Organizational Development Interventions for Enhancing Creativity in the Workplace

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ABSTRACT In an era of rapidly accelerating change, many organizations which developed during a more stable era that demanded bureaucratic efficiency find themselves in a crisis of adaptability and commitment. Effective organizations are those which can mainstream both adaptability and efficiency and strike an appropriate balance between the two. This paper evaluates traditional organizational development (OD) approaches to this problem, then presents a new approach to OD based on organizational creativity. Organizational creativity is defined as a deliberate and continuous change-making process of problem generation and formulation, problem solving, and solution implementation, and as synonymous with adaptability and innovation. Unlike traditional OD approaches that lack a strategic perspective and that rely on single interventions, OD should be employed as an innovation process requiring thinking skills in change-making and incorporating interventions as tools. Under the new approach, organizations can learn to mainstream adaptability by doing two things: encouraging employees to master new thinking skills which increases their creativity, motivation, and commitment; and creating an infrastructure that ensures that these skills will be used regularly. Research is reviewed supporting the new approach, and future research directions are suggested.

The Problem: A Crisis in Commitment and a Crisis in Adaptability

In his classic systems view of organizational change and development, Beer (1980) suggests that the twentieth century has seen "bureaucratic" organizations emerge as the primary means of bringing together and utilizing labor, capital, and technology to achieve organizational goals. The most prominent of these bureaucratic organizations is the corporation. Born out of the Industrial Revolution, the corporation is hierarchical in nature, has centralized decision-making, achieves co-ordination through tight rules and controls, divides work by functional specialization, and emphasizes standardization and control in order to achieve reliability, rationality, and efficiency. Under the stable markets and technology of that period, the corporation had little need to adapt. What was needed was an organization that reliably performed a relatively simple and routine task — a bureaucratic organization that emphasized standardization and control. Given today's ever-accelerating changes in markets, technology, science, information, and values, this bureaucratic organization is now under severe stress, as predicted a quarter-century ago by Toffler (1970).

The Crisis in Commitment

Under more rapid economic development, employees' primary concerns have expanded beyond only job security and survival to include freedom, self-esteem, personal growth, and self-realization (Herzberg, 1966; Maslow, 1954). The primary mechanism of bureaucratic organizations for attracting, motivating, and holding workers — the "economic contract" — has eroded. Specialized jobs that fail to challenge employees, poor communication of goals, and more centralized control systems are eroding the commitment of industrial workers to their jobs and to the organization. More costly labor settlements are required just to obtain minimum levels of commitment. As Albrecht (1983) predicted, the work force is becoming steadily better educated, with steadily increasing expectations about income and job possibilities; many of these people are being disappointed because the industrial base is not creating jobs that require college-level education as fast as the colleges are turning out graduates. These people will become increasingly more restive and dissatisfied with conventionally designed jobs, and less willing to obey orders without question. Young workers — particularly members of so-called

Generation X who generally embrace change as the only constant in their lives — will probably apply social pressure for more participative management and will migrate toward organizations with people-oriented work settings (Coupland, c. 1992). Beyond the production floor, the problem of reduced commitment is also being seen among white-collar clerical employees, professional employees, even managers. Many top managers are now better educated than their forebears, more acquainted with new technologies, and psychologically younger in their attitudes and values. Many bring a more diversified value system than that of their predecessors — still largely materialistic, but increasingly interpersonal, individualistic, and less committed to concepts like "loyalty to your company," "coming up through the ranks," and "paying your dues."

The Crisis in Adaptability

Everywhere we look, traditional structures are abruptly being reshaped or falling down. Once-successful companies are finding that sure-hit formulas no longer work. People, and even whole communities, are finding the world moving beneath their feet as traditional markets, industries, and sources of employment disappear under the impact of new information technologies and a restructuring of the world economy (Morgan, 1993).

It is not surprising that an organization whose main virtues were predictability and reliability should find it difficult to adapt to an increasingly dynamic environment. Its hierarchical structure and centralized decision-making process can hinder this organization from processing the huge volumes of complex information that inundate it, and can impair its ability to respond. Division of labor and functional specialization make it difficult to integrate functional departments and co-ordinate tasks, particularly when a task must be completed quickly. Rules, procedures, and other centralized controls prevent individuals from responding to change or handling unique problems and opportunities without assuming great personal risks. When employees fail to respond, the organization cannot change appropriately (Beer, 1980).

Thus, many employees are struggling in their attempts to deal with these changes. Many once-successful managers find themselves out of work or floundering as bureaucratic hierarchies and familiar career plans disappear. Those fortunate enough to retain their jobs face major challenges and readjustments. They must find new ways of managing in flat, decentralized organizations and must become more creative, or innovative, in their thinking.

This paper addresses the kind of thinking — more creative or innovative — required for everyone to enable their organizations to succeed in a turbulent world. This kind of thinking must be mainstreamed, or made a way of organizational life, not a "sometimes thing" or a "once in a while thing." Creativity is a foundation for successful organizational development efforts to better balance efficiency and adaptability.

What is Adaptability?

