The Creative Work Environment: Manager and Employee Perceptions of Factors that Influence Creativity Within Land-Grant Communication Units

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According to research, environmental factors have the potential to inhibit or enhance creativity, particularly in a work setting. For this study, survey methodology was used to determine manager and employee perceptions of factors that inhibit or enhance creativity in land-grant university communication units. An overall response rate of 86% was achieved. A major finding was that managers and employees have differing perceptions of their work environment. Managers tend to view their part of the organization in a more idealistic manner than do employees. Additionally, managers revealed that administrative support and staff teamwork/interaction are the most important factors supporting their creativity, whereas employees cited freedom and managerial support. Both groups identified a lack of resources, excessive workload, and bureaucracy as important factors inhibiting their creativity at work.

The communication unit manager has the potential to influence worker creativity by encouraging and nurturing a creative work environment. Managers can use findings from this research to design a setting in which individuals exercise their creative talents.

Introduction

Creativity generally is recognized as one of the hottest topics of the '90s (Gehrt, 1991). It has been touted as the cure for what ails American education, business organizations, and society at large. The creativity "craze," as Gordon (1986) termed it, is a direct result of the '90s emphasis on quality, innovation, and cost cutting—three areas that mean a bull market for good ideas and, consequently, creativity (Hequet, 1992).

In recent years, interest in developing and maintaining organizational creativity has risen dramatically. Executives and administrators of profit and nonprofit organizations alike are seeking ways to make themselves and their employees more creative and to stimulate creativity through a more conducive work environment. Several authors have highlighted how creative performance is intertwined with environmental setting (Bailyn, 1985; Delbecq & Mills, 1985; Drucker, 1985; Geis, 1985; Kanter, 1983).

Higher education is a special work setting where creative outcomes are expected. Institutions of higher learning are charged with the creation of new ideas and knowledge, with each component within the institution providing its own contribution to the stated educational outcomes. Communication units are components within most universities that disseminate ideas, information, and knowledge in creative ways. These units play an integral role in fulfilling the missions of institutions of higher education.

Although the land-grant university system is an established institution, the system is faced with many challenges as it searches for new and better ways to serve clientele through its outreach arm of the Extension Service. Raymond (1987) observed that Extension's ability to survive to the year 2000 will depend on its ability to market its educational programs. Boyle (1989) criticized Extension's out-of-date image and emphasized the importance of good public relations.

The importance of this public relations/information function has been well-chronicled in a number of studies. Warner and Christenson (1984) noted that "Extension has been and continues to be an important information agency..." (pp. 146-147). Hussey (1985) categorized Extension functions as information delivery, educational delivery, and problem-solving. Swanson and Claar (1984) concluded that there were two important dimensions to agricultural Extension—a communication dimension and an educational dimension.

At the very core of the crucial communication dimension are the practitioners who work in land-grant university communication units. They are charged with the dissemination of Extension and agricultural experiment station news and educational information. The individu-

als who work within such units are constantly exploring and develop-
ing delivery systems that are radically reshaping the information
landscape—electronic news release dissemination, desktop publish-
ing, interactive video, electronic mail, computer animation, video
and audio teleconferencing, artificial intelligence, and distance
learning (Geasler & Jones, 1991; Kelly, 1985). These communica-
tion specialists have chosen careers generally considered to require
creativity: graphic design, writing, photography, publications, video
productions, and software development.

According to Amabile, Gryskiewicz, Burnside, and Koester
(1990), the work environment and the absence or presence of
certain factors within that environment can have a major impact on
creativity exhibited in the workplace. Environmental qualities that
are potential stimulants to creativity are freedom, challenging work,
sufficient resources, supervisory encouragement, work group sup-
ports, and organizational encouragement. Environmental qualities
that are potential obstacles to creativity are workload pressure and
organizational impediments.

Purpose and Objectives
The main purpose of this research was to determine manager and
employee perceptions of factors that inhibit or enhance creativity in
land-grant university communication units specializing in agricul-
tural, home economics, and youth, community, and natural resource
development programs.

