University of Puerto Rico
Mayagüez Campus
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Are We Making Progress?

¿Estamos Progresando?

Perceptions of UPRM Leaders and Employees about Organizational Performance based on the Baldrige Criteria for Performance Excellence

Office of Continuous Improvement and Assessment
May 31, 2007

Office of Continuous Improvement and Assessment
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May 31, 2007

Dear Colleagues and Community Members:

We are pleased to present this report to share a proposed continuous improvement model for UPRM along with the results of a recent study to determine the perceptions of UPRM senior leaders and employees (directors, faculty, and staff) related to the Baldrige Criteria for Performance Excellence.

This report proposes a model of continuous improvement with both the Baldrige Educational Criteria for Performance Excellence and the MSCHE Accreditation Standards as external drivers; UPRM Institutional Indicators and Student Learning Outcomes as internal drivers; and closely links the strategic planning, institutional research, and assessment functions as a cyclical process at the center of continuous improvement.

The study involved the administration and analysis of two questionnaires developed by the National Institute of Standards and Technology (NIST) and the Baldrige National Quality Program. The questionnaires have been designed by NIST as an assessment tool to determine perception gaps and identify areas for improvement.

We would like to thank the following OMCA staff and steering team members who contributed to the completion of this study:

Omayra López – coordination of questionnaire administration; assistance with report preparation
Eduardo Pérez – preparation of electronic versions of questionnaire; preparation of electronic data files; tabulation of descriptive statistics
Yolanda Pérez – preparation of e-mail invitations to faculty and staff members; translation verification
Mario Rivera - scanning of computer answer sheets
Rocío Zapata – coordination of administration of paper questionnaire in selected offices of the Dean of Administration

We would also like to thank Hewlett Packard and Cervecería India for providing financial support for the Baldrige initiative at UPRM.

We sincerely hope that the proposed continuous improvement model and the findings of this study contribute to the institution's continuous improvement efforts and its quest toward performance excellence in all academic, administrative, and service functions.

Sincerely,

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Director

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Executive Summary

With the opening of the Office of Continuous Improvement and Assessment (OMCA by its Spanish initials) in 2005, the University of Puerto Rico-Mayagüez formalized its continuous improvement efforts. The continuous improvement model for the institution proposed herein includes external and internal excellence criteria which guide the cycle of strategic planning, institutional research, assessment, and improvement actions that constitute the continuous improvement process.

The National Institute of Standards and Technology (NIST) has developed "Are We Making Progress?" (AWMP) as an assessment tool based on the seven Baldrige Criteria for Performance Excellence. This report presents the perceptions of a representative sample of UPRM personnel based on a recent administration of the AWMP tool on our campus. The perceptions of senior leaders are compared with those of employees, and the perceptions of three employee groups – directors, staff, and faculty – are compared with one another.

The results provide valuable information on perceived areas of strength and opportunities for improvement.

STRENGTH categories:

- Student, Stakeholder, and Market Focus
- Measurement, Analysis, and Knowledge Management
- Results (employee role)

Commonly perceived STRENGTHS:

- Employees know who important customers are and keep in contact with them (employees and leaders)
- Employees know how to measure the quality of their work, analyze quality to determine if changes are needed, and make decisions based on analysis (employee groups)
- Clients are satisfied with employees' work (employee groups)

OPPORTUNITY FOR IMPROVEMENT categories:

- Leadership
- Process Management
- Results (institutional role)

Commonly perceived OPPORTUNITIES FOR IMPROVEMENT:

- As it plans for the future, institution asks for employees' ideas (faculty and staff)
- Employees know how well the institution is doing financially (leaders and employees)
- Institution removes things that get in the way of progress (leaders and employees)

PERCEPTION GAPS where leaders are more positive than employees:

- Provision of information and resources to employees
- Employee opportunities for input into planning and professional/job skill development
- Institutional adherence to regulations and standards

PERCEPTION GAPS where employees are more positive than leaders:

- Employee knowledge and use of measurement, analysis, and knowledge management practices
- Quality of employee work products
- Employee job satisfaction

PERCEPTION GAPS among employee groups:

- Greatest differences in perception within Leadership category, followed by Student, Stakeholder, and Market Focus; Process Management; Faculty and Staff Focus; and Results
- In general, Directors have the most positive perceptions across all categories, followed by faculty, then staff members

It is hoped that the institution will use the continuous improvement model and these study results to identify continuous improvement initiatives to reduce perception gaps and to improve institutional performance in key criteria areas.

