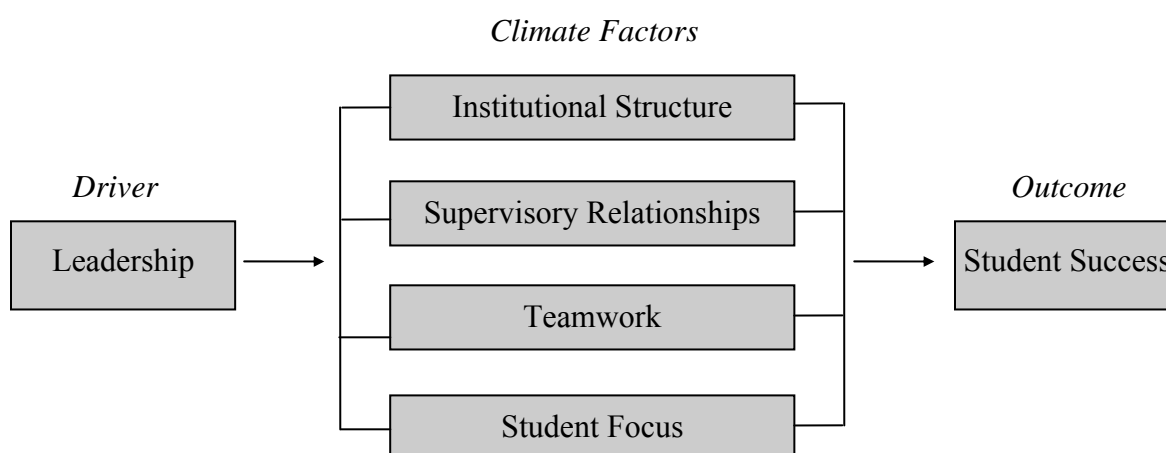


## EXECUTIVE SUMMARY

In April 2012, the Personal Assessment of the College Environment (PACE) survey was administered to 560 employees at Minnesota State Community and Technical College (MSCTC). Of those 560 employees, 239 (42.7%) completed and returned the instrument for analysis. The purpose of the survey was to obtain the perceptions of personnel concerning the college climate and to provide data to assist MSCTC in promoting more open and constructive communication among faculty, staff, and administrators. Researchers at the National Initiative for Leadership and Institutional Effectiveness (NILIE) and representatives of MSCTC collaborated to administer a survey that would capture the opinions of personnel throughout the college.

In the PACE model, the leadership of an institution motivates the Institutional Structure, Supervisory Relationships, Teamwork, and Student Focus climate factors toward an outcome of student success and institutional effectiveness.

**Figure 1.** The PACE Model



NILIE has synthesized from the literature four leadership or organizational systems ranging from coercive to collaborative. According to Likert (1967), the Collaborative System, which he termed System 4, generally produced better results in terms of productivity, job satisfaction, communication, and overall organizational climate. The other systems were Consultative (System 3), Competitive (System 2) and Coercive (System 1). In agreement with Likert, NILIE has concluded that Collaborative (System 4) is the climate to be sought as opposed to existing naturally in the environment. Likert discovered that most of the organizations he studied functioned at the Competitive or Consultative levels. This has been NILIE's experience as well, with most college climates falling into the Consultative system across the four factors of the climate instrument.

Of the more than 120 studies completed by NILIE, few institutions have been found to achieve a fully Collaborative (System 4) environment, although scores in some categories may fall in this range for some classifications of employees. Thus, if the Collaborative System is the ideal, then this environment is the one to be sought through planning, collaboration, and organizational development.

Employees completed a 46-item PACE instrument organized into four climate factors as follows: Institutional Structure, Supervisory Relationships, Teamwork, and Student Focus. They also completed a Customized section designed specifically for Minnesota State Community and Technical College. Respondents were asked to rate the four factors on a five-point Likert-type scale. The instrument was specifically designed to compare the existing climate at MSCTC to a range of four managerial systems found to exist in colleges and to a Norm Base of 60 community colleges across North America. The information generated from the instrument has been developed into a research report that can be used for planning and decision-making in order to improve the existing college climate.

The PACE instrument administered at MSCTC included 55 total items. Respondents were asked to rate items on a five-point satisfaction scale from a low of “1” to a high of “5.” Of the 55 items, none fell within the least favorable category identified as the Coercive range (rated between 1 and 2). Four fell within the Competitive range (rated between 2 and 3). Forty-two fell within the Consultative range (rated between 3 and 4), and nine composite ratings fell within the Collaborative range (rated between 4 and 5).

At MSCTC, the overall results from the PACE instrument indicate a healthy campus climate, yielding an overall 3.61 mean score or middle Consultative system. The Student Focus category received the highest mean score (4.02), whereas the Institutional Structure category received the lowest mean score (3.20). When respondents were classified according to Personnel Classification at MSCTC, the composite ratings were as follows: Faculty (3.62), Administrator/Supervisor (3.58), and Staff (3.63).

Of the 46 standard PACE questions, the top mean scores have been identified at Minnesota State Community and Technical College.

- The extent to which I feel my job is relevant to this institution's mission, 4.32 (#8)
- The extent to which this institution prepares students for a career, 4.23 (#35)
- The extent to which students receive an excellent education at this institution, 4.19 (#31)
- The extent to which this institution prepares students for further learning, 4.16 (#37)
- The extent to which my supervisor expresses confidence in my work, 4.10 (#2)
- The extent to which student ethnic and cultural diversity are important at this institution, 4.04 (#18)
- The extent to which I am given the opportunity to be creative in my work, 4.02 (#39)
- The extent to which my supervisor is open to the ideas, opinions, and beliefs of everyone, 4.00 (#9)
- The extent to which faculty meet the needs of the students, 3.99 (#17)
- The extent to which students are satisfied with their educational experience at this institution, 3.98 (#42)

Of the 46 standard PACE questions, the bottom mean scores have been identified as areas in need of improvement at Minnesota State Community and Technical College.

- The extent to which this institution is appropriately organized, 2.70 (#32)
- The extent to which information is shared within this institution, 2.76 (#10)
- The extent to which I am able to appropriately influence the direction of this institution, 2.87 (#15)
- The extent to which decisions are made at the appropriate level at this institution, 2.94 (#4)
- The extent to which I have the opportunity for advancement within this institution, 3.03 (#38)
- The extent to which a spirit of cooperation exists at this institution, 3.05 (#25)
- The extent to which open and ethical communication is practiced at this institution, 3.09 (#16)
- The extent to which my work is guided by clearly defined administrative processes, 3.18 (#44)
- The extent to which institutional teams use problem-solving techniques, 3.21 (#11)
- The extent to which I receive adequate information regarding important activities at this institution, 3.26 (#41)

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# LEADERSHIP RESEARCH

The term culture refers to a total communication and behavioral pattern within an organization. Yukl (2002) defines organizational culture as “the shared values and beliefs of members about the activities of the organization and interpersonal relationships” (p. 108). Schein (2004) observes that culture “points us to phenomena that are below the surface, that are powerful in their impact but invisible and to a considerable degree unconscious. In that sense culture is to a group what personality is to an individual” (p. 8). Culture as a concept, then, is deeply embedded in an organization and relatively difficult to change; yet it has real day-to-day consequences in the life of the organization. According to Baker and Associates (1992), culture is manifest through symbols, rituals, and behavioral norms, and new members of an organization need to be socialized in the culture in order for the whole to function effectively.

Climate refers to the prevailing condition that affects satisfaction (e.g., morale and feelings) and productivity (e.g., task completion or goal attainment) at a particular point in time. Essentially then, climate is a subset of an organization’s culture, emerging from the assumptions made about the underlying value system and finding expression through members’ attitudes and actions (Baker & Associates, 1992).

The way that various individuals behave in an organization influences the climate that exists within that organization. If individuals perceive accepted patterns of behavior as motivating and rewarding their performance, they tend to see a positive environment. Conversely, if they experience patterns of behavior that are self-serving, autocratic, or punishing, then they see a negative climate. The importance of these elements as determiners of quality and productivity and the degree of satisfaction that employees receive from the performance of their jobs have been well documented in the research literature for more than 40 years (Baker & Associates, 1992).

NILIE’s present research examines the value of delegating and empowering others within the organization through an effective management and leadership process. Yukl (2002) defined leadership as “the process of influencing others to understand and agree about what needs to be done and how it can be done effectively, and the process of facilitating individual and collective efforts to accomplish the shared objectives” (p. 7). The concept of leadership has been studied for many years in a variety of work settings, and there is no one theory of management and leadership that is universally accepted (Baker & Associates, 1992). However, organizational research conducted to date shows a strong relationship between leadership processes and other aspects of the organizational culture. Intensive efforts to conceptualize and measure organizational climate began in the 1960s with Rensis Likert’s work at the University of Michigan. A framework of measuring organizational climate was developed by Likert (1967) and has been adapted by others, including McClelland and Atkinson, as reported in Baker and Glass (1993).