Mott (1972) showed that effective organizations have two major but very different characteristics: efficiency and adaptability. Efficiency means optimizing, stabilizing, and perfecting current methods or routines in order to attain the highest quantity and quality for the lowest possible cost. High efficiency means mastery of routine, or a standard, prescribed method by which the organizational unit carries out its main tasks. Adaptability means continually and intentionally changing routines and finding new, continuous, and better ways to do business. Called opportunistic surveillance by Simon (1977), it means scanning the environment to anticipate new opportunities and problems and changing methods in order to attain new levels of quantity, quality, and cost; adaptability yields both new methods and new products. High adaptability means a high rate of positive change of routine. According to Mott's research, the following equation is key:

Effectiveness = High Skill in Efficiency + High Skill in Adaptability

High skill in adaptability (or efficiency) means the ability to implement higher or lower levels of adaptability (or efficiency) performance as desired. Formerly, bureaucratic organizations could be effective by concentrating solely on efficiency. Many organizations that have found comfort in predictable technology, markets, and other environmental factors are highly efficient but not highly adaptable. Until the 1970s, for example, North America's automotive tire industry had enjoyed a predictable environment (Figure 1a). Consumers bought their tires every 20,000 miles or so from Goodyear, Firestone or any of their well-known competitors. With the tires basically of the same quality, consumers shopped for the best price and friendly service — and suppliers concentrated on providing these efficiency factors. But the most effective organizations ensure they have the right amount of both

efficiency and adaptability. In today's highly competitive North American car market, many companies — North American, Japanese and German — stress both high efficiency and high adaptability. Their consumers demand high levels of both quality and innovation. In a rapidly changing, unstable environment, both high efficiency and high adaptability are necessary (Figure 1b).

FIGURE 1A. Balance of efficiency and adaptability appropriate for a predictable, stable environment

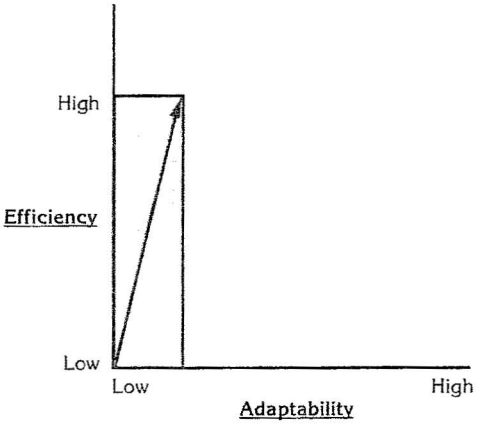
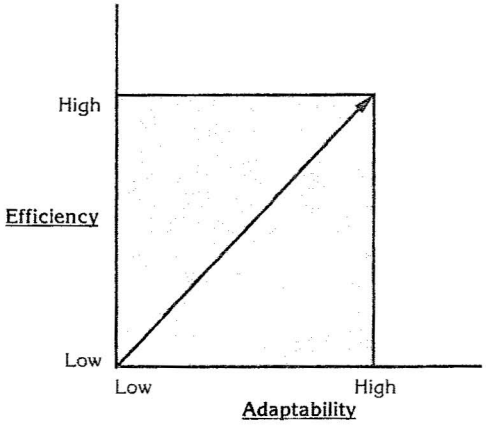


FIGURE 1B. Balance of efficiency and adaptability appropriate for a rapidly changing, unstable environment



The least effective organizations lack the right amount of either or both attributes. Before the 1970s, North American consumers bought their cars from one of the Big Three domestic automakers. People were used to encountering poor quality cars and simply switched to another supplier for their next purchase. Innovation was limited to cosmetic changes to style each model year. Meanwhile, the Japanese began introducing more reliable cars and options, and smaller vehicles that addressed new problems such as the 1970s oil crisis. Thus, they took advantage of the lack of attention by the Big Three to both efficiency and adaptability (Figure 2a). The tire industry had also been experiencing rapid changes. The radial tire introduced by France's Michelin in 1945 was displacing the bias-ply tire everywhere but in North America. North American tire companies failed to adapt to this major change because of management resistance. As a result, much of the market was lost virtually overnight to Michelin and Japan's Bridgestone, which found a public receptive to the advantages of the new radial tire. For the North American suppliers, what had appeared to be a predictable environment had become anything but. They should have been operating according to Figure 1b; instead they were operating according to Figure 1a (efficient enough but not adaptable enough). It is also possible to be too adaptable and not efficient enough (Figure 2b). Some highly successful organizations — such as 3M, which is famous for continuously creating new products — carefully monitor their own activities so as not to overemphasize adaptability at the expense of efficiency (which would be an appropriate balance only in the most extremely turbulent environments). Mediocre organizations compromise unnecessarily, trading off efficiency against adaptability in a zero-sum fashion.

No matter what its environment, an organization needs skills in both efficiency and adaptability in order to be effective. Accustomed to yesterday's stable, predictable environments, most organizations understand the concept of efficiency better than that of adaptability, and thus it is easier for them to mainstream efficiency than adaptability. Yet it is vital for an organization to mainstream both, and particularly to achieve the correct ratio of adaptability and efficiency. One of the most important factors in determining this ratio is the volatility of the organization's environment. The work of Burns and Stalker (1961) suggested that, in rapidly changing environments, organizations with more organic structures (favoring creativity and innovation) were more effective than organizations with more mechanistic structures (favoring adherence to rules and procedures and routine). In less volatile environments, the reverse was true.

