

The Climate for Creativity and Change in Teams

Scott G. Isaksen and Kenneth J. Lauer

We must all hang together, or assuredly we shall all hang separately.

—Benjamin Franklin, At the signing of the Declaration of Independence, July 4, 1776.

This article reports the results of a study conducted to examine the ability of the Situational Outlook Questionnaire (SOQ™) to effectively discern climates that either encourage or discourage creativity and the ability to initiate change in a team setting. The purpose of the study is to examine the concurrent criterion-related validity of the SOQ. The article explores the characteristics in an organisational climate that promote teamwork and some of the trip-wires one needs to be aware of in the formation and management of teams. Nine dimensions of the climate for creativity and change as measured by the Situational Outlook Questionnaire are put forward and defined in relation to teams. The methodology and results of the study are reported. The results show that when subjects (N = 154) complete the SOQ based on their recollection of a best- and worst-case team experience, the measure is able to consistently and significantly discriminate between the two types of experiences. Conclusions, implications, and areas for future research to further examine the validity of the SOQ are explored.

Introduction

The need for organisational change stems from two basic sources. Numerous external and internal forces drive the changes that organisations have to anticipate and manage as a means to ensure their survival and success. Changes in government policies and regulations, actions taken by competitors, and changing needs and desires of customers are a few examples of external drivers of change coming from the marketplace. A survey of 506 CEOs from around the world conducted in 2000 and published in 2001 by The Conference Board and Accenture shows what some of the major market challenges are today (see Table 1).

All organisations must also face the demands of increased efficiency, flexibility and growth. These internal issues are core challenges for leaders and managers within organisations. Table 2 shows the results obtained on The Conference Board and Accenture survey when CEO's were asked to rate management issues.

The potential role of teams in handling both the marketplace and management challenges

identified in this survey were apparent to us in a variety of ways. We saw that beyond the formal organisational structure, often depicted in organisational charts, the way most leaders and managers deal with these challenges is through the use of teamwork. Our experience has shown that:

- Senior management must work together as a team to build a shared vision and strategy for the organisation
- Middle management must team cross-functionally to meet most of these challenges
- Supervision must demonstrate team competence in organising to get people to accomplish tasks, and
- Projects and Initiatives within all parts of the organisation require teamwork to meet the novelty and complexity of obtaining the objectives they are focused on

The Conference Board and Accenture survey went on to examine what drivers of change are being focused upon by CEO's today. These interviews revealed that CEO's felt the key drivers for the challenges of Increased Flexibility and Speed, and Competing for

Table 1. Ten Leading Marketplace Challenges

Challenge	Percent identifying as a challenge
Changes in type/level of competition	40.7%
Impact of the Internet	38.3%
Industry consolidation	37.4%
Downward pressure on prices	33.4%
Shortages of key skills	31.6%
Changing technology	21.9%
Changes in supply/distribution systems	19.2%
Access to/cost of capital	16.6%
Regulatory issues (labor, market access, etc.)	15.0%
Currency issues	7.7%

Source The CEO Challenge: Top Marketplace and Management Issues 2001 by The Conference Board

Table 2. Ten Leading Management Challenges

Challenge	Percent identifying as a challenge
Customer loyalty/retention	37.2%
Increasing flexibility and speed	33.6%
Competing for talent	29.2%
Reducing costs	28.9%
Managing mergers/acquisitions/alliances	23.9%
Increasing innovation	21.9%
Engaging employees in the company's vision/values	20.8%
Developing and retaining potential leaders	20.0%
Launching new technology initiatives	19.8%
Improving the stock price multiple	18.0%

Source The CEO Challenge: Top Marketplace and Management Issues 2001 by The Conference Board

Talent include:

- Keeping pace with new technology and product innovations
- Creating Organisational structures that promote flexibility and speed
- Making faster decisions enabled by increasingly rapid information flow
- Obtaining the right kind of people for the new market conditions
- Creating a higher purpose that instils a passion that people now want from work
- Overcoming the lack of younger workers to replace retiring baby boomers (which consists of individuals born between the

years 1946–1962. This accounts for 81 million people in the USA.)