The first adaptation of Likert’s climate concepts research to higher education organizations was employed at the various campuses of Miami-Dade Community College, Florida, in 1986. A modified version of the Likert profile of organizations was used in a case study of Miami-Dade Community College and reported by Roueche and Baker (1987).

Results of the Miami-Dade study indicated that Likert's four-system theory worked well when applied to a higher education setting. It showed promise not only for measuring climate and responses to leadership style but also for articulating ways both leadership effectiveness and organizational climate could be improved within the institution. Since the Miami-Dade research project, more than 120 institutions have participated in climate studies conducted by NILIE at North Carolina State University. Various versions of the PACE instrument were field-tested through NILIE's efforts, and several doctoral dissertations.

From Likert's original work and research methods, NILIE identified four leadership models and organizational systems ranging from Coercion to Collaboration. The Collaborative System, referred to as System 4, is generally seen as the ideal climate to be achieved, since it appears to produce better results in terms of productivity, job satisfaction, communication, and overall organizational effectiveness (Likert, 1967). The various NILIE research studies have verified that the Collaborative System is the climate to be sought. NILIE's research supports the conclusion that most organizations function between the Competitive (System 2) and Consultative (System 3) levels across the four climate factors of the instrument (i.e., Institutional Structure, Supervisory Relationships, Teamwork, and Student Focus).

Coercion represents the least desirable climate and constitutes a structured, task-oriented, and highly authoritative leadership management style. This leadership style assumes that followers are inherently lazy, and to make them productive, the manager must keep after them constantly. Interestingly, a few employees in almost all organizations evaluated by NILIE hold this view of the organizational climate. However, as a rule, their numbers are too few to have much effect on the overall institutional averages.

In contrast, a Collaborative model is characterized by leadership behaviors that are change-oriented, where appropriate decisions have been delegated to organizational teams, and leaders seek to achieve trust and confidence in the followers. The followers reciprocate with positive views of the leaders. This model is based on the assumption that work is a source of satisfaction and will be performed voluntarily with self-direction and self-control because people have a basic need to achieve and be productive. It also assumes that the nature of work calls for people to come together in teams and groups in order to accomplish complex tasks. This leadership environment is particularly descriptive of the climate necessary for productivity in a higher education environment, especially in the face of present and near future challenges such as new technologies, demands for accountability and the desire to accurately measure learning outcomes.

As the perceptions of the staff, faculty, and administrators approach the characteristics of the Collaborative environment, better results are achieved in terms of productivity and cost management. Employees are absent from work less often and tend to remain employed in the organization for a longer period of time. The Collaborative model also produces a better organizational climate characterized by excellent communication, higher peer-group loyalty, high confidence and trust, and favorable attitudes toward supervisors (Likert, 1967). In addition, various researchers (Blanchard, 1985; Stewart, 1982; Yukl, 2002) suggest that adapting leadership styles to fit particular situations according to the employees' characteristics and developmental stages and other intervening variables may be appropriate for enhancing productivity. Table 1 is a model of NILIE's four-systems framework based on Likert's original work and modified through NILIE's research conducted between 1992 and the present.



**Table 1.** NILIE Four Systems Model

System 1	System 2	System 3	System 4
<b>Coercive</b>	<b>Competitive</b>	<b>Consultative</b>	<b>Collaborative</b>
Leaders are seen as having no confidence or trust in employees and seldom involve them in any aspect of the decision-making process.	Leaders are seen as having condescending confidence and trust in employees. Employees are occasionally involved in some aspects of the decision-making process.	Leaders are seen as having substantial but not complete confidence and trust in employees. Employees are significantly involved in the decision-making process.	Leaders are seen as having demonstrated confidence and trust in employees. Employees are involved in appropriate aspects of the decision-making process.
Decisions are made at the top and issued downward.	Some decision-making processes take place in the lower levels, but control is at the top.	More decisions are made at the lower levels, and leaders consult with followers regarding decisions.	Decision making is widely dispersed throughout the organization and is well integrated across levels.
Lower levels in the organization oppose the goals established by the upper levels.	Lower levels in the organization cooperate in accomplishing selected goals of the organization.	Lower levels in the organization begin to deal more with morale and exercise cooperation toward accomplishment of goals.	Collaboration is employed throughout the organization.
Influence primarily takes place through fear and punishment.	Some influence is experienced through the rewards process and some through fear and punishment.	Influence is through the rewards process. Occasional punishment and some collaboration occur.	Employees are influenced through participation and involvement in developing economic rewards, setting goals, improving methods, and appraising progress toward goals.

In addition to Likert, other researchers have discovered a strong relationship between the climate of an organization and the leadership styles of the managers and leaders in the organization. Astin and Astin (2000) note that the purposes of leadership are based in these values:

- To create a supportive environment where people can grow, thrive, and live in peace with one another;
- To promote harmony with nature and thereby provide sustainability for future generations; and
- To create communities of reciprocal care and shared responsibility where every person matters and each person's welfare and dignity is respected and supported (p. 11).

Studies of leadership effectiveness abound in the literature. Managers and leaders who plan change strategies for their organizations based on the results of a NILIE climate survey are encouraged to review theories and concepts, such as those listed below, when planning for the future.

- The path-goal theory of House (1971, 1996) in which leader behavior is expressed in terms of the leader's influence in clarifying paths or routes followers travel toward work achievement and personal goal attainment.
- The Vroom/Yetton model for decision procedures used by leaders in which the selected procedure affects the quality of the decision and the level of acceptance by people who are expected to implement the decision (Vroom & Yetton, 1973 as discussed in Yukl, 2002).
- Situational leadership theories (see Northouse, 2004; Yukl, 2002).
- Transformational leadership theory (Burns, 1978; Bass, 1985; Astin & Astin, 2000).
- Emotional intelligence theories (Goleman, 1995; Goleman, McKee & Boyatzis, 2002)

In the context of the modern community college, there is much interest in organizational climate studies and their relation to current thinking about leadership. The times require different assumptions regarding leader-follower relations and the choice of appropriate leadership strategies that lead to achievement of organizational goals. This report may help Minnesota State Community and Technical College understand and improve the overall climate by examining perceptions and estimates of quality and excellence across personnel groups. This report may also provide benchmarks and empirical data that can be systematically integrated into effective planning models and change strategies for Minnesota State Community and Technical College.

# METHOD

## Population

In April 2012, the Personal Assessment of the College Environment (PACE) survey was administered to the staff, faculty, and administrators of Minnesota State Community and Technical College. Of the 560 employees administered the instrument, 239 (42.7%) completed and returned the instrument for analysis. The purpose of the survey was to obtain the perceptions of personnel concerning the college climate and to provide data to assist MSCTC in promoting more open and constructive communication among faculty, staff, and administrators. Researchers at the National Initiative for Leadership and Institutional Effectiveness (NILIE) and the Institutional Effectiveness Office of MSCTC collaborated to administer a survey that would capture the opinions of personnel throughout the college.

Employees of MSCTC were invited to participate in the survey through an email that contained the survey link and instructions. Follow-up emails were sent during the response period to encourage participation. The survey was up for three weeks. Completed surveys were submitted online and the data compiled by NILIE. The data were analyzed using the statistical package SAS, version 9.1.

## Instrumentation

The PACE instrument is divided into four climate factors: Institutional Structure, Supervisory Relationships, Teamwork, and Student Focus. A Customized section developed by Minnesota State Community and Technical College was also included in the administration of the instrument. A total of 55 items were included in the PACE survey, as well as a series of questions ascertaining the demographic status of respondents.

Respondents were asked to rate the various climate factors through their specific statements on a five-point scale from a low of “1” to a high of “5.” The mean scores for all items were obtained and compared. Items with lower scores were considered to be high priority issues for the institution. In this way, the areas in need of improvement were ranked in order of priority, thereby assisting in the process of developing plans to improve the overall performance of the institution.

## Reliability and Validity

In previous studies, the overall PACE instrument has shown a coefficient of internal consistency (Cronbach's Alpha) of 0.98. Cronbach's alpha coefficient provides an internal estimate of the instrument's reliability. The high coefficient means that participants responded the same way to similar items. The Cronbach's alpha coefficients of internal consistency from July 2009 to July 2011 are shown in Table 2.

**Table 2.** Alpha Coefficients by Climate Category for PACEs Completed from July 2009 to July 2011 (n=14,365)

Climate Category	Alpha Coefficient
Institutional Structure	0.95
Supervisory Relationships	0.95
Teamwork	0.93
Student Focus	0.91
<b>Overall (1-46)</b>	<b>0.98</b>

Establishing instrument validity is a fundamental component of ensuring the research effort is assessing the intended phenomenon. To that end, NILIE has worked hard to demonstrate the validity of the PACE instrument through both content and construct validity. Content validity has been established through a rigorous review of the instrument's questions by scholars and professionals in higher education to ensure that the instrument's items capture the essential aspects of institutional effectiveness.