An organization should not view a more predictable environment as an invitation to stop mainstreaming innovation. In this case, rather than focus adaptability efforts externally on seizing new, major changes in the environment to create new products, processes, and services, the organization

FIGURE 2A. Balance of efficiency and adaptability inappropriate for any environment

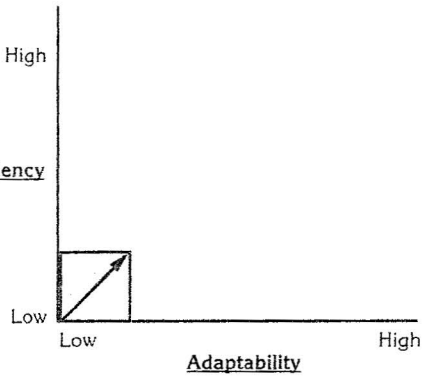
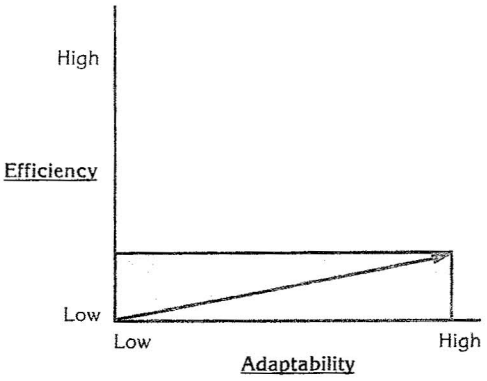


FIGURE 2B. Balance of efficiency and adaptability overemphasizing adaptability at the expense of efficiency (inappropriate except in the most extremely unstable, unpredictable environments)



should redirect its innovation efforts more internally toward continuously improving existing, routine products, processes, and services. In either case, change is planned and deliberate: the organization regularly sets innovation goals and works toward those goals. While the former is planned transformational change, including discovering previously undetected customer problems to solve, the latter results in a planned, steady flow of incremental improvements in the quantity, quality, and cost of its current products and services. During stable times, effective organizations turn their adaptability efforts to deliberate improvement of internal processes and their current products, processes, and services. In more turbulent times, these organizations turn their adaptability efforts to deliberately changing their products, processes, and services to meet customers' changing demands and problems.

Thus, this paper will treat adaptability, innovation, and deliberate change-making as synonymous.

The Traditional Organizational Development Approach to Improving Commitment and Adaptability

The purpose of the field of organizational development (OD) is to make organizations more effective. Beer (1980) defined organizational development as a "system-wide process of data collection, diagnosis, action planning, intervention, and evaluation aimed at: (a) enhancing congruence between organizational structure, process, strategy, people, and culture; (b) developing new and creative organizational solutions; and (c) developing the organization's self-renewing capacity." Thus, Beer views the organization as a system of elements interacting with each other and with the organization's external environment; this view considers OD as an ongoing process that continuously improves those interactions. Beer emphasizes that OD offers as much opportunity to increase efficiency in an organization as it does to increase adaptability. He stresses the importance of problem diagnosis for accurate intervention and emphasizes that some OD practitioners believe that OD merely addresses adaptability concerns. However, he acknowledges that most organizations face greater adaptability challenges as described above.

Traditional OD researchers and practitioners are divided into two camps: those who, like Beer, believe that OD must be a skilled, continuous *process* of deliberate change for improving both efficiency and adaptability, and those who believe in a non-process approach. For the former group, as problems are proactively found and defined, appropriate interventions are selected as solutions and implemented within a system of additional, supporting interventions. The latter group views OD as a set of individual, discrete interventions to treat specific organizational problems. Such techniques are sometimes prescribed without adequate diagnosis or supporting interventions. In effect, they are solutions developed in isolation before a problem has been adequately defined. When such interventions fail to make any significant impact, the organization simply reaches for another "solution." For example, the specific intervention called total quality management (TQM) has often failed because it has been presented as a grab-bag of tools and management rhetoric without any supporting strategy, system, or process of change. On the other hand, TQM has sometimes succeeded when it has been installed as a

continuous process of skilled change-making supported by a comprehensive system of interventions and management leadership and involvement. In either case, four categories of traditional OD interventions are available to organizations; all of the following interventions in Table 1 are intended to enhance creativity and innovation and are more fully described in Beer (1980):

> Diagnostic interventions: used mostly to gather data about the system or its parts and to create a setting for feedback and diagnosis.
>
> Process interventions: activities intended to affect organizational behavior and process. These interventions enable employees to examine, become dissatisfied with, and change their behaviors, and improve their relationships with others.
>
> Structural interventions: enable the organization to diagnose its existing structures and create new organizational designs and systems that help address changes in people and environment.
>
> Individual interventions: intended to change employees. These are strategies and methods for selecting, training, and developing individuals.