Conceptual Frame

In our practice over the last ten years we have worked with a number of organisations in a number of situations and at a variety of levels. Part of that work often focused on team building and team development as a means to promote and increase problem solving skills in organisational settings. It became apparent to us that the work we were doing with team creativity had a direct

impact on all the drivers mentioned by CEO's in the Conference Board and Accenture survey. We felt that an empirical study of team creative climate might be able to shed some light on the nature and nurture of teams as a means to improve organisational climate, flexibility, productivity and profitability. In this paper we will explore the questions of what type of climate facilitates team creativity and inversely, what type of climate hinders team creativity. The literature has been summarised regarding the characteristics that promote teamwork and the dimensions of the creative climate. An exploratory investigation, from the world of professional services, provided initial evidence that the climate for most and least creative teams is clearly distinguishable. Thus, since the climate for successful team creativity and performance is identifiable, it is measurable and more importantly it is manageable. We will explore these manageable aspects found in this study and suggest further avenues of research in this topic.

Teams are one of the basic building blocks of every organisation. After individuals, they may be considered the most important resource in any organisation. That so much real day-to-day work within organisations is conducted more and more by teams explains the interest in high-performance work systems, electronic groupware, small-group facilitation skills, and a host of other strategies for improving the way groups work. However, before we continue we think it would be helpful to explore what we mean by a team. According to the Merriam-Webster dictionary the word 'team' is derived from the Middle English *teme*, from the Old English *tEam* that was used to describe a group of draft animals. Merriam-Webster defines the current use of the word to mean 'a number of persons associated together in work or activity: as a: a group on one side (as in football or a debate) b: a crew, gang'. For us a team means a combination of individuals who come together or who have been brought together for a common purpose or goal in their organisation. Since teamwork is so important for organisational effectiveness, and climate is emerging as a construct to be assessed, understood and improved, the purpose of this article is to explore the climate for creativity within teams.

Identifying Characteristics That Promote Teamwork

Authors, researchers and practitioners have offered many suggestions for productive teamwork. Given how important it is to be

able to contribute productively as a member of a working group, it is interesting to note the increased interest in developing teamwork skills (Belbin, 1981 a & b; Carnevale, Gainer & Meltzer, 1990; Guzzo & Salas, 1995; Katzenbach & Smith, 1993; Katzenbach, 1998). This section of the article will provide some general characteristics which promote teamwork and some tripwires to watch out for when working with groups.

There are a variety of ways to differentiate working groups from teams. One senior executive with whom we have worked described groups as individuals with nothing in common except a zip/postal code. Teams, however, were characterised by a common vision. Smith (1996) described a team as '... a small number of people with complementary skills who are mutually committed to a common purpose, a common set of performance goals, and a commonly agreed upon working approach.' The following dozen characteristics of productive teams have been formulated from reviewing the work of McGregor (1967), Bales (1988) and Larson & LaFasto (1989).

A clear elevating goal. Having a clear and elevating goal means having understanding, mutual agreement and identification with respect to the primary task a group faces. For instance, one of our client's R&D teams had the task of revamping how the department developed their products. This team concluded that their current practices did not take into account any customer input and it became their goal to introduce consumer input into the process. Active teamwork toward common goals happens when members of a group share a common vision of the desired future state.

Results-driven structure. Individuals within groups feel productive when their efforts take place with a minimum of grief. Open communication, clear co-ordination of tasks, clear roles and accountabilities, monitoring performance, providing feedback, fact-based judgement, efficiency, and strong impartial management combine to create a results-driven structure.

Competent team members. Competent teams are comprised of capable and conscientious members. Members must possess essential skills and abilities, a strong desire to contribute, be capable of collaborating effectively, and have a sense of responsible idealism. They must have knowledge in the domain surrounding the task (or some other domain

which may be relevant) as well as with the process of working together.

Unified commitment. Having a shared commitment relates to the way the individual members of the group respond. Effective teams have an organisational unity; members display mutual support, dedication and faithfulness to the shared purpose and vision, and a productive degree of self-sacrifice to reach organisational goals.

Collaborative climate. Productive teamwork does not just happen. It requires a climate which supports co-operation and collaboration. This kind of situation is characterised by mutual trust...trust in the goodness of others. Organisations desiring to promote teamwork must provide a climate within the larger context which supports co-operation.