Building on this foundation of content validity, the PACE instrument has been thoroughly tested to ensure construct (climate factors) validity through two separate factor analysis studies (Tiu, 2001; Caison, 2005). Factor analysis is a quantitative technique for determining the intercorrelations between the various items of an instrument. These intercorrelations confirm the underlying relationships between the variables and allow the researcher to determine that the instrument is functioning properly to assess the intended constructs. To ensure the continued validity of the PACE instrument, the instrument is routinely evaluated for both content and construct validity. The recent revision of the PACE instrument reflects the findings of Tiu and Caison.

## DATA ANALYSIS

Data were analyzed in four ways. First, a descriptive analysis of the respondents' demographics is presented, followed by an overall analysis of the item and climate factor means and standard deviations. Similar analyses were applied to the items and climate factors by Personnel Classification and generated priorities for change for each Personnel Classification. Also, comparative analyses of factor means by demographic variables were conducted. The item and factor means of this PACE were correspondingly compared with the NILIE Norm Base, with significant differences between means being identified through *t*-tests.

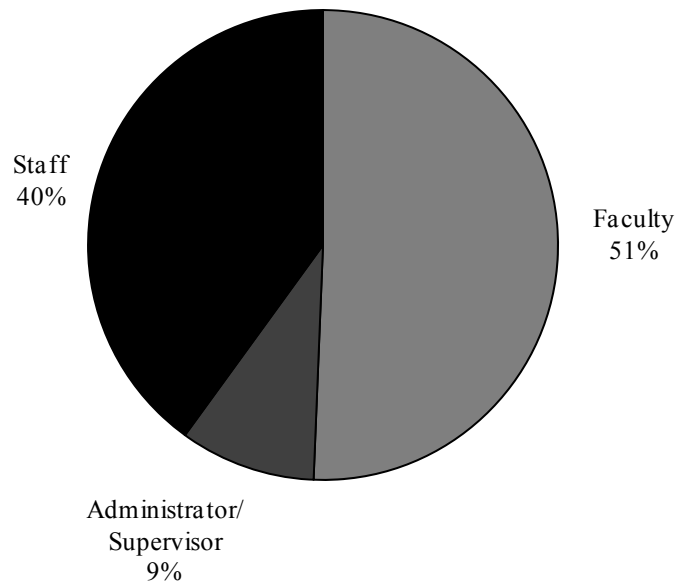
### Respondent Characteristics

Of the 583 MSCTC employees administered the survey, 239 (42.7%) completed the PACE survey. Survey respondents classified themselves into Personnel Classifications. Caution should be used when making inferences from the data, particularly for subgroups with return rates of less than 60%. Refer to Table 3 and Figure 2.

**Table 3.** Response by Self-Selected Personnel Classification

<b>Personnel Classification</b>	<b>Population</b>	<b>Surveys Returned for Analysis</b>	<b>Percent of Population Represented</b>
Faculty	322	119	37.0%
Administrator/Supervisor	22	22	100.0%
Staff	216	94	43.5%
Did not respond		4	
Total	560	239	42.7%

**Figure 2.** Proportion of Total Responses by Personnel Classification



4 individuals did not respond to the Personnel Classification demographic variable.

Table 4 reports the number of respondents across the different demographic classifications and the percentage of the overall responses that each group represents.

**Table 4.** Proportion of Responses Across Demographic Classifications

<b>Demographic Variable</b>	<b># of Responses</b>	<b>% of Responses</b>
<b>What is your personnel classification:</b>		
Faculty	119	49.8%
Administrator/Supervisor	22	9.2%
Staff	94	39.3%
Did not respond	4	1.7%
<b>Please select the race/ethnicity that best describes you:</b>		
Hispanic or Latino, of any race	0	0.0%
American Indian or Alaska Native, not Hispanic or Latino	0	0.0%
Asian, not Hispanic or Latino	0	0.0%
Black, not Hispanic or Latino	0	0.0%
Native Hawaiian or Other Pacific Islander, not Hispanic or Latino	2	0.8%
White, not Hispanic or Latino	229	95.8%
Two or more races, not Hispanic or Latino	3	1.3%
Did not respond	5	2.1%
<b>Your status at this institution is:</b>		
Full time	194	81.2%
Part time	41	17.2%
Did not respond	4	1.7%
<b>What is the highest degree you have earned:</b>		
First Professional degree (e.g., M.D., D.D.S., J.D., D.V.M.)	0	0.0%
Doctoral degree (e.g., Ph.D., Ed.D.)	9	3.8%
Master's degree	93	38.9%
Bachelor's degree	55	23.0%
Associate's degree	60	25.1%
High School Diploma or GED	18	7.5%
No Diploma or Degree	0	0.0%
Did not respond	4	1.7%
<b>What gender are you:</b>		
Female	145	60.7%
Male	86	36.0%
Did not respond	8	3.3%
<b>Would you recommend this college as a place to work:</b>		
Yes	190	79.5%
No	43	18.0%
Did not respond	6	2.5%

## Comparative Analysis: Overall

The results from the PACE survey indicate that personnel perceive the composite climate at MSCTC to fall toward the middle-range of the Consultative management style. The scale range describes the four systems of management style defined by Likert and adapted by Baker and the NILIE team in their previous in-depth case studies. The four systems are Coercive management style (i.e., a mean score rating between 1.0 and 2.0), Competitive management style (i.e., a mean score rating between 2.0 and 3.0), Consultative management style (i.e., a mean score rating between 3.0 and 4.0), and Collaborative management style (i.e., a mean score rating between 4.0 and 5.0). As previously stated, the Collaborative management style is related to greater productivity, group decision making, and the establishment of higher performance goals when compared to the other three styles. Thus, the Collaborative system is a system to be sought through planning and organizational learning.

As indicated in Table 5, the Student Focus climate factor received the highest composite rating (4.02), which represented a lower range Collaborative management environment. The Institutional Structure climate factor received the lowest mean score (3.20) within the lower area of the Consultative management area. Overall, employees rated the management style in the middle range of the Consultative management area. (See also Figure 3).

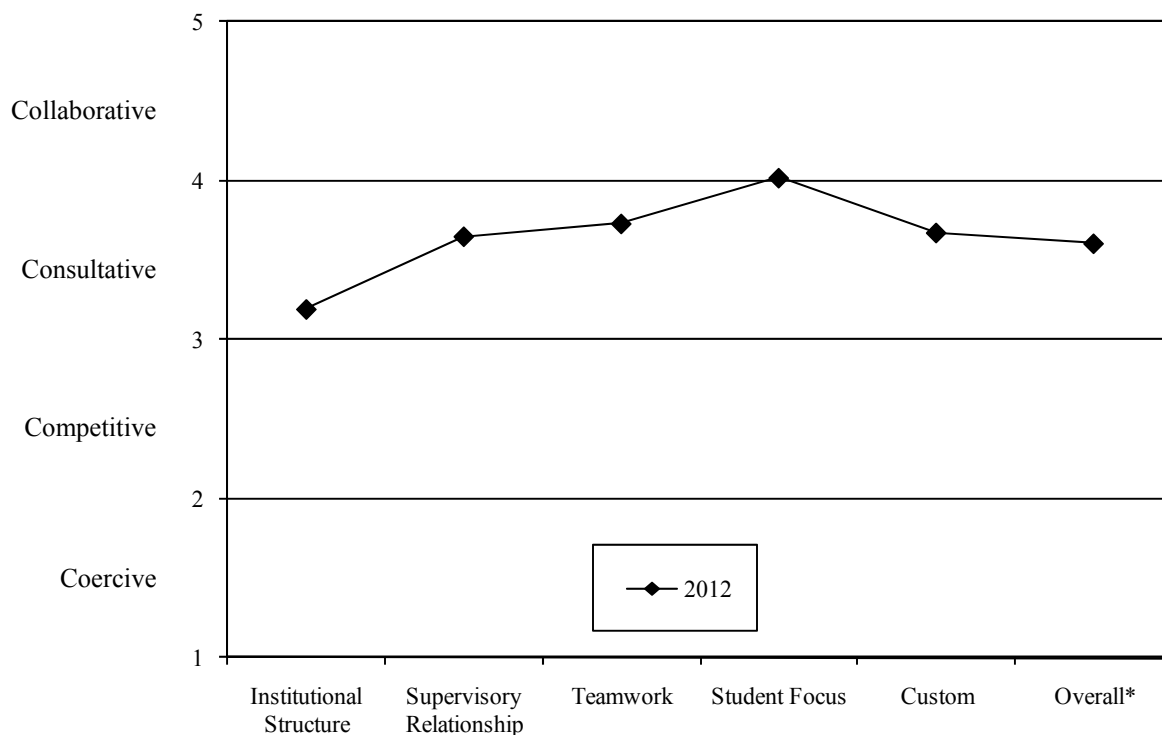
**Table 5.** Minnesota State Community and Technical College Climate as Rated by All Employees

Factor	MSCTC
Institutional Structure	3.20
Supervisory Relationships	3.65
Teamwork	3.73
Student Focus	4.02
Customized	3.68
<b>Overall*</b>	3.61

\* Overall does not include the customized section developed specifically for MSCTC.