Section I: Purpose and Background

The Office of Continuous Improvement and Assessment (OMCA by its initials in Spanish) was established in 2005 to lead the process of continuous improvement at UPRM. While the continuous improvement model at UPRM is constantly evolving, it was decided early on that the Baldrige Criteria for Performance Excellence (NIST, 2006) would serve as a guide for our institutional processes and improvement efforts (see http://www.uprm.edu/omca/chancellor.php).

OMCA has taken several steps to familiarize staff and steering team members with the Baldrige criteria and national award processes.

- November 4, 2005: Visit to University of Wisconsin-Stout, 2001 Baldrige Award Recipient for Education (A. González, Sharma)
- December 14, 2005: Presentation by Dr. James Melsa – "A Blueprint and Framework for Excellence"
- April 23, 2006: Getting Acquainted with Baldrige – Quest for Excellence Preconference Workshop (Sharma)
- September 11-15, 2006: Iowa Recognition for Performance Excellence (IRPE) Examiner Training (Dika, Sharma, Zapata)
- November 2-3, 2006: American Society for Quality Application of the Baldrige National Quality Award Criteria (Dika, Sharma)

The Baldrige National Quality Program (BNQP) has developed "Are We Making Progress?" (AWMP) as an assessment tool based on its seven criteria for performance excellence. The tool utilizes two questionnaires – one for leaders and one for employees – to determine gaps in perceptions and to identify opportunities for improvement. The administration of this tool is seen as an important initial step in embarking on a continuous improvement process based on the Baldrige criteria.

This report presents the perceptions of a representative sample of UPRM personnel based on a recent administration of the AWMP tool on our campus. The perceptions of senior leaders are compared with those of employees, and the perceptions of three employee groups – directors, staff, and faculty – are compared with one another. The results provide valuable information on perceived areas of strength and opportunities for improvement.

Section II: UPRM Model of Continuous Improvement

The proposed UPRM Continuous Improvement (CI) Model is displayed graphically in Figure 1.

Figure 1. UPRM Continuous Improvement Model

The model depicts a systemic view of the institution's continuous improvement process in the context of internal and external standards and indicators.

- The continuous improvement process is at the center of the model. The four major elements of the process are strategic planning; institutional research; assessment; and improvement actions. The elements are linked by arrows to indicate the cyclical, spiraling nature of continuous improvement.
- Internal (institutional) standards and indicators provide the basis for metrics of improvement in key areas of interest to the institution. Institutional indicators, tied to the institution's strategic plan, and the institutional student learning outcomes represent our internal quality standards against which we examine the effectiveness of student learning and administrative processes and services.
- External criteria represent important guidelines for the institution to assure its accreditation and the alignment of its processes with internationally-recognized standards of educational excellence. The Middle States Commission on Higher Education (MSCHE) Standards of Accreditation provide guidelines for institutional self-review related to accreditation processes. The Baldrige Educational Criteria for Performance Excellence serve as an additional, complementary framework for institutional self-assessment.

Section III: Methodology

Instrumentation

The two AWMP instruments were modified slightly for use with the UPRM population. Spanish and English versions of the employee instrument were used for unit directors, faculty, and staff[1]. The questionnaire for senior leaders[2] was translated to Spanish by OMCA staff using the employee version to ensure equivalent terminology. Minor modifications were made to substitute language more specific to the higher education context, e.g., institution instead of organization, and the questionnaire sections (categories) were changed to match those used for the Baldrige Education Criteria for Performance Excellence (NIST, 2006). Some demographic items were added to gather information on sex, position/status, dean's unit (employees only), and number of years employed at the institution.