Standards of excellence. Effective teams establish clear standards of excellence. They embrace individual commitment, motivation, self-esteem, individual performance, and constant improvement. Members of teams develop a clear and explicit understanding of the norms upon which they will rely.

External support and recognition. Team members need resources, rewards, recognition, popularity and social success. Being liked and admired as individuals and respected for belonging and contributing to a team is often helpful in maintaining the high level of personal energy required for sustained performance. With the increasing use of cross-functional and inter-departmental teams within larger complex organisations, teams must be able to obtain approval and encouragement.

Principled leadership. Leadership is important for teamwork. Whether it is a formally appointed leader or leadership of the emergent kind, the people who exert influence and encourage the accomplishment of important things usually follow some basic principles. Principled leadership includes the management of human differences, protecting less able members, and providing a level playing field to encourage contributions from everyone. This is the kind of leadership which promotes legitimate compliance to competent authority.

Appropriate use of the team. Teamwork is encouraged when the tasks and situations really call for that kind of activity. Sometimes the team itself must set clear boundaries on when and why it should be deployed. One of the easiest ways to

destroy a productive team is to overuse it or use it when it is not appropriate to do so.

Participation in decision making. One of the best ways to encourage teamwork is to engage the members of the team in the process of identifying the challenges and opportunities for improvement, generating ideas, and transforming ideas into action. Participation in the process of problem solving and decision making actually builds teamwork and improves the likelihood of acceptance and implementation.

Team spirit. Effective teams know how to have a good time, release tension, and relax their need for control. The focus at times is on developing friendship, engaging in tasks for mutual pleasure and recreation. This internal team climate extends beyond the need for a collaborative climate.

Embracing appropriate change. Teams often face the challenges of organising and defining tasks. In order for teams to remain productive, they must learn how to make necessary changes to procedures. When there is a fundamental change in how the team must operate, different values may need to be accommodated. Productive teams learn how to use the full spectrum of their members' creativity.

Challenges to Watch for with Teams

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 that 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 organisational work groups, he found some seemingly small factors that if overlooked in the management of teams will have large implications that tend to destroy the capability of a team to function. These small and often hidden 'tripwires' to major problems include:

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. This is similar to making it a team 'because I said so.' It is important to be very clear about the underlying goal structure. Organisations

are often surprised that teams do not function too well in their environment. Of course, they often fail to examine the essential ingredient of competition in their rating or review process. People are often asked to perform tasks as a team, but then have all evaluation of performance based on an individual level. This situation sends conflicting messages, and may negatively effect team performance.

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? 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. Teamwork is often under-utilised because the desired ends are unclear and unspecified. As a result, teams are often given too much guidance on the means (the how) rather than sufficient emphasis on the ends (the what and why).

Structured freedom. It is a major mistake to assemble a group of people and merely tell them in general terms what needs to be accomplished and then let them work out their own 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. They need clear limits as to the group's authority and responsibility, and they need sufficient freedom to take initiative and make good use of their diversity.

Structures and systems. Often challenging team objectives are set, but the organisation fails to provide adequate support in order to make the objectives a reality. In general, high performing teams need a reward system which recognises 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 organisations have a great deal of faith in their selection systems. Facilitators, and others who manage groups, cannot assume that the

group members have all the competence they need to work effectively as a team, simply because they have been selected to join any particular organisation. Technical skills, domain-relevant expertise, and abilities often explain why someone has been included within a group. These are often not the only competencies individuals need for effective team performance. Members will undoubtedly need explicit coaching on skills they need to work well in a team. Coaching and other supportive interventions are best done during the launch, at a natural break in 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.

Teamwork and Goal Structures

There is very clear evidence that if teamwork is desired, then goals that are competitive or individualistic should be avoided (Johnson, Maruyama, Johnson, Nelson & Skon, 1981). Groups can be structured so that they will co-operate, compete, or act individualistically (Deutsch, 1949; Johnson & Johnson, 2000).

Individualistic goal structures are those where there is no relationship among group members' goal attainments. Group members perceive that obtaining their goals is unrelated to the goal achievement of other members of the same group. An individual's success in swimming fifty yards, for example, is unrelated to whether anyone else swims fifty yards or not. When working within individualistic goal structures the interaction among group members is likely to be characterised as non-related to work, unnecessary, or even as a distraction to accomplishing the tasks at hand. There is really no perceived need for interaction.