Lewin introduced a simple, three-phase paradigm for the change process called "unfreeze-change-refreeze" (Schein, 1961). Under this paradigm, diagnostic interventions "unfreeze" organizational members, or prepare them for change by providing data and identifying problems. Process interventions and individual interventions "unfreeze" and "change" by introducing new attitudes, behaviors, skills, and processes to groups and individuals. Structural interventions — changing appraisal and reward systems, jobs (e.g. job enrichment), and organizational designs (e.g. moving from functional design to more team-based, cross-functional design) — "refreeze" these changes by ensuring that new, appropriate behaviors solidify.

TABLE 1. Beer's Classification of Interventions

DIAGNOSTIC INTERVENTIONS	PROCESS INTERVENTIONS
■ Survey Feedback	■ Processing Meetings
■ Confrontation Meeting	■ Group Development
■ Sensing Meetings	— Goal Model
■ Manager's Diagnostic Meeting	— Role Model
■ Family Group Diagnostic Meeting	— Interpersonal Model
■ Organization Mirror	■ Intergroup Meetings
■ Diagnostic Task Force	■ Interpersonal Peacemaking
STRUCTURAL INTERVENTIONS	**INDIVIDUAL INTERVENTIONS**
■ Organizational Design	■ Counselling and Coaching
■ Job Design	■ Training and Development
■ Reward Systems	■ Replacement and Termination
■ Performance Management Systems	■ Recruitment and Selection
■ Control and Accounting Systems	■ Career Development

Many of these intervention methods improve organizations in the short run. But many seemingly successful and permanent changes regress or disappear within a relatively short time after their implementation (Beer, 1979; Hinrichs, 1978; Walton, 1978). These experiences suggest that, beyond changing a single organizational unit or introducing a single, successful intervention, a large organization must understand several strategic considerations in starting, orchestrating, and sustaining an OD effort. For example, creativity training as an individual or team process intervention succeeds only when managers institutionalize the implementation and daily use of the new creativity skills. To do so, managers must provide appropriate counselling, coaching, and, above all, modelling of the new skills. They must also implement new organizational designs, reward systems, performance management systems, and control and accounting systems that ensure employees will use these skills on the job. One of the most obvious examples of the lack of understanding of this systems approach to managing is the inconsistency between organizational rewards and desired behaviors (Kerr, 1995). Table 2 details these examples.

TABLE 2. Examples of Inconsistencies Between Desired Behaviors and Reward Systems

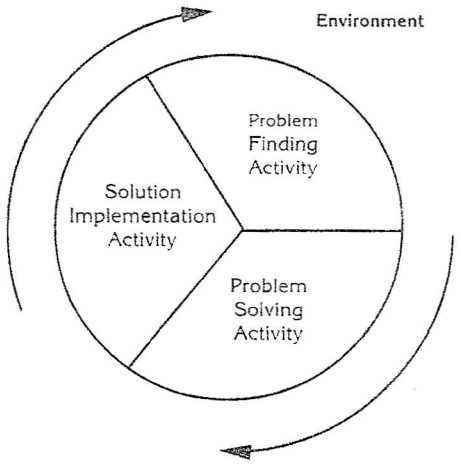
We hope for . . .	But we reward . . .
Long term growth; environmental responsibility	Quarterly earnings
Setting challenging "stretch" objectives	Achieving goals: "making the numbers"
Commitment to total quality	Shipping on schedule, even with defects
Teamwork and collaboration	The best team members
Innovative thinking and risk-taking	Proven methods and not making mistakes
Development of people skills	Technical achievements and accomplishments
Employee involvement and empowerment	Tight control over operations and resources
High achievement	Another year's effort

Such inconsistencies reflect a lack of skill in what is fundamental to successful organizational development: deliberate change-making (virtually identical to organizational creativity, as explained below).

Creativity: A New Approach to the Problem of Adaptability and Commitment

Creativity, or innovation, in organizations can be defined as a continuous process of deliberate problem finding, problem solving, and solution implementation (Basadur, 1982, 1987, 1992). Problem finding means continuously finding new problems to address, including not just things that are going wrong but current or future changes, trends, challenges, and opportunities. Senge, Kleiner, Roberts, Ross and Smith (1994) emphasize the importance of problem finding in adaptable organizations. By taking the time to explore background causes of problems rather than merely finding "quick fixes," members of adaptable organizations discover bigger, long-term issues and recognize the interconnectedness of decisions within the organization. This recognition is the essence of systems thinking and the starting point for making long-term, permanent improvements to the organization. Problem solving means developing new and useful solutions to identified problems. Solution implementation means making new solutions succeed. Implementation usually leads the organization to find new problems to solve. New problems arise as the system and its environment react to each newly implemented solution. Thus, organizational creativity is synonymous with continuous improvement, deliberate change-making, or adaptability: organizational creativity is a circular process of continuously finding and solving problems and implementing new solutions which represent valuable changes that enable the organization to succeed (Figure 3).