The main research objectives were to:
1. Determine manager and employee perceptions of environmen-
   tal factors that enhance or inhibit creativity in land-grant
   university communication units.
2. Determine differences between manager and employee percep-
   tions of environmental factors that enhance or inhibit creativity
   in land-grant university communication units.

Methodology
The target population included managers and employees of U.S.
land-grant university and 1890 institution communication units that
specialize in agricultural, home economics, and youth, community,
and natural resource development programs. A census was con-
ducted of communication unit managers (N=66), and a proportional
stratified random sample of employees was drawn (n=260) accord-
ing to the number of unit employees in each state.

The main instrument for this study was Version 4 of the Work
Environment Inventory (WEI), a copyrighted, proprietary question-

naire developed by creativity scholar Teresa M. Amabile of Brandeis University. The WEI is a 78-item paper-and-pencil measure of organizational climate for creativity that can be used with both manager and employee groups. The WEI contains six scales that describe stimulants to creativity (freedom, challenging work, sufficient resources, supervisory encouragement, work group support, and organizational encouragement), two scales that describe obstacles to creativity (workload pressure and organizational impediments), and two scales used to assess the perceived creativity and productivity of an organization.

Perceptions of the work environment were assessed with a four-point response scale: 1=Never or almost never true of your current work environment; 2=Sometimes true of your current work environment; 3=Often true of your work environment; and 4=Always or almost always true of your current work environment. In addition to the 78 descriptive statements, three open-ended questions asked respondents: (a) What is the single most important factor supporting creativity and innovation in your current work environment?; (b) What is the single most important factor inhibiting creativity and innovation in your current work environment?; and (c) What specific suggestions do you have for improving the climate for creativity and innovation in your daily work environment?

Instrument face-validity was established by a panel of experts. Reported coefficients of stability for the WEI scales are .70 or higher (Amabile et al., 1990). Post-hoc reliability coefficients for the WEI were .89 for managers (N=58) and .93 for employees (n=221).

Data were collected by mail questionnaire. Two weeks after the initial mailing, a second mailing was sent to nonrespondents. Of the 66 managers in the target population, 58 (88%) returned usable questionnaires. Of the 260 employees selected for the study, 221 (85%) returned usable questionnaires. When the two groups were combined, the overall response rate for this study was 86%.

A random sample of manager and employee nonrespondents was contacted by telephone to collect demographic and selected communication unit data. These data were then compared with data from respondents to ensure that there were no differences between the groups. Because none was found, the results of this study can be generalized to the populations of managers and employees from which the samples were drawn.

Descriptive statistics were used to analyze the data, using SPSS/PC+ microcomputer statistical software. Means, standard deviations, and t-tests were calculated on data relating to manager and employee perceptions of environmental factors that inhibit or enhance creativity

in U.S. land-grant university communication units. Statistics calculated were tested for statistical significance at the .05 level.

Perceptions of Factors that Enhance or Inhibit Creativity

As illustrated in Table 1, the highest mean scores for the managers on the WEI scales were on the Challenging Work, Productivity, and Work Group Support scales, indicating that managers perceive their work environment to be efficient and effective, their work as challenging, and their work group as supportive. Employees also had high mean scores on the Work Group Support and Productivity scales, indicating that their perceptions were comparable to those of managers. The employees' highest mean score, however, was on the Freedom scale, indicating that employees perceive more of a sense of control over their work than managers do. Employee

TABLE 1: Perceptions of Environmental Factors that Enhance or Inhibit Creativity in Land-Grant University Communication Units

WEI Scales	Managers[a] Mean	S.D.	Employees[b] Mean	S.D.	Comparison Group[c] Mean	S.D.	Comparison Group[d] Mean	S.D.
Potential Stimulants								
Freedom	2.70	.31	3.15	.58	2.96	.68	2.91	.44
Challenging Work	3.28	.48	2.90	.64	2.97	.60	3.01	.42
Sufficient Resources	2.61	.36	2.95	.56	2.92	.58	3.04	.35
Supervisory Encouragement	2.52	.31	2.81	.75	2.94	.75	2.99	.49
Work-Group Support	3.20	.46	3.03	.68	3.09	.62	3.13	.34
Organizational Encouragement	2.77	.57	2.51	.65	2.72	.53	2.58	.39
Potential Obstacles								
Workload Pressure	2.59	.36	2.55	.58	2.77	.71	2.49	.43
Organizational Impediments	2.11	.48	2.28	.57	2.91	.51	2.27	.32
Perceived Creativity	3.12	.52	2.83	.65	2.54	.61	2.71	.40
Perceived Productivity	3.23	.49	2.99	.56	3.18	.54	3.06	.36