**Figure 3.** Minnesota State Community and Technical College Climate as Rated by All Employees Combined Using Composite Averages



\* The overall mean does not reflect the mean scores of the customized items developed specifically for Minnesota State Community and Technical College.

In reviewing each of the items separately, the data shows that of the 55 mean scores, no items fell within the Coercive management style (i.e., a mean score rating between 1.0 and 2.0). Four fell within the Competitive management style (i.e., a mean score rating between 2.0 and 3.0). Forty-two fell within a Consultative management style (i.e., a mean score rating between 3.0 and 4.0) and nine fell within a Collaborative management style (i.e., a mean score rating between 4.0 and 5.0).

The preponderance of Consultative (n=42) scores indicates that the institution has a relatively high level of perceived productivity and satisfaction. Overall results from the survey yielded a mean institutional climate score of 3.61 as indicated in Figure 3.

Tables 6 through 10 report the mean scores of all personnel for each of the 55 items included in the survey instrument. The mean scores and standard deviations presented in this table estimate what the personnel participating in the study at MSCTC perceive the climate to be at this particular time in the institution's development. The standard deviation (SD) demonstrates the variation in responses to a given question.

**Table 6.** Comparative Mean Responses: Institutional Structure

<b>Institutional Structure</b>		<b>Mean (SD)</b>
1	The extent to which the actions of this institution reflect its mission	3.68 (0.95)
4	The extent to which decisions are made at the appropriate level within this institution	2.94 (1.19)
5	The extent to which the institution effectively promotes diversity in the workplace	3.82 (0.91)
6	The extent to which administrative leadership is focused on meeting the needs of students	3.46 (1.11)
10	The extent to which information is shared within the institution	2.76 (1.29)
11	The extent to which institutional teams use problem-solving techniques	3.21 (0.94)
15	The extent to which I am able to appropriately influence the direction of this institution	2.87 (1.12)
16	The extent to which open and ethical communication is practiced at this institution	3.09 (1.20)
22	The extent to which this institution has been successful in positively motivating my performance	3.31 (1.16)
25	The extent to which a spirit of cooperation exists at this institution	3.05 (1.18)
29	The extent to which institution-wide policies guide my work	3.56 (0.93)
32	The extent to which this institution is appropriately organized	2.70 (1.17)
38	The extent to which I have the opportunity for advancement within this institution	3.03 (1.09)
41	The extent to which I receive adequate information regarding important activities at this institution	3.26 (1.19)
44	The extent to which my work is guided by clearly defined administrative processes	3.18 (1.15)
<b>Mean Total</b>		<b>3.20 (0.81)</b>

**Table 7.** Comparative Mean Responses: Supervisory Relationships

<b>Supervisory Relationships</b>	<b>Mean (SD)</b>
2 The extent to which my supervisor expresses confidence in my work	4.10 (1.20)
9 The extent to which my supervisor is open to the ideas, opinions, and beliefs of everyone	4.00 (1.25)
12 The extent to which positive work expectations are communicated to me	3.50 (1.12)
13 The extent to which unacceptable behaviors are identified and communicated to me	3.47 (1.01)
20 The extent to which I receive timely feedback for my work	3.50 (1.14)
21 The extent to which I receive appropriate feedback for my work	3.53 (1.14)
26 The extent to which my supervisor actively seeks my ideas	3.53 (1.33)
27 The extent to which my supervisor seriously considers my ideas	3.66 (1.32)
30 The extent to which work outcomes are clarified for me	3.50 (1.04)
34 The extent to which my supervisor helps me to improve my work	3.46 (1.26)
39 The extent to which I am given the opportunity to be creative in my work	4.02 (1.05)
45 The extent to which I have the opportunity to express my ideas in appropriate forums	3.51 (1.09)
46 The extent to which professional development and training opportunities are available	3.69 (0.97)
<b>Mean Total</b>	<b>3.65 (0.92)</b>

**Table 8.** Comparative Mean Responses: Teamwork

<b>Teamwork</b>	<b>Mean (SD)</b>
3 The extent to which there is a spirit of cooperation within my work team	3.76 (1.25)
14 The extent to which my primary work team uses problem-solving techniques	3.78 (1.02)
24 The extent to which there is an opportunity for all ideas to be exchanged within my work team	3.71 (1.14)
33 The extent to which my work team provides an environment for free and open expression of ideas, opinions and beliefs	3.72 (1.14)
36 The extent to which my work team coordinates its efforts with appropriate individuals and teams	3.72 (1.05)
43 The extent to which a spirit of cooperation exists in my department	3.81 (1.22)
<b>Mean Total</b>	<b>3.73 (1.02)</b>

**Table 9.** Comparative Mean Responses: Student Focus

<b>Student Focus</b>	<b>Mean (SD)</b>
7 The extent to which student needs are central to what we do	3.78 (1.09)
8 The extent to which I feel my job is relevant to this institution's mission	4.32 (0.87)
17 The extent to which faculty meet the needs of students	3.99 (0.88)
18 The extent to which student ethnic and cultural diversity are important at this institution	4.04 (0.82)
19 The extent to which students' competencies are enhanced	3.96 (0.82)
23 The extent to which non-teaching professional personnel meet the needs of the students	3.97 (0.92)
28 The extent to which classified personnel meet the needs of the students	3.86 (0.86)
31 The extent to which students receive an excellent education at this institution	4.19 (0.76)
35 The extent to which this institution prepares students for a career	4.23 (0.71)
37 The extent to which this institution prepares students for further learning	4.16 (0.76)
40 The extent to which students are assisted with their personal development	3.86 (0.89)
42 The extent to which students are satisfied with their educational experience at this institution	3.98 (0.73)
<b>Mean Total</b>	<b>4.02 (0.59)</b>
<b>Overall</b>	<b>3.61 (0.70)</b>

**Table 10.** Comparative Mean Responses: Customized

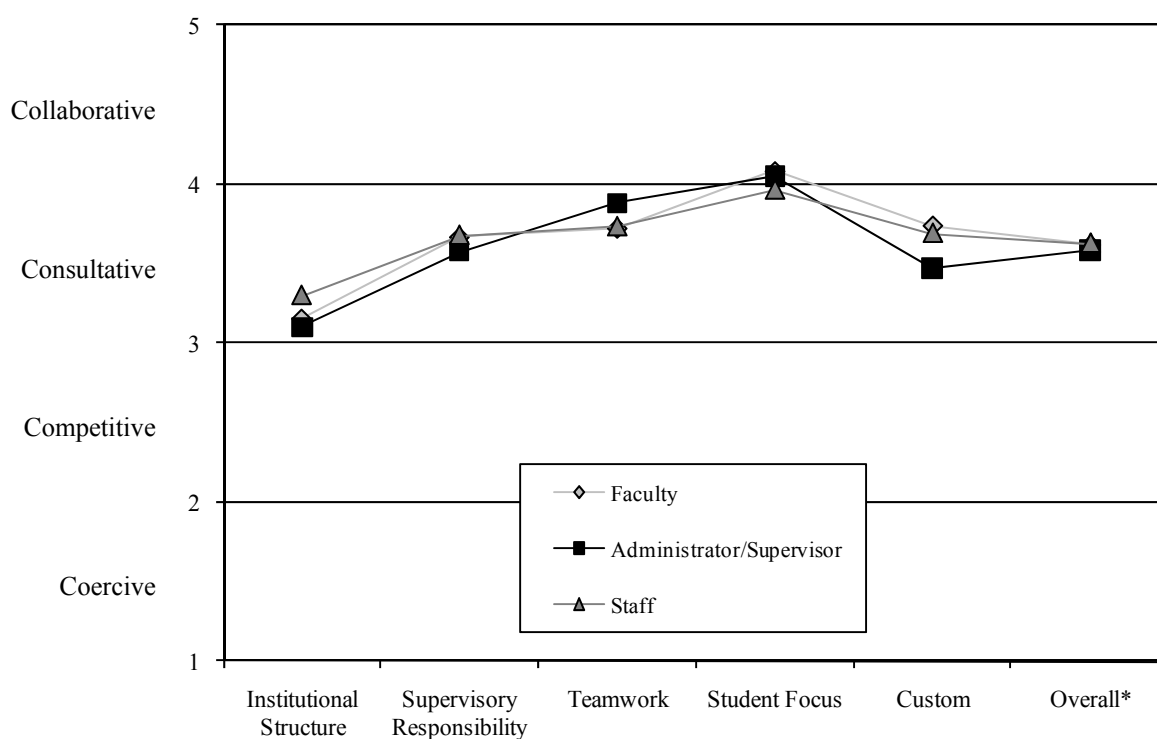
<b>Customized</b>	<b>Mean (SD)</b>
47 The extent to which I receive recognition or praise for doing good work	3.42 (1.17)
48 The extent to which my development is encouraged	3.59 (1.10)
49 The extent to which I have the materials and tools to do my job	3.61 (1.05)
50 The extent to which I have the opportunities at work to learn and grow in the last year	3.72 (1.04)
51 The extent to which my opinions count in my work team	3.61 (1.13)
52 The extent to which I have the opportunity to do what I do best every day	3.81 (1.04)
53 The extent to which my team is effective and productive and does quality work	3.92 (1.05)
54 The extent to which I perceive there to be individual accountability	3.42 (1.21)
55 The extent to which I make a difference at my institution/workplace	4.02 (0.91)
<b>Mean Total</b>	<b>3.68 (0.85)</b>

## Comparative Analysis: Personnel Classification

Figure 4 reports composite ratings according to the four climate factors and the customized questions for employees in Personnel Classifications. In general, the Staff rated the four normative factors most favorable (3.63), whereas the Administrator/Supervisor rated the four normative factors least favorable (3.58).