FIGURE 3. Creativity activity in an organization



This definition also removes any distinction between creativity and innovation (despite views of some researchers who distinguish between creativity as the generation of an idea and innovation as its implementation). Here, creativity (and OD) is defined as a multi-phase, complete, and continuous process: creativity is required in each phase, including problem generation and formulation, idea (solution) generation, and solution implementation. It is important that the specific interventions in Table 1 are understood as discrete tools to be used within this creative process. In other words, OD is a creative process that incorporates OD interventions as tools. Some of these tools are used within the problem finding phase, others within the problem solving and implementation phases. For example, diagnostic interventions like survey feedback or the confrontation meeting are tools for problem generation and formulation: used regularly, they help anticipate and

unearth organizational issues that might otherwise have remained buried. Group development (or team-building) process interventions help solve identified problems such as slow project completion by improving the way people work together. When the organization has identified employee development as an important problem to solve, it might turn to structural interventions such as job enrichment. Structural interventions can also help implement other intervention solutions. For example, a new reward system like the Scanlon plan, intended to encourage employees to use their creativity by sharing the profits from their productivity improvements, can cement the transfer of creativity skills learned in training to the job. Elsewhere, Japan's Toshiba Corp. places newly hired scientists and engineers directly into the sales department in order to reinforce the importance of problem finding (learning customers' problems) before they begin developing new products to solve those problems within research and development. Finally, individual interventions such as counselling and coaching help in the implementation phase of the organizational creativity (OD) process. For junior managers who have been trained in facilitative leadership (individual intervention) to work in a flattened organizational design (structural intervention), senior managers' counselling and coaching (individual intervention) can help cement the training.

From this perspective, it is organizational creativity that provides the change-making dynamic for organizational adaptability. This suggests that an organization can achieve adaptability if it mainstreams the creative process.

For this to happen, two things are necessary. First, employees must obtain new thinking skills (and reframe their jobs, i.e. become creative problem finders and solvers and solution implementers). Second, the organization must provide a framework for directing these creative thinking skills to support its important goals and objectives.

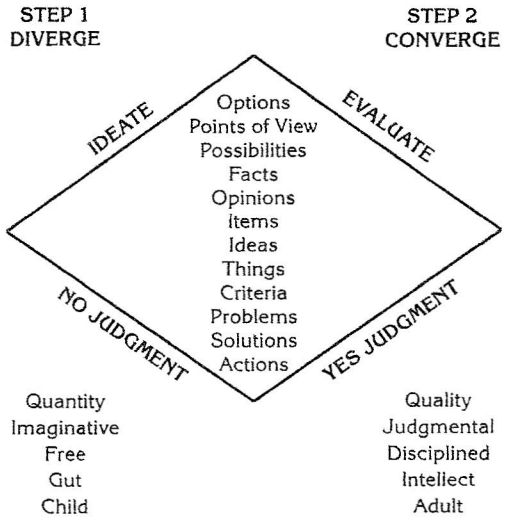
What Organizations Must Do in Order to Become Skilled in Making Change

In order to make continuous, deliberate change for the better, organizations must learn to overcome shortcomings in thinking skills that affect individuals and teams, and organizational design. For many individuals, problem finding is a foreign concept. For example, people usually wait for others to find problems to solve rather than actively seek out problems or avoid important problems that cross departmental lines ("That's not our problem"). Even after finding and defining problems, they find it difficult to solve them creatively and imaginatively. Individuals are critical of new ideas, for example, and thus prevent productive thinking. While many people may be able to implement routine solutions to routine problems, few can implement creative solutions to new, unprogrammed problems. Teamwork is also often uncreative. Group members are unable to communicate clearly in simple terms, for example. Unaware of variations in individual thinking styles, groups fail to synchronize these differences, jump into "solving the problem" without first considering what the real problem is, and then flounder. Interfunctional teams get stalled arguing about territorial issues. Meeting leaders steer toward their own points of view rather than facilitating the group to work open-mindedly and cohesively. The design of many organizations remains along bureaucratic, functional lines — a design that itself minimizes creativity. Jobs are programmed for maximum control, highest quality, and lowest cost per unit. Creativity skills and change-making are limited to short-term quick-fixes during emergencies. These organizations view problems and changes stemming from new technology, customer tastes, and foreign competition as irritants that disrupt well-functioning, established routines. (Yet the essence of change-making and continuous improvement, and the first phase of the creative process, is problem finding.)

According to Basadur, Graen, and Green (1982), these individual shortcomings can be overcome by developing specific thinking skills, behaviors, and attitudes. Training to build these skills is based on two central concepts. First, the change-making process has distinctly different stages: problem generation and problem formulation (the two aspects of problem finding), problem solving, and solution implementation. Second, within each of the four critical stages, there is a sequential, two-step process called "ideation-evaluation" (Figure 4). Ideation means generating options without evaluation (laying aside judgment), which is the diverging aspect of this two-step process. Evaluation means applying judgment in order to select the best option(s), which is the converging aspect of the process. Both aspects are essential to creative thinking (Parnes, Noller, & Biondi, 1977). The ability to create options and to select and pursue good options is fundamental to creative thinking and change-making.