Competitive goal structures exist when there is a negative relationship among group members' goal attainments. Group members perceive that they can obtain their goals only if the other members, with whom they are competitively linked, fail to obtain their goal. When one runner wins a race, for example, all other runners in that race fail to win. When the goal structure is competitive; interaction, communication, and information exchange among group members can often be misleading or threatening. Group members do not utilise each others' resources. Competitive goal structure also brings increased fear of failure, low trust, evidence of win-lose conflict and high emotional involvement in and commitment to

productivity by the few members who have a chance 'to win.' There is a tendency to avoid risk-taking and divergent thinking.

Co-operative goal structures exist when there is a positive relationship among group members' goal attainments. This happens when group members perceive that they can achieve their goal if and only if the other members with whom they are co-operatively linked obtain their goal. When a team of climbers, for example, reaches the summit of a mountain, the success is experienced by all members of the team. In groups with co-operative goal structures, interaction among members is characterised by effective communication and exchange of information, facilitation of each others' productivity, helping, and sharing. Group members use each other's resources. The climate is characterised by high acceptance and support among members, high trust, decreased fear of failure, and a problem-solving orientation to conflict.

People working within teams perform better when they are structured for co-operative and collaborative work. In short, productivity increases. Promoting teamwork within groups is not merely a matter of warm-ups, fun and games, or team-building exercises. Seeking co-operative goal structures and organising for effective teamwork is best done upon the foundation of a key philosophy. One of the best writers and thinkers about this area is Greenleaf (1977) on the servant as leader. His basic premise is that a leader seeks first to serve. It is just this attitude that establishes a collaborative environment with which co-operative goal structures are likely to flourish. This philosophy has been recently linked to creative leadership (Freeman, Isaksen & Dorval, 2002).

The Climate that Promotes Creativity

Scholars have contributed a great deal to our understanding of climate (Litwin & Springer, 1968; Payne & Pugh, 1976; Schneider, Brief, & Guzzo, 1996; Tagiuri & Litwin, 1968). Some scholars have linked their study of climate to creativity (Amabile, Conti, Coon, Lazenby & Herron, 1996; Talbot, Cooper, & Barrow, 1992; Turnipseed, 1994).

Ekvall has also researched the organisational climate conducive to innovation and growth (Ekvall, 1983; Ekvall, Arvonen & Waldenstrom-Lindblad, 1983; Ekvall, 1987; Ekvall, 1991; Ekvall, 1996; Ekvall, 1997), and his work has been translated and validated for use in North America (Cabra, 1996; Isaksen, Lauer & Ekvall, 1999; Lauer, 1994; Sobieck, 1996; Speranzini, 1997).

Similar to other organisational psychologists (Pettigrew, 1990; Schneider & Gunnarson, 1991), Ekvall has differentiated the concepts of climate and culture. Ekvall (1991) defined climate as the observed and recurring patterns of behaviour, attitudes, and feelings that characterise life in the organisation. Culture reflects the deeper foundations of the organisation. Culture includes values, beliefs, history and traditions. According to this distinction, culture provides the foundation for patterns of behaviour that are more readily observed, described, and changed. These patterns of observed behaviour, along with many other variables (e.g., management, leadership, organisational size and structure, etc.), help to establish the climate within the organisation.

The concept of climate may be separated into two distinct, but complementary, constructs commonly referred to as psychological and organisational climate depending on the unit of analysis (James, James & Ashe, 1990). Psychological climate is the cognitive appraisal by an individual of environmental attributes in terms of their acquired meaning and personal values to the individual. When individual appraisals are aggregated, based on the belief that individuals in an organisation have a sense of shared meaning, the result is referred to as organisational climate. As an attribute of an organisation, organisational climate has been identified as a productive construct to utilise in preliminary and sustained organisational diagnosis for development or improvement efforts.

Climate is an intervening variable that influences organisational and psychological processes which, in turn, influence the overall productivity and well-being of an organisation. Climate influences, and is subsequently influenced by, the outcome of organisational operations. Climate affects organisational productivity and well-being by influencing organisational processes such as problem solving, decision making, communicating and coordinating, the individual processes of learning and creating, and levels of motivation and commitment. A number of factors affect climate (e.g., the larger external environment within which the organisation operates, the resources available within the organisation, its strategic positioning and architecture as well as its culture and leadership practices). As such, climate is an important variable in understanding organisational performance and change (Burke & Litwin, 1992; Schneider, Brief & Guzzo, 1996).