Figures 5 through 9 show the ratings of each employee group for each of the 55 climate items. The data summary for each figure precedes the corresponding figure. This information provides a closer look at the institutional climate ratings and should be examined carefully when prioritizing areas for change among the employee groups.

**Figure 4.** Mean Climate Scores as Rated by Personnel Classifications at Minnesota State Community and Technical College.



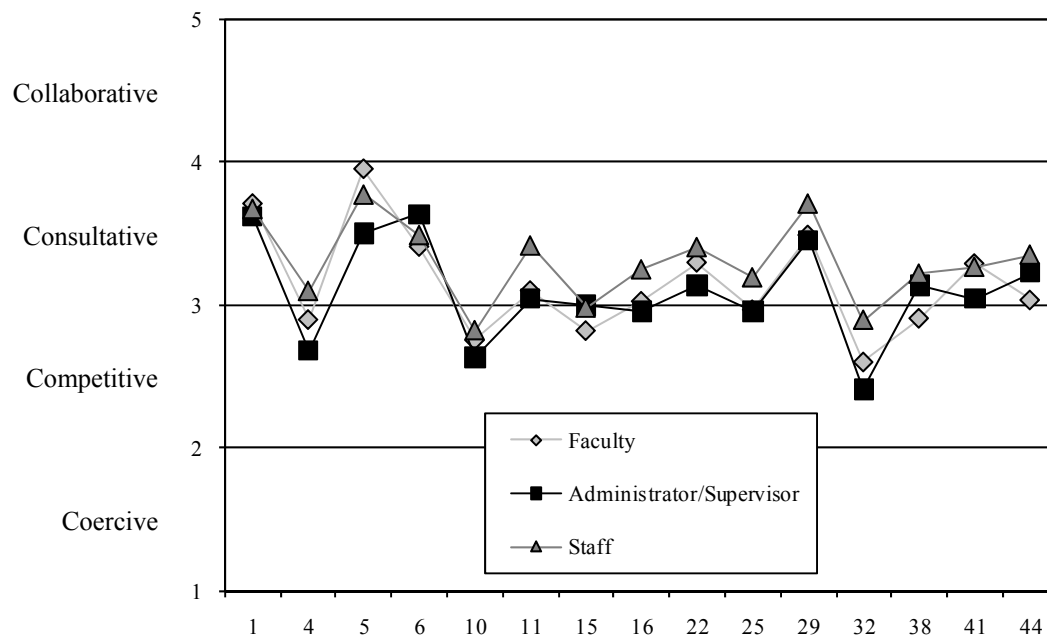
**Table 11.** Mean Climate Scores as Rated by Personnel Classifications

	Institutional Structure	Supervisory Relationships	Teamwork	Student Focus	Custom	Overall*
Faculty	3.15	3.67	3.72	4.09	3.74	3.62
Administrator/Supervisor	3.10	3.58	3.88	4.05	3.47	3.58
Staff	3.30	3.68	3.73	3.96	3.69	3.63

\* The overall mean does not reflect the mean scores of the customized items developed specifically for MSCTC.

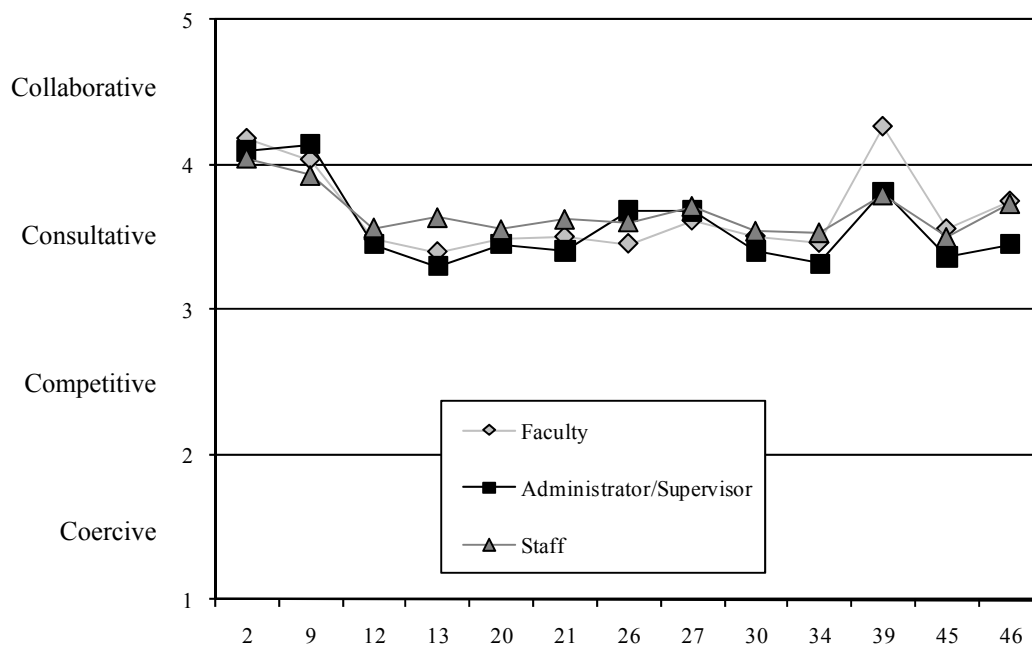
Institutional Structure		Faculty	Administrator/ Supervisor	Staff
1	The extent to which the actions of this institution reflect its mission	3.71	3.62	3.67
4	The extent to which decisions are made at the appropriate level at this institution	2.90	2.68	3.10
5	The extent to which the institution effectively promotes diversity in the workplace	3.95	3.50	3.77
6	The extent to which administrative leadership is focused on meeting the needs of students	3.41	3.64	3.49
10	The extent to which information is shared within this institution	2.75	2.64	2.82
11	The extent to which institutional teams use problem-solving techniques	3.10	3.05	3.42
15	The extent to which I am able to appropriately influence the direction of this institution	2.82	3.00	2.98
16	The extent to which open and ethical communication is practiced at this institution	3.03	2.95	3.25
22	The extent to which this institution has been successful in positively motivating my performance	3.30	3.14	3.40
25	The extent to which a spirit of cooperation exists at this institution	2.97	2.95	3.19
29	The extent to which institution-wide policies guide my work	3.49	3.45	3.71
32	The extent to which this institution is appropriately organized	2.60	2.41	2.89
38	The extent to which I have the opportunity for advancement within this institution	2.91	3.14	3.22
41	The extent to which I receive adequate information regarding important activities at this institution	3.29	3.05	3.27
44	The extent to which my work is guided by clearly defined administrative processes	3.03	3.23	3.35

**Figure 5.** Mean Scores of the Institutional Structure Climate Factor as Rated by Personnel Classifications at Minnesota State Community and Technical College