Three distinct thinking skills are needed to execute this two-step process effectively (Basadur & Finkbeiner, 1985): deferral of judgment, active divergence, and active convergence. By separating divergent thinking from convergent thinking, deferral of judgment resists the tendency to prematurely

FIGURE 4. Ideation-evaluation: A sequential creative thinking process



evaluate and select options, and encourages active divergence. Deferral of judgment also prevents people from leaping to solutions before properly formulating problems, and helps them separate assumptions from facts. Active divergence enables generation of many options without judging or analyzing them. Active convergence, which resists the tendency to linger in divergent thinking, then selects and acts on the options that ultimately lead to implementation of change. The change-making process uses these three thinking skills and the ideation-evaluation process within each of the four stages in turn, as shown in Figure 5 and Tables 3, 4, and 5. In practice, it is useful to break the four-stage change process shown in Figure 5 into a circular process of eight smaller steps (Figure 6). These steps include problem finding and fact finding, which collectively make up "problem generation," or Stage 1; problem definition and idea finding ("problem formulation," or Stage 2); idea evaluation and selection, and planning for implementation ("problem solving," or Stage 3); and gaining acceptance and taking action ("solution implementation," or Stage 4). It is vital to use the ideation-evaluation process within each of the eight smaller steps across all four stages.

TABLE 3. Deferral of Judgment Skill

Avoid making premature, negative judgments of fledgling thoughts (both when working alone and with others).
Visibly value, appreciate, and welcome other points of view as opportunities to strengthen thinking rather than as a threat to one's ego.
Maintain an awareness that some facts are more difficult to perceive than others.
Question assumptions for validity and search out hidden, unconscious assumptions that might be unwarranted.
Tackle problems with an optimistic "can do" attitude.
Do not jump prematurely to a conclusion as to what the "real problem is" in a situation.
Stay open-minded to new ideas and approaches.
Deliberately try an unusual approach to solve a problem instead of automatically relying on an old approach.
React positively to new radical ideas as opportunities to build fresh new thinking.
Enter meetings open to ideas that might change one's own function or department.
Support other people or departments getting credit or more resources as a result of a team solution that was clearly the best one for the organization as a whole.
Choose solutions that might be suboptimal in the short run but that maximize long-term results.
Realize that some problems require a long time to solve, and do not expect immediate results.

FIGURE 5. Change-making as a four-stage process emphasizing the ideation-evaluation two-step miniprocess in each stage

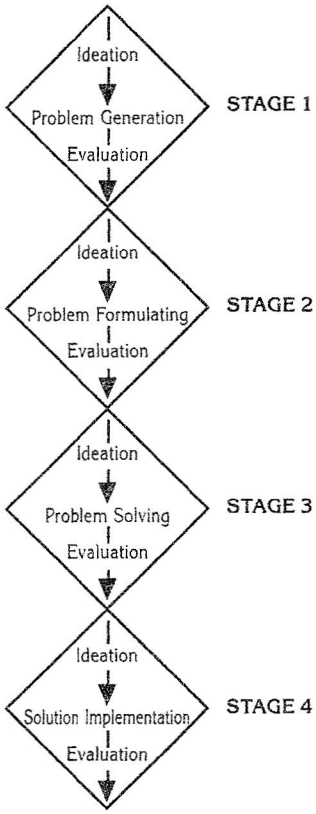


FIGURE 6. The organizational change-making process

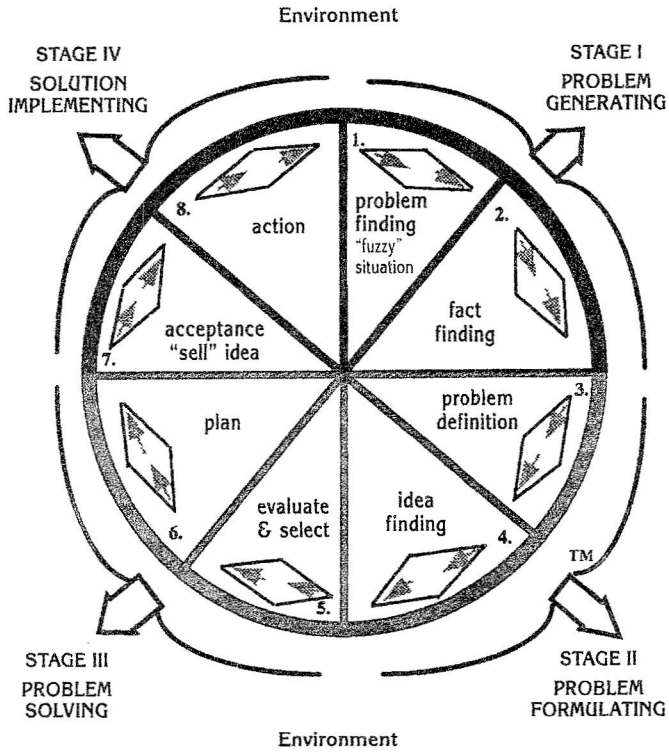


TABLE 4. Active Divergence Skill

Show leadership in pinpointing changes, trends, problems, and opportunities for improvement throughout the organization.
Share information and ideas freely with other people and departments.
Share "bad news" as quickly as "good news" to aid organizational problem solving.
Search out many different facts and points of view before attempting to define a problem.
Define problems in multiple and novel ways to get a variety of insights.
Clarify problems by breaking them down into smaller, more specific subproblems and also opening them up into broader, less limiting challenges.
Facilitate teams to formulate problems in ways that transcend individual and departmental considerations.
Deliberately push oneself to create unusual, thought-provoking potential solutions.
Generate many alternative criteria for decision-making covering both long- and short-term considerations.
Turn premature, negative evaluations of ideas into positive challenges to keep the creative process flowing; when others say "We can't because . . ." counter with "How might we . . . ?"