Table 1 displays the number of items per category for both instruments. The exact items administered to leaders and employees are shown in Appendices A and B respectively. Leaders are asked questions about "our employees" and employees are asked to give personal opinions (i.e., I know my institution's mission). All items are scored on a five point Likert-type scale from 1=strongly disagree to 5=strongly agree.

Table 1. "Are We Making Progress?" Items per Baldrige Category

Are We Making Progress? – ¿Estamos Progresando?	Number of Items
Category 1: Leadership	7
Category 2: Strategic Planning	3
Category 3: Student, Stakeholder, and Market Focus	5
Category 4: Measurement, Analysis, and Knowledge Management	6
Category 5: Faculty and Staff Focus	6
Category 6: Process Management	4
Category 7: Results	9
TOTAL	40

Administration

The questionnaire administration occurred in three distinct phases. From May to June 2006, Spanish questionnaires for senior leaders and employees were administered to senior leaders and directors. Senior leaders were given a verbal invitation at an Administrative Board meeting, followed by an e-mail, while directors were invited to participate via e-mail. This phase was used as a pilot study.

The online administration period for faculty and staff took place from November 2006 to February 2007. All employees were invited to participate in the online questionnaire via e-mail (see Appendices C and D for the invitations sent to faculty and staff members). The questionnaire web site included both English and Spanish versions of the instrument to allow employee participants to select their language of preference.

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[1] Directors: Directors of academic and non-academic units; Assistant and Associate Deans
Faculty: Full-time and part-time instructional, research, and public service personnel (docente), including counseling and library personnel classified as faculty
Staff: Full-time and part-time non-instructional personnel (no-docente), including clerical, technical, maintenance, and skilled crafts personnel

[2] Leaders: Chancellor, Deans of Academic Affairs, Administration, Agricultural Sciences, Arts & Sciences, Business Administration, Engineering, and Students; Director of Research & Development Center (CID)

The third administration phase, in March 2007, utilized a paper version of the Spanish questionnaire. Copies of the questionnaire and computer answer sheets were distributed to particular unit and sub-unit directors in the Physical Plant (Dean of Administration) in which employees do not use or have access to computers. The administration was coordinated by the OMCA assessment liaison from the Dean of Administration.

Participants

Seven of nine senior leaders participated in the leaders' questionnaire, for a response rate of 78%. Demographic data are not reported due to the small sample size.

A total of 382 employees responded to the employee questionnaire. The breakdown of participants by group and approximate representation by group are shown in Figure 2.

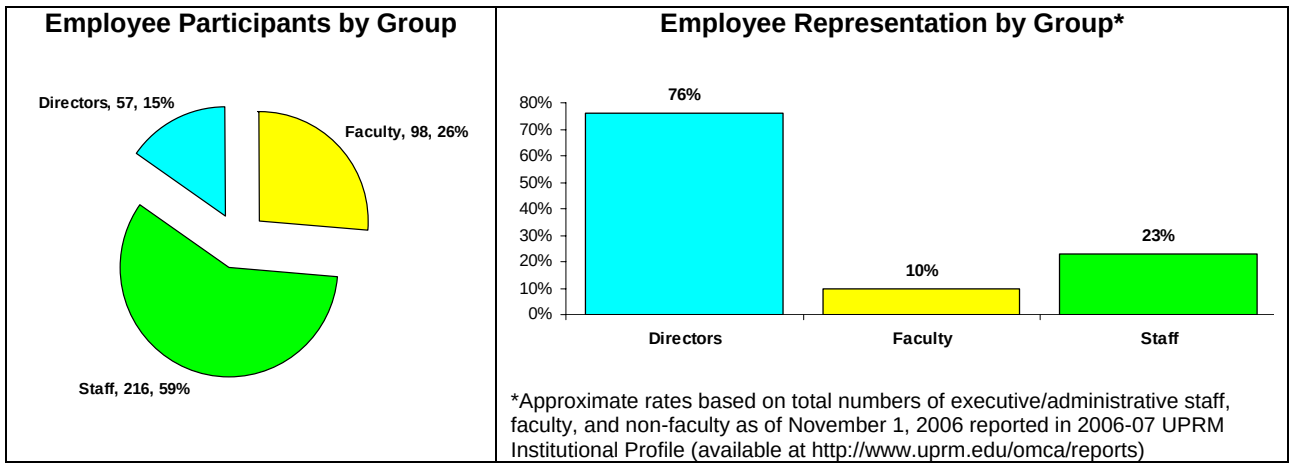

Figure 2. Employee participants and representation by group

The participants in the employee questionnaire are primarily male (65%), from administrative units (58%), and have been employed ten or more years at the institution (58%). A significant proportion of the participants come from the offices of the Dean of Administration (40%). Figure 3 displays the demographic characteristics of the participant employees.