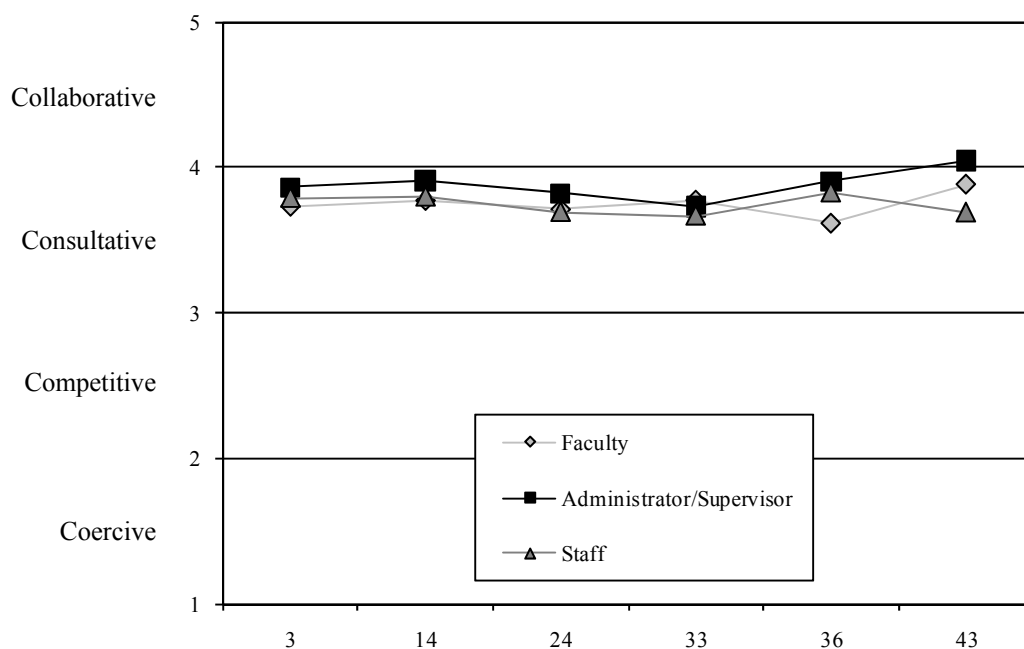
Supervisory Relationships		Faculty	Administrator/ Supervisor	Staff
2	The extent to which my supervisor expresses confidence in my work	4.18	4.10	4.04
9	The extent to which my supervisor is open to the ideas, opinions, and beliefs of everyone	4.03	4.14	3.92
12	The extent to which positive work expectations are communicated to me	3.48	3.45	3.57
13	The extent to which unacceptable behaviors are identified and communicated to me	3.40	3.30	3.64
20	The extent to which I receive timely feedback for my work	3.49	3.45	3.55
21	The extent to which I receive appropriate feedback for my work	3.50	3.41	3.62
26	The extent to which my supervisor actively seeks my ideas	3.45	3.68	3.61
27	The extent to which my supervisor seriously considers my ideas	3.61	3.68	3.71
30	The extent to which work outcomes are clarified for me	3.50	3.41	3.54
34	The extent to which my supervisor helps me to improve my work	3.46	3.32	3.53
39	The extent to which I am given the opportunity to be creative in my work	4.26	3.82	3.79
45	The extent to which I have the opportunity to express my ideas in appropriate forums	3.55	3.36	3.50
46	The extent to which professional development and training opportunities are available	3.75	3.45	3.73

**Figure 6.** Mean Scores of the Supervisory Relationships Climate Factor as Rated by Personnel Classifications at Minnesota State Community and Technical College



Teamwork		Faculty	Administrator/ Supervisor	Staff
3	The extent to which there is a spirit of cooperation within my work team	3.73	3.86	3.79
14	The extent to which my primary work team uses problem-solving techniques	3.77	3.91	3.80
24	The extent to which there is an opportunity for all ideas to be exchanged within my work team	3.71	3.82	3.69
33	The extent to which my work team provides an environment for free and open expression of ideas, opinions, and beliefs	3.77	3.73	3.67
36	The extent to which my work team coordinates its efforts with appropriate individuals and teams	3.62	3.90	3.82
43	The extent to which a spirit of cooperation exists in my department	3.88	4.05	3.69

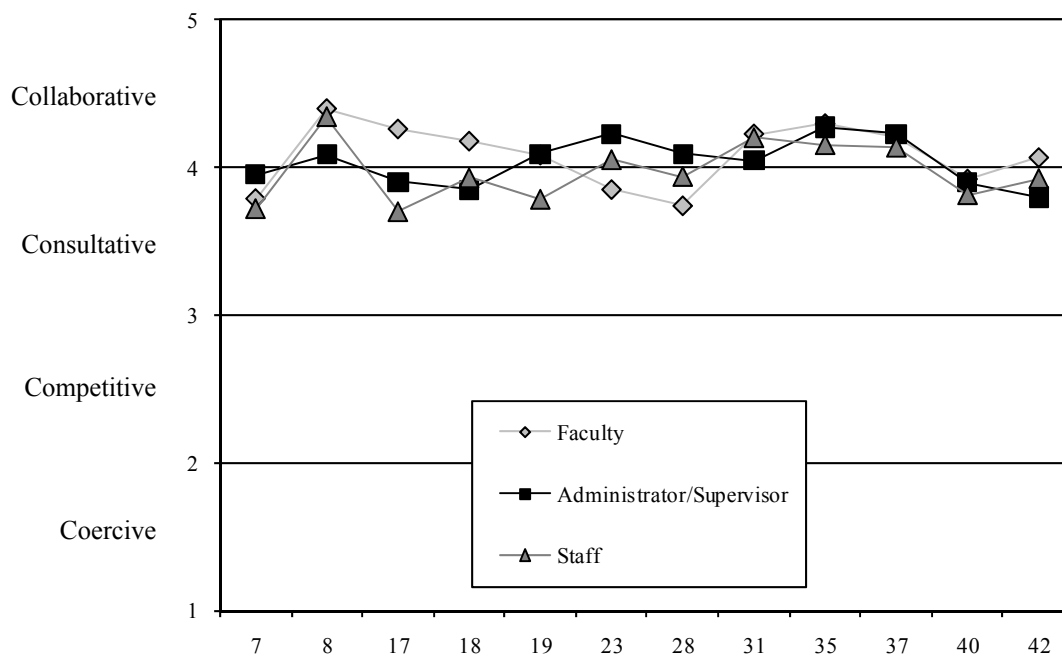
**Figure 7.** Mean Scores of the Teamwork Climate Factor as Rated by Personnel Classifications at Minnesota State Community and Technical College





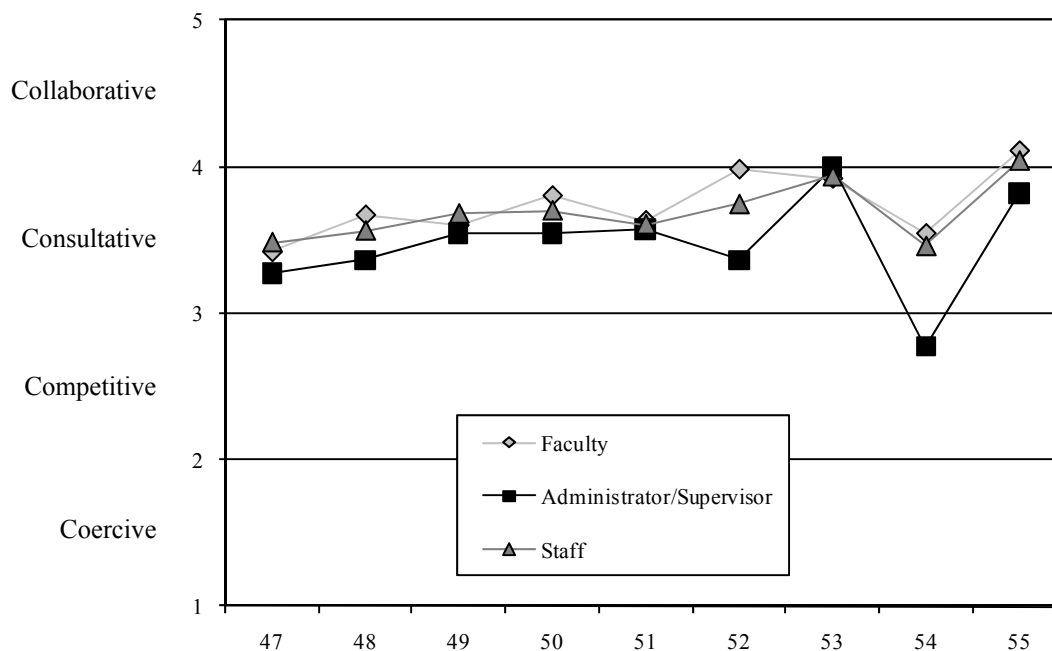
Student Focus		Faculty	Administrator/ Supervisor	Staff
7	The extent to which student needs are central to what we do	3.79	3.95	3.73
8	The extent to which I feel my job is relevant to this institution's mission	4.40	4.09	4.34
17	The extent to which faculty meet the needs of the students	4.26	3.90	3.70
18	The extent to which student ethnic and cultural diversity are important at this institution	4.18	3.85	3.93
19	The extent to which students' competencies are enhanced	4.08	4.10	3.79
23	The extent to which non-teaching professional personnel meet the needs of the students	3.85	4.23	4.05
28	The extent to which classified personnel meet the needs of the students	3.74	4.10	3.94
31	The extent to which students receive an excellent education at this institution	4.23	4.05	4.20
35	The extent to which this institution prepares students for a career	4.30	4.27	4.16
37	The extent to which this institution prepares students for further learning	4.20	4.23	4.14
40	The extent to which students are assisted with their personal development	3.92	3.90	3.82
42	The extent to which students are satisfied with their educational experience at this institution	4.07	3.80	3.93

**Figure 8.** Mean Scores of the Student Focus Climate Factor as Rated by Personnel Classifications at Minnesota State Community and Technical College



Customized		Faculty	Administrator/ Supervisor	Staff
47	The extent to which I receive recognition or praise for doing good work	3.42	3.27	3.48
48	The extent to which my development is encouraged	3.67	3.36	3.56
49	The extent to which I have the materials and tools to do my job	3.60	3.55	3.68
50	The extent to which I have the opportunities at work to learn and grow in the last year	3.80	3.55	3.70
51	The extent to which my opinions count in my work team	3.63	3.57	3.61
52	The extent to which I have the opportunity to do what I do best every day	3.98	3.36	3.74
53	The extent to which my team is effective and productive and does quality work	3.92	4.00	3.94
54	The extent to which I perceive there to be individual accountability	3.55	2.77	3.46
55	The extent to which I make a difference at my institution/workplace	4.11	3.82	4.04

**Figure 9.** Mean Scores of the Customized Climate Factor as Rated by Personnel Classifications at Minnesota State Community and Technical College



Tables 12 through 14 contain the top priorities for discussion for each Personnel Classification among the standard PACE items and the top priorities for discussion from the customized items developed specifically for Minnesota State Community and Technical College.

