniques more appropriate than others in various clients and situations? Which ones work best under what circumstances?
- What future implications will use of the model, goals and objectives have on the qualitative aspects of the interaction of all the components?

Those are only a few of the questions to be raised in connection with use of the model. The model has been proposed to stimulate needed discourse on the subject. As the need for a more focused or targeted approach to the use of CPS increases, so does our need for more and better information about the leading, helping or facilitating of others in the use of CPS. The model is offered as a springboard for further examination of how to nurture creative potential.

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