Ekvall has accumulated a great deal of support for his approach to measuring climate through his own field research with colleagues

and doctoral students, as well as his consultancy experiences in organisational psychology. As a result of this sustained program of research and practice, Ekvall has demonstrated that his method of assessing climate clearly discriminated 'stagnated' from 'innovative' organisations (Ekvall, 1996). Ekvall's colleagues and students were able to make independent assessments of the degree to which each of the 30 international organisations was innovative. The organisations in the studies were assessed on their ability to bring novel products or services to the marketplace. This assessment included both technical and market novelty. Those that were able to put many new products and services through their systems were labeled innovative. Those who had extreme difficulty, or simply could not produce new products or services, were called stagnated. Clear and significant differences on the scores were observable between the stagnated and innovative organisations on the dimensions designed to measure the creative climate.

The following nine dimensions have been found to effectively discriminate the degree to which a climate supports creativity. The dimensions have been derived on the basis of Ekvall's extensive validation with organisations, and our own work to translate, extend, and validate the measure we utilise (Isaksen & Kaufmann, 1990; Isaksen & Lauer, 1999; Isaksen, Lauer, Ekvall & Britz, 2001; Lauer & Isaksen, 2001; Lauer, Isaksen & Dorval, 1996).

Challenge and Involvement means the extent to which teams are given opportunities to get involved in the daily operations, long-term goals, and visions of the organisation. When there is a high degree of challenge and involvement team members feel motivated, energised, and committed to making contributions. The climate is dynamic, electric, and inspiring. Team members find their work to be personally fulfilling and meaningful to their team and organisation. In the opposite situation, team members are not engaged and feelings of alienation and apathy are present. The team lacks direction, members lack interest in their work and interpersonal interactions within and without the team are dull and listless.

Freedom refers to the degree that teams can take initiatives or are at liberty to act without constantly referring to higher authorities or 'rule books' for decisions. The team members exhibit independence in behaviour and the team is given the

autonomy and resources to define much of their work. Team members are provided the opportunities and take initiatives to acquire and share information about their work. In the opposite climate teams work within strict guidelines and are not allowed to take initiative. Team members carry out their work in prescribed ways with little room to redefine their tasks.

Trust and openness refers to the degree of emotional safety in relationships. When there is a high degree of trust, team members trust one another and feel 'safe' enough to be open and honest with their colleagues, in the spirit of constructive relationships. Team members are genuinely open and frank with one another. They count on each other for professional and personal support. Team members have a sincere respect for one another and give credit where credit is due. Where trust is missing, team members are suspicious of each other, and therefore, they closely guard themselves, their plans, and their ideas. In these situations team members find it extremely difficult to openly communicate with each other and function as a team.

Idea time is the time the team takes off to generate new ideas or consider the merits of existing ideas and opportunities. In the high idea-time situation, possibilities exist to discuss and test suggestions not included in the task assignment. There also are opportunities to take the time to explore and develop new ideas. Flexible timelines permit team members to explore new avenues and alternatives. In the reverse case, every minute is booked and specified. The time pressure makes thinking outside the instructions and planned routines impossible.

Playfulness and humour refers to the amount of spontaneity and levity displayed within the team. A professional, yet relaxed atmosphere where good-natured jokes and laughter occur often is indicative of this dimension. Team members can be seen having fun within the team and at work. The climate is seen as easy-going and light-hearted. The opposite climate is characterised by gravity and seriousness within the team. The atmosphere is stiff, gloomy and cumbersome. Jokes and laughter are regarded as improper and intolerable.

Conflict means the presence of personal and emotional tensions within the team and between team members. When the level of conflict is high, team members

dislike and may even hate each other. The climate can be characterised by 'inter-personal warfare.' Plots, traps, power and territory struggles are usual elements of team functioning. Personal differences yield gossip and slander. In the opposite case, team members behave in a more mature manner; they have psychological insight and control of impulses. The team welcomes, accepts and deals effectively with diversity. Conflict is the only negative dimension, for which a lower score is generally better.