TABLE 5. Active Convergence Skill

Convince others to join up and form teams to take on new problems.
Take the time to select, clarify, and focus on the most significant facts available prior to attempting to define a problem.
Make wise choices from among problem definition options in terms of breadth versus narrowness of focus.
Develop and use unbiased criteria for selecting from among options rather than letting preconceptions or hidden motives sway decisions.
Recognize and accept the few best options.
Be willing to accept and participate in consensus decisions and move on in the change-making process.
Take reasonable risks to get action taken within time limits rather than waiting for the "perfect" option to emerge.
Pin down clear, simple, and specific implementation plans.
Identify and accept ownership of measures of performance about the products and processes being improved.
Follow up on implementation; do whatever it takes to ensure successful installation of the chosen solution.
Take the risk of failing or being criticized for being different in implementing your ideas.

Results of Training Skills in the Change-Making Process

Additional research and experience strongly indicate that the thinking skills required for the change-making process can be learned, nurtured, and managed within organizations through experiential and practice-oriented training (Basadur, 1994, 1995; Basadur, Wakabayashi, & Takai, 1992).

Basadur et al (1982) found that such training among participants from an industrial research organization yielded several improvements including:

- more likely to pause to try new, unusual approaches;
- more open-mindedness to new ideas and approaches;
- deferral of premature critical judgment;
- less time spent in negative evaluation during idea generation;
- increased quantity and quality of problems found; and
- more different problem definitions developed.

Basadur, Graen, and Scandura (1986) found that training effects on manufacturing engineers persisted back on the job, particularly when they were trained in teams. Other organizational field research demonstrating the results of training in specific thinking skills, attitudes, and behaviors for both individuals and teams is summarized by Basadur (1987, 1993). At the organizational level, top management can also be trained to apply these skills in their work as individuals and as members of executive teams. Furthermore, they can be taught how to model and encourage the use of these new skills throughout the organization. Top managers must lead by learning and visibly using the creativity skills and change-making process. They must also develop specific strategies to maintain the use of the process and the thinking skills (Basadur, 1993, 1994).

Discovering How and Why Japanese Organizations Mainstream Creativity

Establishing adaptability as a daily, continuous process of problem finding, problem solving, and solution implementation to complement efficiency increases employee commitment and motivation. Top Japanese organizations manage their employee suggestion systems to induce creative behavior and to derive creative output including cost savings and new products and procedures (Basadur, 1992).

The primary objective of the suggestion systems is not to improve economic outcomes but to motivate people and increase their commitment. Permitted to engage in creative problem solving (as it has been described here), workers become extremely motivated and desire even more participation in creative activity. They work harder at perfecting their routine jobs to increase quality and quantity and reduce costs, thus increasing organizational efficiency and short-term organizational effectiveness. Creative activity also stimulates team-building as people help each other to solve problems. This connection between creative activity and employee motivation is supported by motivational literature in industrial and organizational psychology. For example, two important motivational need sets — the need for competence and the need for curiosity and activity — provide the most direct explanations of how creativity motivates people (White, 1959; Berlyne, 1967). When people face new, challenging situations, their need for competence can be satisfied by performing creatively. Many people find that exercising their curiosity and exploring new things is intrinsically motivating. Herzberg, Mausner and Snyderman's (1959) research also suggested that the way to truly motivate people at work was "job enrichment," or redesigning jobs to require creativity. More recently, the research of Amabile (1993), Deci and Ryan (1985), and Hackman and Oldham (1980) has supported the link between intrinsic motivation and creative work.

Impacts and Outcomes — Economic and People — of Creativity in Organizations

By mainstreaming and nurturing creative activity, organizations can reap two kinds of specific outcomes: economic outcomes and people outcomes (Basadur, 1993). The economic outcomes include:

- new and improved products and services;
- increased quantity and quality and lower costs of current products and services;
- reduced turnover and absenteeism;
- clearer corporate visions and goals;
- more appropriate and successful organizational designs; and
- faster project completion times.

The people outcomes include:

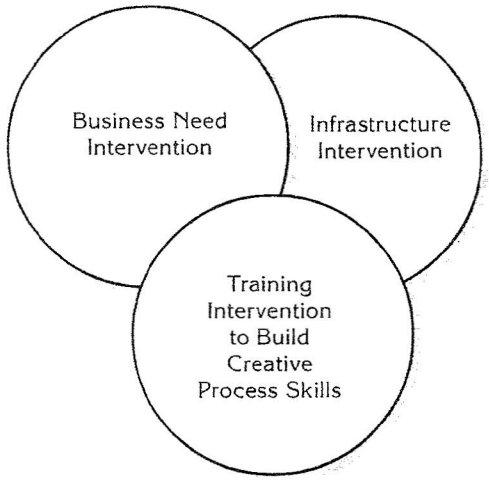
- higher-level thinking skills associated with organizational adaptability;
- improved strategic thinking and customer satisfaction focus throughout the organization;
- new managerial leadership skills based on coaching, facilitating, and consulting;
- greater personal and organizational goal congruency;
- more rational decision-making;
- interlocking goal-setting across departments and between hierarchical levels;
- interfunctional co-operation; and
- increases in: job satisfaction; trust; motivation; commitment; involvement; group interaction; teamwork; and job enrichment.