NOTE: The means were calculated based upon the following scale: 1=never or almost never, 2=often, 3=sometimes, 4=always or almost always. [a](N=58); [b](n=221); [c]=a nonprofit educational institution (n=127); [d]=13 for-profit organizations (n=1,863). (Source of comparison group data: Amabile, Gryskiewicz, Burnside, & Koester, 1990).

perceptions of Organizational Encouragement also tended to be quite different from manager perceptions, with employees' mean scores indicating less positive perceptions of an organizational culture that encourages creativity, rewards and recognizes creative work, encourages active flow of ideas, and provides a shared vision of what the organization is trying to do.

Communication unit managers also had more positive perceptions of productivity and creativity in their work environment than either the employees or the two norm groups (Amabile et al., 1990) used for comparison purposes. As illustrated in Table 1, the comparison groups consisted of a nonprofit educational institution (n=127) and 13 for-profit organizations (n=1,863). Across all four groups (managers, employees, and two comparison groups), scores on the Productivity and Work Group Support scales were among the highest mean ratings, indicating that the groups perceive their work environments as productive and their work groups as supportive.

Differences Between Manager and Employee Perceptions

Table 2 shows that eight of the 10 WEI scales had statistically significant differences between the means of the managers and employees, indicating that perceptions of the work environment tended to differ among the two groups.

Regarding potential stimulants to creativity, manager and employee groups did not statistically differ in their perceptions of Work Group Support. However, manager mean scores tended to be higher than employee mean scores on the Challenging Work, Work Group Support, and Organizational Encouragement scales, indicating that managers perceive their work as more challenging, their work group as more supportive, and their organization as more encouraging than do employees. Employee mean scores, on the other hand, tended to be higher on the Freedom and Sufficient Resources scales, indicating that employees perceive greater freedom and more access to sufficient resources in the work environment than do managers.

Perceptions of Workload Pressure were not statistically different between the manager and employee groups concerning potential obstacles to creativity. However, employee mean scores tended to be higher on the Organizational Impediments scale, indicating that employees perceive more organizational impediments to creativity than do managers. Organizational impediments are factors that impede creativity through internal political problems, harsh criticism of new ideas, destructive internal competition, an avoidance of risk, and an overemphasis on the status quo.

On the two WEI scales used to assess perceived creativity and productivity of an organization, managers' mean scores on both

scales tended to be higher than employees' mean scores, indicating that managers perceive their organization or unit to be more creative and productive than do employees.

Scales	Mean	S.D.	t	df
TABLE 2: Differences Between Manager and Employee Perceptions of Environmental Factors that Enhance/Inhibit Creativity				
Freedom				
Managers (N=56)	2.70	.31	5.68*	265
Employees (n=211)	3.15	.58		
Challenging Work				
Managers (N=55)	3.28	.48	-4.15*	267
Employees (n=214)	2.90	.64		
Sufficient Resources				
Managers (N=56)	2.61	.36	4.28*	264
Employees (n=210)	2.95	.56		
Supervisory Encouragement				
Managers (N=54)	2.52	.31	2.85*	256
Employees (n=204)	2.81	.75		
Work Group Support				
Managers (N=55)	3.20	.46	-1.73	265
Employees (n=212)	3.03	.68		
Organizational Encouragement				
Managers (N=54)	2.77	.57	-2.59*	252
Employees (n=200)	2.51	.65		
Workload Pressure				
Managers (N=56)	2.59	.36	-.48	268
Employees (n=214)	2.55	.58		
Organizational Impediments				
Managers (N=54)	2.11	.48	2.00*	257
Employees (n=205)	2.28	.57		
Perceived Creativity				
Managers (N=55)	3.12	.52	-3.04*	267
Employees (n=214)	2.83	.65		
Perceived Productivity				
Managers (N=54)	3.23	.49	-2.82*	260
Employees (n=208)	2.99	.56		

NOTE: The means were calculated based upon the following scale: 1=never or almost never; 2=often; 3=sometimes; 4=always or almost always. *p<.05.