Idea Support refers to the ways new ideas are considered, taken up or advocated by the team. In the supportive climate, ideas and suggestions are received in an attentive and professional way by teammates. They listen to each other and encourage initiatives. Possibilities for trying out new ideas are created within the team. The team's atmosphere is constructive and positive when considering new ideas. When idea support is low, the automatic 'no' is prevailing within the team. Fault-finding and obstacle-raising are the usual styles of responding to ideas.

Debate is the occurrence of encounters and disagreements between viewpoints, ideas, and differing experiences and knowledge within the team. Conflict relates to personal tension while debate is related to idea-tension. In the debating team all the voices of team members are heard and they are keen on putting forward their ideas for consideration, and their merits are openly debated and resolutions reached. Where debate is missing, team members follow authoritarian patterns and procedures without questioning them or exploring alternatives.

Risk-Taking refers to the degree to which the team can tolerate ambiguity and make decisions with some uncertainty. Team members are prepared to live with the potential negative consequences. In the high risk-taking case, teams take bold initiatives even when the outcomes are unknown. Teams and team members feel as though they can 'take a gamble' on ideas. They will often 'go out on a limb' to put an idea forward. In a risk-avoiding climate there is a cautious, hesitant mentality within the team. Team members will lack decisiveness, try to be on the 'safe side' and often 'sleep on the matter.' They may set up committees, defer decisions to other teams, and cover themselves in many ways.

Previous research with the SOQ used the organisation (Lauer & Isaksen, 2001) as the unit of analysis. All of our previous studies regarding these dimensions have been conducted with individual psychological climate as the unit of analysis (Isaksen & Kaufmann, 1990; Isaksen & Lauer, 1999; Isaksen, Lauer, Ekvall & Britz, 2001). This study represents an initial attempt to use teams as the unit for comparison.

Method

The data were collected as a part of a distance learning workshop within a large global professional services firm that was led by the lead author from a site in Baltimore, Maryland USA. This sample was chosen because those providing a variety of professional consulting services to a diverse kind of organisation would provide a broad lens for this initial study. The workshop was called 'Teamwork for Innovation' and was one of a series of workshops offered within the program. The participants in the study were all enrolled in this series of workshops as a part of their own interest in developing their leadership and management skills. The 170 participants were all managers in the firm. They had at least three to five years experience and all elected to participate in this module. They came from 23 locations in North America including Boston, New York, Miami, Toronto, Tampa, and Atlanta.

A set of nine questions (see Appendix A) was designed to summarise the key behaviours described in the dimensions above. Participants used the same set of nine questions for two different tasks. One asked them to recollect their most creative team experience, and the other asked them to recall their least creative team experience. A tenth open-ended item was included to ask what factor the respondent thought was most important or detrimental to the success of the team.

Before they were given a description of climate, or any of the dimensions outlined above, the participants were invited to respond nominally to the nine closed-ended questions after identifying the most creative team they have experienced. The definition provided to them regarding the most creative team was one that produced something that was: new, unique, or original; valuable, relevant and useful; and accepted, produced results, and made a positive impact. In addition, they were asked to write a narrative response to the question: What do you think was the most important factor accounting for the team's success? The distance learning

technology allowed the presenter to know the number and percentage of respondents for every question.

After 90% of the participants completed their responses to the above questions, they were requested to respond nominally to nine additional closed-ended questions about their least creative team experience. The least creative team was described for them as one that produced something that was: well within previous practice or standard, where they 'reinvented the wheel'; useless or valueless; and was rejected or produced very little or no impact. They were also asked to respond to an open-ended question that asked them to identify the most significant barrier hindering the team's success.

Participants could choose a number for each of the sets of nine questions that ranged from zero to three. Assigning the number zero meant that they did not observe the dimension at all. Giving a team the number one signified that they observed a dimension to some extent. Two meant that the dimension was fairly applicable. Three signified that they observed the dimension very often. Each participant was able to read each of the two sets of nine questions on their own personal monitor and select a number indicating their assessment of the frequency of the behaviour described in the dimension. All quantitative responses were electronically conveyed to the distance learning provider and the results were aggregated and recorded. All narrative responses were also electronically communicated and summarised by the provider.