**Table 12.** Priorities for Change: Faculty

<b>Area to Change</b>		<b>Mean</b>
32	The extent to which this institution is appropriately organized	2.60
10	The extent to which information is shared within this institution	2.75
15	The extent to which I am able to appropriately influence the direction of this institution	2.82
4	The extent to which decisions are made at the appropriate level at this institution	2.90
38	The extent to which I have the opportunity for advancement within this institution	2.91
25	The extent to which a spirit of cooperation exists at this institution	2.97
16	The extent to which open and ethical communication is practiced at this institution	3.03
44	The extent to which my work is guided by clearly defined administrative processes	3.03
11	The extent to which institutional teams use problem-solving techniques	3.10
41	The extent to which I receive adequate information regarding important activities at this institution	3.29
<b>Area to Change—Customized</b>		<b>Mean</b>
47	The extent to which I receive recognition or praise for doing good work	3.42
54	The extent to which I perceive there to be individual accountability	3.55
49	The extent to which I have the materials and tools to do my job	3.60

**Table 13.** Priorities for Change: Administrator/Supervisor

<b>Area to Change</b>		<b>Mean</b>
32	The extent to which this institution is appropriately organized	2.41
10	The extent to which information is shared within this institution	2.64
4	The extent to which decisions are made at the appropriate level at this institution	2.68
16	The extent to which open and ethical communication is practiced at this institution	2.95
25	The extent to which a spirit of cooperation exists at this institution	2.95
15	The extent to which I am able to appropriately influence the direction of this institution	3.00
41	The extent to which I receive adequate information regarding important activities at this institution	3.05
11	The extent to which institutional teams use problem-solving techniques	3.05
38	The extent to which I have the opportunity for advancement within this institution	3.14
22	The extent to which this institution has been successful in positively motivating my performance	3.14
<b>Area to Change—Customized</b>		
54	The extent to which I perceive there to be individual accountability	2.77
47	The extent to which I receive recognition or praise for doing good work	3.27
48	The extent to which my development is encouraged	3.36

**Table 14.** Priorities for Change: Staff

<b>Area to Change</b>		<b>Mean</b>
10	The extent to which information is shared within this institution	2.82
32	The extent to which this institution is appropriately organized	2.89
15	The extent to which I am able to appropriately influence the direction of this institution	2.98
4	The extent to which decisions are made at the appropriate level at this institution	3.10
25	The extent to which a spirit of cooperation exists at this institution	3.19
38	The extent to which I have the opportunity for advancement within this institution	3.22
16	The extent to which open and ethical communication is practiced at this institution	3.25
41	The extent to which I receive adequate information regarding important activities at this institution	3.27
44	The extent to which my work is guided by clearly defined administrative processes	3.35
22	The extent to which this institution has been successful in positively motivating my performance	3.40
<b>Area to Change—Customized</b>		<b>Mean</b>
54	The extent to which I perceive there to be individual accountability	3.46
47	The extent to which I receive recognition or praise for doing good work	3.48
48	The extent to which my development is encouraged	3.56

## Comparative Analysis: Demographic Classifications

As depicted in Table 15, employees with high school diploma or GED rated the climate highest within its demographic group (3.87). In terms of employment status, those individuals with Part-time status rated the climate highest (3.72). Employees with Master's degrees rated the climate lowest within its demographic group (3.52), while respondents with full-time status, rated the climate with a composite rating of 3.58.

**Table 15.** Mean Climate Scores as Rated by Demographic Classifications

	Institutional Structure	Supervisory Relationships	Teamwork	Student Focus	Customized	Overall*
<b>What is your personnel classification:</b>						
Faculty	3.15	3.67	3.72	4.09	3.74	3.62
Administrator/Supervisor	3.10	3.58	3.88	4.05	3.47	3.58
Staff	3.30	3.68	3.73	3.96	3.69	3.63
<b>Please select the race/ethnicity that best describes you:</b>						
White, not Hispanic or Latino	3.19	3.65	3.75	4.03	3.68	3.61
Other (Including Native Hawaiian or Other Pacific Islander, not Hispanic or Latino and Two or more races, not Hispanic or Latino)	3.60	3.74	3.27	3.90	3.57	3.73
<b>Your status at this institution is:</b>						
Full time	3.13	3.65	3.72	4.01	3.65	3.58
Part time	3.45	3.65	3.84	4.07	3.77	3.72
<b>What is the highest degree you have earned:</b>						
Doctoral degree (e.g., Ph.D., Ed.D.)	3.45	3.84	3.84	3.89	3.51	3.72
Master's degree	3.04	3.57	3.58	4.05	3.63	3.52
Bachelor's degree	3.28	3.68	3.82	4.00	3.69	3.65
Associate's degree	3.27	3.68	3.77	3.99	3.74	3.64
High School Diploma or GED	3.49	3.93	4.12	4.21	3.85	3.87
<b>What gender are you:</b>						
Female	3.23	3.65	3.66	4.06	3.67	3.62
Male	3.17	3.70	3.87	3.99	3.73	3.62

\* The overall mean does not reflect the mean scores of the customized items developed specifically for Minnesota State Community and Technical College.

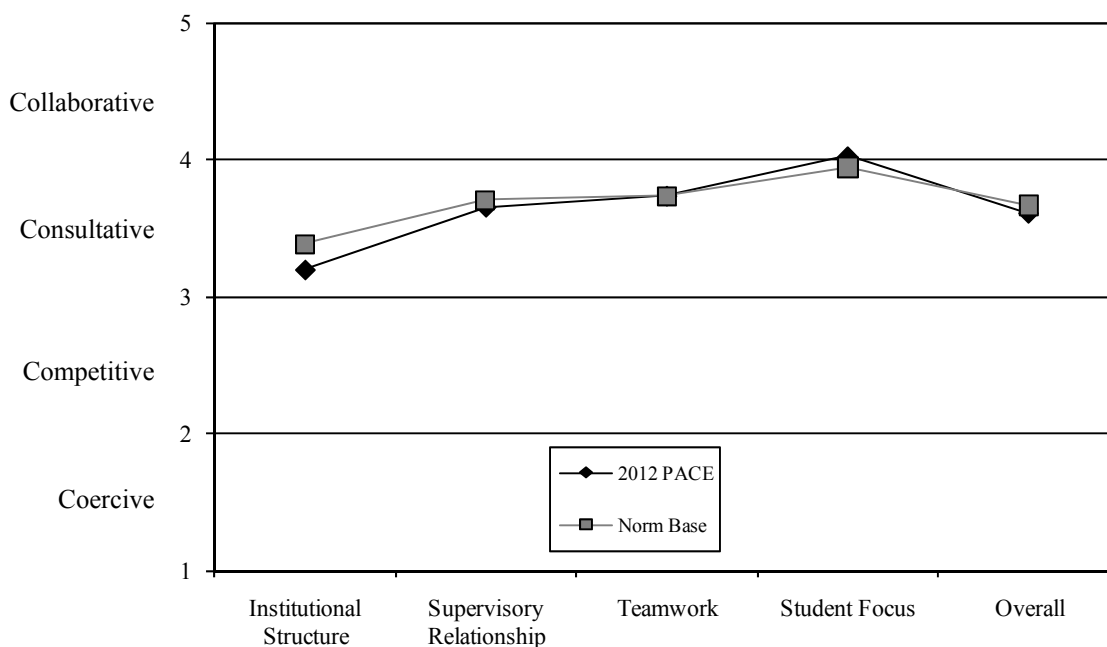
## Comparative Analysis: Norm Base

Table 16 shows how MSCTC compares with the NILIE PACE Norm Base, which includes approximately 60 climate studies conducted at two-year institutions since 2009. These studies include small, medium, and large institutions. Institutions range in size from 1,200 credit students on one campus to 22,000 credit students enrolled on multiple campuses. The Norm Base is updated each year to include the prior 2-year period. Normative data are not available for the Customized climate factor area developed specifically for MSCTC. Figure 10 also shows how MSCTC compares with data from the four PACE climate factors (i.e., Institutional Structure, Supervisory Relationships, Teamwork, and Student Focus) maintained by NILIE.