Synthesis of Open-Ended Comments:
Factors Supporting Creativity in the Work Environment

Both managers and employees were asked to share the single most important factor supporting creativity and innovation in their current work environment. Of the 58 manager respondents, 51 (88%) provided a written answer. The managers listed support, confidence, and empowerment from the administration most frequently, then staff teamwork and interaction.

Items that are generally thought to be negative workplace factors, such as budget cuts and inability to hire staff, were reported by several managers actually to encourage creativity in their work environment. "Downward budget trends require creativity/innovation," said one manager, whereas another noted that "...to do more with less is a challenge that demands creativity."

Several themes were also evident from the employees' responses. Of the 221 employee respondents, 182 (82%) answered the question, most often citing freedom as the single most important factor supporting creativity and innovation in their work environment. Employee comments advocated the freedom to develop new ideas, freedom to decide which projects to work on, and the freedom to decide how best to complete a project.

The second most frequent factor that supported creativity and innovation dealt with the managers/supervisors. Responses tended to highlight supervisor support and managers who appreciate and encourage creativity and risk-taking. Other areas employees listed as factors in supporting their creativity include, listed in order of frequency: (a) coworker and work group support, (b) technology, (c) administrative support, (d) personal satisfaction and motivation, and (e) recognition and rewards. Employees and managers also commented on how negative circumstances, such as budget cuts and skeleton staffing levels, actually forced them to be more creative and provided opportunities to cross over traditional job boundaries.

Factors Inhibiting Creativity in the Work Environment

Both managers and employees were asked to identify the single most important factor inhibiting creativity and innovation in their current work environment. Of the 58 manager respondents, 51 (88%) provided a written answer to this question. Most responses centered around a lack of resources, specifically time and money.

Closely aligned with time constraints, workload was also cited by managers as a frequent inhibitor to creativity in the work environment. With the same frequency, unit managers also reported how administrative misunderstanding of the importance of communica-

tion and an over reliance on tradition served to inhibit work environment creativity and innovation. In addition, unit managers pointed out that bureaucratic red tape and politics served as obstacles.

Eighty-eight percent (194) of the employees provided responses concerning the single most important factor inhibiting creativity and innovation in their work environment. The greatest inhibitor, according to the employees, was a lack of funds, which, in turn, had an adverse impact upon staffing, workspace, and resources. Employees asserted that the general issue of bureaucracy, with its accompanying red tape and politics, was the second most important factor inhibiting creativity and innovation. Time and workload, followed by supervisor/management deficiencies, were the employees' next most often cited work environment inhibitors. Numerous employees also found tradition and lack of understanding about the job problematic.

Suggestions for Improving the Climate for Creativity and Innovation in the Work Environment

The final item on the WEI questionnaire asked managers and employees for suggestions on improving the climate for creativity and innovation in their daily work environment. Of the 58 manager respondents, 46 (79%) offered suggestions. A majority of the managers' suggestions dealt with additional resources: more money, staff, time, and space.

Managers also offered several suggestions related to professional development and its importance in "recharging batteries and stimulating creative, innovative thought." Other manager suggestions dealt with reward systems, teamwork, better understanding of the importance of communications, and encouraging risk-taking.

Several themes were also recurring in the employees' responses. Of the 221 employee respondents, 163 (74%) offered suggestions. The most popular suggestion was an even split between better communication and increased rewards and recognition. The next suggestion given most often by employees advised less bureaucracy and politics. Other employee suggestions were evenly distributed along broad themes of stronger leadership from management, less workload, a more conducive physical environment, and increased professional development and networking opportunities.