The comments were transcribed onto one master list and numbered for future reference. The first list included all the factors of success and the second, all the barriers

identified by the participants. Each list was analysed separately to identify key themes. The themes were identified on a separate list and all comments were placed into a theme. The work on themeing the responses continued until all comments were included. Each list was then given to a second reviewer and were checked by having another reviewer independently place each comment into a theme. There was 97% agreement of fit and the few comments that did not agree provided additional clarity of definition for the theme.

Since there were no controls to ensure that all participants completed all questions before proceeding, a different number of responses were collected for each of the two sets of nine questions. As a result, averages were used for comparison purposes. In addition, some participants provided more than one response to the narrative questions, and others chose not to respond at all. All narrative responses were recorded separately as factors for success and barriers. These responses were then themed using content analysis and were validated by two independent raters with a 97% agreement with the themes.

Results

The quantitative comparisons between the most and least creative teams are presented in Table 3.

Significant differences were observed on all nine mean scores (see Table 4). These results were consistent with results of the Isaksen, Lauer, Ekvall & Britz (2001) SOQ study of individual perceptions of their best and worst case experience in a job. They are also consistent with a SOQ study by Isaksen & Lauer

Table 3. Averages of the Most and Least Creative Team Responses

Dimension	Most Creative Team Experience	Least Creative Team Experience
Challenge & Involvement	260	100
Freedom	202	110
Trust & Openness	253	88
Idea Time	227	65
Playfulness/Humor	235	77
Conflict	27	123
Idea Support	218	70
Debate	231	83
Risk-Taking	210	65

N = 154

Table 4. Tests of Significance on the Most and Least Creative Team Responses

Dimension	t Value	Statistical Significance
Challenge & Involvement	11.63	p < .01
Freedom	8.98	p < .05
Trust & Openness	30.06	p < .001
Idea Time	15.39	p < .01
Playfulness/Humor	24.54	p < .01
Conflict	-31.73	p < .001
Idea Support	12.82	p < .01
Debate	15.16	p < .01
Risk-Taking	10.19	p < .01

N=154

(2001) that explored the individuals perception of perceived support for creativity. These previous studies used the individual level of analysis as the unit for comparison, while this is the first study using teams.

These quantitative results are consistent with the previous research with the SOQ using both an individual and organisational unit of analysis. The main themes derived from a qualitative analysis of the 330 narrative comments received by the 160 subjects are summarised as:

Interpersonal Dynamics. The more creative teams had the ability to work together without major conflicts in personalities. There was a high degree of respect for the contributions of others. Communication was characterised by 'The willingness of team members to listen to one another and honour the opinions of all team members.' Members of these teams reported that they knew their roles and responsibilities and that this provided freedom to develop new ideas. In the least creative teams there was an 'unwillingness to communicate with one another because people did not make the effort to understand each other.' There were instances of animosity, jealousy, and political posturing.

Energy and Motivation. The more creative teams 'played hard and worked even harder.' Team members enjoyed contributing and celebrated their accomplishments. 'All team members were motivated to do the best job possible in reaching the end goal, so everyone was willing to pitch in to get the job done.' There was a high degree of enthusiasm and commitment to get the job done. On the least creative

teams there was a lack of motivation. There was a lack of initiative, ideas, and follow through on suggestions. The least creative teams had a 'lack of motivation and the inability to recognise the value provided by the end result.'

Openness. The most creative teams had an environment that encouraged new ideas and allowed the development of new ways of working. 'No matter what the disagreements, we all knew that we had to bring our ideas together to get the job done.' Everyone felt comfortable discussing ideas, offering suggestions because '...ideas were received in a professional and attentive manner...people felt free to brainstorm to improve others' ideas without the authors' feelings getting hurt. In the least creative teams new ideas were not attended to or encouraged because '...individuals placed their own priorities before the teams'. They were characterised by not being able to discuss multiple solutions to a problem because team members couldn't listen to any opinion other than their own. In these teams, members were '...expected to follow what had always been done and finish as quickly as possible.'

Leadership. In the most creative teams the '...leader led by example, encouraging new ideas and sharing best practices.' Leaders provided clear guidance, support and encouragement, and kept everyone working together and moving forward. Leaders also worked to obtain support and resources from within and outside the group. In the least creative teams, the leader '...created a situation where everyone was confused and afraid to ask questions.' Leaders 'tore down people's

ideas,' 'set a tone of distrust,' and 'stifled others who had ideas and energy to succeed.' They '...kept all control, but took no action.'