**Table 16.** Minnesota State Community and Technical College Climate compared with the NILIE PACE Norm Base

	MSCTC	Norm Base*
Institutional Structure	3.20	3.38
Supervisory Relationships	3.65	3.70
Teamwork	3.73	3.73
Student Focus	4.02	3.94
Overall	3.61	3.66

**Figure 10.** Minnesota State Community and Technical College Climate Compared with the NILIE PACE Norm Base



\* Normative data are not available for the customized climate factor developed specifically for MSCTC. Thus, the customized items are not included in the calculation of the overall mean.

Tables 17-20 shows how MSCTC compares question by question to the PACE Norm Base maintained by NILIE.

**Table 17.** Institutional Structure Mean Scores Compared to the NILIE Norm Base

<b>Institutional Structure</b>		<b>MSCTC Mean</b>	<b>Norm Base</b>
1	The extent to which the actions of this institution reflect its mission	3.68	3.78
4	The extent to which decisions are made at the appropriate level at this institution	2.94*	3.17
5	The extent to which the institution effectively promotes diversity in the workplace	3.82	3.77
6	The extent to which administrative leadership is focused on meeting the needs of students	3.46*	3.63
10	The extent to which information is shared within the institution	2.76*	3.11
11	The extent to which institutional teams use problem-solving techniques	3.21	3.31
15	The extent to which I am able to appropriately influence the direction of this institution	2.87*	3.10
16	The extent to which open and ethical communication is practiced at this institution	3.09	3.24
22	The extent to which this institution has been successful in positively motivating my performance	3.31	3.36
25	The extent to which a spirit of cooperation exists at this institution	3.05*	3.28
29	The extent to which institution-wide policies guide my work	3.56	3.58
32	The extent to which this institution is appropriately organized	2.70*	3.22
38	The extent to which I have the opportunity for advancement within this institution	3.03	3.08
41	The extent to which I receive adequate information regarding important activities at this institution	3.26*	3.61
44	The extent to which my work is guided by clearly defined administrative processes	3.18*	3.39
<b>Mean Total</b>		<b>3.20*</b>	<b>3.38</b>

\* T-test results indicate a significant difference between the mean and the Norm Base mean ( $\alpha=0.05$ )

**Table 18.** Supervisory Relationships Mean Scores Compared to the NILIE Norm Base

<b>Supervisory Relationships</b>		<b>MSCT C Mean</b>	<b>Norm Base</b>
2	The extent to which my supervisor expresses confidence in my work	4.10	4.09
9	The extent to which my supervisor is open to the ideas, opinions, and beliefs of everyone	4.00	3.97
12	The extent to which positive work expectations are communicated to me	3.50	3.60
13	The extent to which unacceptable behaviors are identified and communicated to me	3.47	3.56
20	The extent to which I receive timely feedback for my work	3.50	3.57
21	The extent to which I receive appropriate feedback for my work	3.53	3.60
26	The extent to which my supervisor actively seeks my ideas	3.53	3.65
27	The extent to which my supervisor seriously considers my ideas	3.66	3.72
30	The extent to which work outcomes are clarified for me	3.50	3.54
34	The extent to which my supervisor helps me to improve my work	3.46*	3.66
39	The extent to which I am given the opportunity to be creative in my work	4.02	3.92
45	The extent to which I have the opportunity to express my ideas in appropriate forums	3.51	3.56
46	The extent to which professional development and training opportunities are available	3.69	3.64
<b>Mean Total</b>		<b>3.65</b>	<b>3.70</b>

\* T-test results indicate a significant difference between the mean and the Norm Base mean ( $\alpha=0.05$ )



**Table 19.** Teamwork Mean Scores Compared to the NILIE Norm Base

	<b>Teamwork</b>	<b>MSCTC Mean</b>	<b>Norm Base</b>
3	The extent to which there is a spirit of cooperation within my work team	3.76	3.83
14	The extent to which my primary work team uses problem-solving techniques	3.78	3.72
24	The extent to which there is an opportunity for all ideas to be exchanged within my work team	3.71	3.68
33	The extent to which my work team provides an environment for free and open expression of ideas, opinions, and beliefs	3.72	3.74
36	The extent to which my work team coordinates its efforts with appropriate individuals and teams	3.72	3.73
43	The extent to which a spirit of cooperation exists in my department	3.81	3.73
	<b>Mean Total</b>	<b>3.73</b>	<b>3.73</b>

**Table 20.** Student Focus Mean Scores Compared to the NILIE Norm Base

	<b>Student Focus</b>	<b>MSCTC Mean</b>	<b>Norm Base</b>
7	The extent to which student needs are central to what we do	3.78	3.80
8	The extent to which I feel my job is relevant to this institution's mission	4.32	4.33
17	The extent to which faculty meet the needs of students	3.99	3.92
18	The extent to which student ethnic and cultural diversity are important at this institution	4.04	3.94
19	The extent to which students' competencies are enhanced	3.96*	3.85
23	The extent to which non-teaching professional personnel meet the needs of the students	3.97	3.85
28	The extent to which classified personnel meet the needs of the students	3.86	3.72
31	The extent to which students receive an excellent education at this institution	4.19*	4.07
35	The extent to which this institution prepares students for a career	4.23*	4.04
37	The extent to which this institution prepares students for further learning	4.16*	4.04
40	The extent to which students are assisted with their personal development	3.86	3.80
42	The extent to which students are satisfied with their educational experience at this institution	3.98	3.89
	<b>Mean Total</b>	<b>4.02*</b>	<b>3.94</b>
	<b>Overall Total</b>	<b>3.61</b>	<b>3.66</b>

\* T-test results indicate a significant difference between the mean and the Norm Base mean ( $\alpha=0.05$ )

# CONCLUSION

One of the primary purposes of the PACE instrument is to provide insight that will assist in efforts to improve the climate at an institution or system of institutions. To accomplish this goal, the mean scores for each of the items were arranged in ascending order, from the lowest to the highest values. The distance between each item mean and the ideal situation, represented by a score of 4.50 on any item, can be identified as a measure of the extent to which individuals and groups can be motivated through leadership to improve the climate within the institution. Thus, the gap between the scores on what is and what could be for each item is the zone of possible change within the institution. Those items with the highest values are viewed as areas of satisfaction or excellence within the climate. Conversely, those items with the lowest values are the areas of least satisfaction or in need of improvement.

Overall, the following scores have been identified as the top performance at Minnesota State Community and Technical College. Seven of these items represent the Student Focus climate factor (items #8, #17, #18, #31, #35, #37, and #42), and three represent the Supervisory Relationships climate factor (items #2, #9, and #39).

- The extent to which I feel my job is relevant to this institution's mission, 4.32 (#8)
- The extent to which this institution prepares students for a career, 4.23 (#35)
- The extent to which students receive an excellent education at this institution, 4.19 (#31)
- The extent to which this institution prepares students for further learning, 4.16 (#37)
- The extent to which my supervisor expresses confidence in my work, 4.10 (#2)
- The extent to which student ethnic and cultural diversity are important at this institution, 4.04 (#18)
- The extent to which I am given the opportunity to be creative in my work, 4.02 (#39)
- The extent to which my supervisor is open to the ideas, opinions, and beliefs of everyone, 4.00 (#9)
- The extent to which faculty meet the needs of the students, 3.99 (#17)
- The extent to which students are satisfied with their educational experience at this institution, 3.98 (#42)

Overall, the following have been identified as the top performance areas within the Customized Climate factor at Minnesota State Community and Technical College.

- The extent to which I make a difference at my institution/workplace, 4.02 (#55)
- The extent to which my team is effective and productive and does quality work, 3.92 (#53)
- The extent to which I have the opportunity to do what I do best every day, 3.81 (#52)

Overall, the following mean scores have been identified as areas in need of improvement at Minnesota State Community and Technical College. All of these items represent the Institutional Structure climate factor.

- The extent to which this institution is appropriately organized, 2.70 (#32)
- The extent to which information is shared within this institution, 2.76 (#10)
- The extent to which I am able to appropriately influence the direction of this institution, 2.87 (#15)
- The extent to which decisions are made at the appropriate level at this institution, 2.94 (#4)
- The extent to which I have the opportunity for advancement within this institution, 3.03 (#38)
- The extent to which a spirit of cooperation exists at this institution, 3.05 (#25)
- The extent to which open and ethical communication is practiced at this institution, 3.09 (#16)
- The extent to which my work is guided by clearly defined administrative processes, 3.18 (#44)
- The extent to which institutional teams use problem-solving techniques, 3.21 (#11)
- The extent to which I receive adequate information regarding important activities at this institution, 3.26 (#41)

Overall, the following mean scores have been identified as in need of improvement within the Customized Climate factor at Minnesota State Community and Technical College.

- The extent to which I receive recognition or praise for doing good work, 3.42 (#47)
- The extent to which I perceive there to be individual accountability, 3.42 (#54)
- The extent to which my development is encouraged, 3.59 (#48)

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