Recommendations

Based on the findings, the following recommendations were made:

1. Managers seem to have more positive perceptions of their overall work environment than do employees. These differences in perceptions could be a source of further conflict between managers

and employees if steps are not taken to bring the two groups closer together. One way to bridge the gap is with improved communication. Employees cited better communication as one of their top suggestions. Communication unit managers should be especially sensitive to such a suggestion because their livelihood revolves around communicating. However, as Huberman observed, companies that are in the business of communications are notorious for having poor internal communications (cited in Coleman, 1991).

Communication unit managers have the potential to influence directly worker creativity through encouraging and nurturing a creative work environment. Although employees in communication units perceive greater organizational impediments than do managers, managers can strive to alter these perceptions by consciously working to create an environment that is free of impediments. A majority of the research and writings on creativity supports the basic notion that it is possible to identify and control several factors that are essential to creative performance (Amabile, 1988a, 1988b; Amabile & Gryskiewicz, 1989; Albrecht, 1987; Gretz & Drozdeck, 1992; Kanter, 1989; Miller, 1987; Popcorn, 1991; Weaver, 1988).

2. If managerial support, staff teamwork, and freedom are the most important factors supporting creativity in the land-grant university communication unit, then managers must ensure that creativity stimulants are present in healthy doses. Managerial support can be made evident through various methods of reward, such as sabbaticals, increased freedom, membership in professional organizations, professional development opportunities, and acknowledging credit. Managers should also encourage more teamwork and group projects. It has been established in the literature (Amabile & Gryskiewicz, 1987, 1989; Coleman, 1991; Goleman, Kaufman & Ray, 1992; Kuhn, 1985) that creative people thrive in a team atmosphere where they seem to feed off one another's creativity—open-ended responses in this study support this contention.

Freedom is also a vital stimulant to creativity in the land-grant university communication units. This finding is heavily supported by literature on the creative work environment. Considering that communication unit employees list freedom as the most important factor supporting their creativity, managers should provide employees with a sense of control over their own ideas and work, convey a sense of trust and respect in the employees' abilities and decisions, give leeway to try out new ideas, and offer the freedom to risk unproven approaches without the fear of reprisal.

3. A lack of resources was cited as the primary inhibitor of creativity. However, at the same time, some managers and employees suggested that a lack of resources inadvertently forces more

creativity. Morris (1992) suggested that the challenge is to design systems that allow people to demonstrate their creativity without having to do so as a matter of survival.

If both managers and employees see a lack of resources as the most important creativity inhibitor, then unit managers should expend more effort in justifying why their unit should receive a greater slice of the budget pie. Managers must convince administrators of a) the value of spending scarce resources on communications, b) the vital role that the unit plays in organizational well-being, c) the importance of proper resources in the daily work of a communication unit, and d) the long-term returns that such short-term investments will reap.

Realizing that excessive workload and bureaucracy are seen as obstacles to creativity by managers and employees, unit managers should take steps to decrease the existence of both. Managers must set priorities in accordance with organizational goals and decline those projects that do not enhance these goals. Hard choices must be made—the units cannot be all things to all people.

Although land-grant university communication units will never totally be able to escape the inflexibility and preciseness of university bureaucracy, managers can strive to abolish the red tape within their own units by eliminating such bureaucratic staples as status reports, elaborate approval systems, tight controls, formality, risk avoidance, and an emphasis on tradition and the status quo.

As the clientele of land-grant university communication units becomes better educated, more literate, and more information-hungry, the need for communicators who can reshape the information landscape grows. Bost (1972) asserted that how well land-grant university communication units do their job has a direct impact upon the success of the overall organization. Similarly, the need for Extension professionals with a sense of vision, innovation, and creativity was pointed out by Smith (1988) who stated, "The implications for Extension may not be finding these individuals as much as learning what kind of environment turns them on" (p. 29).

A documented need is apparent for a creative work environment within land-grant university communication units. It falls into the hands of unit managers to provide a setting where individuals can exercise creative talents. Managers could use this research study as a first-step in designing a work environment conducive to creativity.

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One in a series that won the 1994 Critique and Awards Program Silver Award in Graphic Design, Print: One to Three Colors. This graphic was sketched on 80# French Speckleton using textured scratchboard technique for maximum graphic appeal.

Graphic by Frankie Gould, Louisiana State University