Focus, Direction, and Goals. The most creative teams had clear and common goals. 'The most important factor accounting for my team's creative success was, undoubtedly, each member's drive to attain the end goal, knowing the benefits that would be derived from the results.' The goals were clear and compelling, but also open and challenging. The least creative teams had conflicting agendas, different missions, and no agreement on the end result. 'Everyone did their own thing without keeping in mind the overall objective that the group was charged to achieve.' The tasks for the least creative teams were tightly constrained, considered routine, and were overly structured.

Trust. The most creative team members trusted each other, promoted open and honest communication and supported each other's views. 'The most important factor for the success of the team was the overwhelming trust we had for each other, both personal and work-related.' In the least creative teams there was '...Absolutely no trust among team members. Everyone was suspect of someone's underlying motives.'

Diversity of skills and experience. The most creative teams recognised the diverse strengths and talents and used them accordingly. 'Each individual brought a cornucopia of experience and insight. All of this, together with the desire to meet the end goal was the key to success.' The least creative teams had inadequate skill sets and were unable to effectively utilise their diversity.

The themes derived through qualitative analysis are consistent with much of the literature regarding effective teamwork and contain characteristics that respond to tripwires and goal structures.

Summary and Conclusions

The significant results reported on the basis of well over one hundred different team experiences indicate that there are clear and meaningfully distinct climates for creative team performance. The results of this study were also consistent with previous research on creative climate and the literature on small group effectiveness.

There are many implications for those who lead and manage organisations. One of the most important is that teams requiring creativity in order to pursue their tasks need to attend to the dimensions of the creative climate, as well as the factors derived from the narrative comments. Attending to these ingredients of creative team climate is a function well suited for the leader or facilitator of the group. This facilitation and leadership must be done in such a way that it establishes, nourishes, and maintains a climate that is appropriate for the team to succeed. There is more than sufficient literature to support this facilitative kind of leadership within teams (Isaksen, 2000).

The study does have some limitations that need to also be identified. The first is that the results are based on the internal self-perceptions of the respondent and these were not observed or validated by an outside source as being either a creative or non-creative team. The use of a virtual platform for the collection of the responses to the questions is also a concern because there were time limits for the completion of the questions and not every participant completed the questionnaire.

Our observations from completing this study suggest many productive areas of further inquiry in this area. First we suggest that future researchers utilise the entire SOQ to ensure that the questionnaire used is reliable and has support for its validity. We would also recommend that intact work teams be used and that external measures of creative productivity be used. A final recommendation that we have focuses on the facilitation and leadership abilities of individuals in the team. Our observations from the field have been that teams containing individuals who have facilitation and leadership skills are more efficient, effective and creative than teams which are lacking these skills (Bradford, 1976; Isaksen, 1986). A study of teams that controls for these variables could lead to some empirical support to our general observations.

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Scott G. Isaksen is the CEO of The Creative Problem Solving Group, Inc. and Senior Fellow of the Creativity Research Unit. Kenneth J. Lauer is the Director of Research and Operations at The Creative Problem Solving Group, Inc. and Coordinator of the Creativity Research Unit.

Appendix A: Situational Outlook Questionnaire Sample Questions

1. Most people on this team were highly motivated and committed to making contributions in accomplishing the purposes and goals of the team.
2. People on this team define much of their own work and frequently took independent initiatives to acquire information, make decisions, and plan.
3. People on the team trusted each other, were open and honest, and count on each other for personal support.
4. People on this team took the time to consider and test new ideas and ways of doing things.
5. People on this team had fun doing work. There was a great deal of good-natured joking and laughter.
6. People on this team often set traps for each other and engaged in territory struggles, gossip, and slander.
7. New ideas were received in an attentive and professional way by bosses, peers, and others. People listened, encouraged, and tried new ideas here.
8. People on this team discussed and considered opposing opinions and a diversity of viewpoints.
9. People on this team feel as though they can go out on a limb and be first to put an idea forward. They tolerated uncertainty and ambiguity.
10. What do you think was the most important factor for the team's success? (Please write your answer)