(Detailed examples are provided in: Basadur, 1995, 1992, 1982; Basadur & Paton, 1993; Basadur et al, 1986, 1982; Basadur, Ellspermann & Evans, 1994).

Organizations should achieve these outcomes if they systematically tailor and manage an OD process, anchored by building skills in creative thinking for unfreezing and changing. The organization must integrate additional interventions for refreezing. These multiple interventions must affect additional individual, group, and organizational factors that fall into one of two categories:

> Business need: encompasses the notions of clarity of objectives, and individual and organizational motivation to innovate;
>
> Infrastructure: encompasses the notions of organizational values and norms, including incentive systems, organizational design factors that balance freedom and direction, group cohesiveness, diversity of information, and individual familiarity with the work.
>
> (A thorough discussion of these factors is provided in Amabile and Gryskiewicz, 1989, and in Baker, Winkofsky, Langmeyer, and Sweeney, 1976).

FIGURE 7. The three necessary components of a successful organizational development effort to mainstream innovation



Creative Process Skills, Business Need and Infrastructure

The organization can build skills in the complete creative problem solving process (as described above) as an OD training intervention in one of two ways. It might integrate the training to boost an existing corporate improvement initiative like a total quality management program when a well-defined business need and infrastructure already exist. Alternatively, the organization might implement the training within a brand-new innovation initiative created for the organization based on the process itself (Basadur, 1995). In the latter case, the organization's leaders must use the creative process to identify a clear business need and establish an infrastructure to ensure that employees use their new creative skills (Figure 7).

Many worthwhile initiatives flounder because the organization lacks at least one of these three components: business need, infrastructure, and creative process skills. When it introduces a training intervention, the organization must spell out what specific business need it intends to address — lower costs, higher sales, fewer defects or customer complaints, shorter turn-around time or time to market, better products or services — in order to ensure that employees buy-in to the intervention and can measure success. The organization might lack an effective infrastructure such as performance appraisal systems and teamwork in order to encourage people to use the new philosophies and tools regularly. Even when the organization establishes clear business needs and infrastructures for implementing new initiatives — TQM, management by objectives, T-groups, intrapreneuring — it might underestimate the effort required to alter people's change-making skills, attitudes, and behaviors, and thus fail to provide adequate training in these process skills (Basadur and Robinson, 1993). In order to mainstream innovation, adaptability, and commitment, an organization must integrate creative change-making skills and establish a clear-cut business need and infrastructure to encourage employees to use those skills.

Future Research

What are the decision rules that some organizations use in order to balance adaptability and efficiency? What are the decision rules that prompt senior management to request more creativity, that motivate middle managers to act upon a top management requirement for more creativity, and that encourage individuals in the organization to act more creatively (assuming in each case that they know how to do so)? More research is needed in determining an organization's appropriate balance of adaptability and efficiency for a given set of circumstances. Although North American organizations have taken steps to correct the balance between efficiency and adaptability, they still overwhelmingly favor the former over the latter. More research is needed to reassure such organiza-

tions that they are on the right track, particularly important when the results of emphasizing adaptability may take considerably longer to appear than the results of an emphasis on efficiency. A clue may be found in Japan: whereas much North American decision-making is driven by the next quarter's results, Japanese organizations favor long-term planning and reporting (Dertouzos, Lester & Solow, 1989). Decision rules that enable organizations to confidently shift the balance between adaptability and efficiency will help them prosper over the long term and prevent their being surprised and damaged by a volatile environment.

An additional avenue for further research is to define the decision rules that enable an organization facing a change in its environment or circumstances to alter its "appropriate" balance of adaptability and efficiency. A clue may be found in several North American corporations that had the appropriate balance for an earlier era but had to drastically change that balance during the 1980s in order to react to changes in their environment or circumstances. While suffering through 13 consecutive quarters of huge losses in the early 1980s, Ford made massive top-down training interventions to become a less authoritarian, more innovative and more efficient organization with higher employee involvement. In order to respond to new competition, Xerox reinvented itself from a copier company into a document company and instituted a continuous process to fundamentally change how its employees work and manage. More recently, IBM reorganized itself after seeing its stock price plummet when smaller competitors capitalized on the market shift to personal computers from mainframes. An excellent research question would be how these organizations might have recognized the need to shift their balance much sooner than they did.

In summary, this paper advocates a new approach to organizational development. OD must be understood as a process, not just a program of interventions and philosophies of "what's good" for organizations. Effective OD is a process of organizational adaptability, i.e. a process of creativity that can be learned, implemented, and mainstreamed to provide continuous and deliberate change, improvement, and innovation. Above all, OD must be a change-making process. In order to implement specific OD interventions, one must first obtain skills in the creative change-making process. Specific interventions simply follow as tools and techniques to help implement the steps of the basic creative process described in Figure 6. Therefore, skill-building in this creative process for effective change-making should precede any attempt at traditional OD including TQM. Classic OD interventions should be attempted as solutions only after careful problem definition and only as part of a complete, system-oriented change (creativity) process.

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