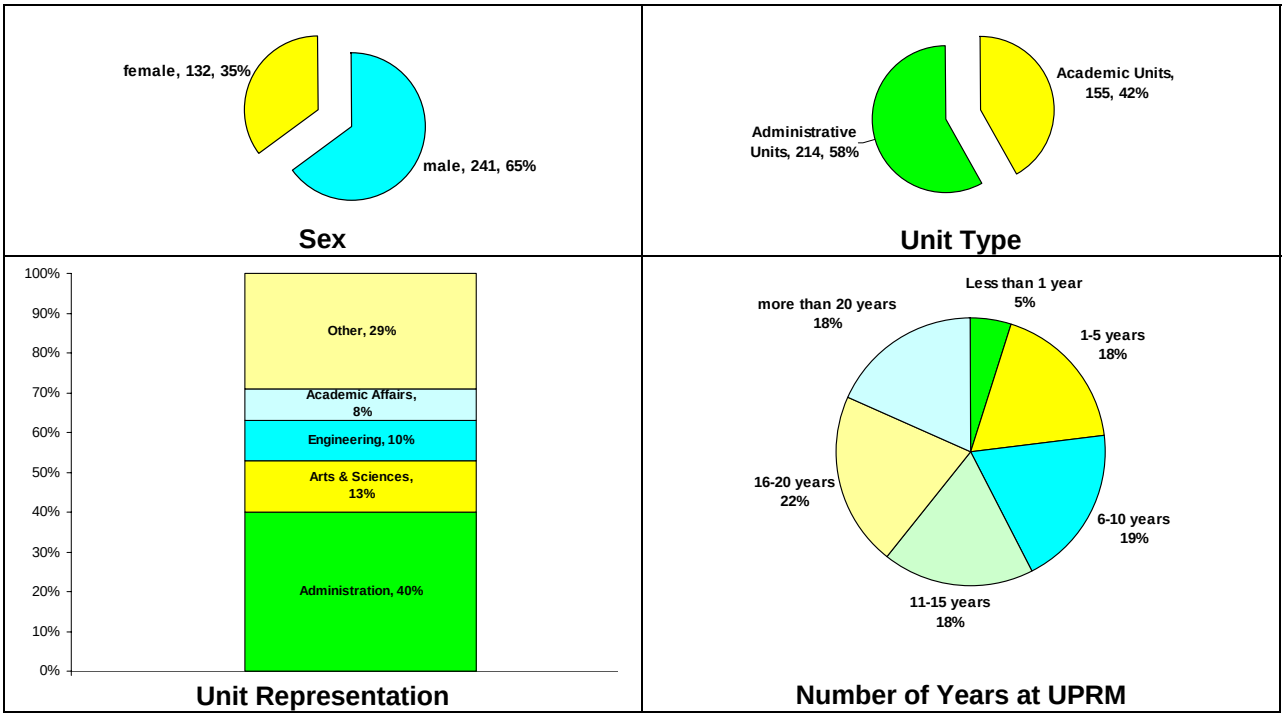

Figure 3. Employee participant characteristics

Data Analysis and Interpretation of Results

Descriptive statistics; including means, standard deviations, and frequencies; were computed for all items on both questionnaires using Microsoft Excel and Minitab 15 statistical software. Appendix E includes tables of descriptive statistics by participant group and Baldrige category. The number of responses by item varies slightly, and not all cumulative frequencies add to 100% due to rounding.

The results of the questionnaires are presented as comparisons of item means (averages). The average rating (from 1 to 5) for each item can be interpreted in the following manner to facilitate discussion and utilization of the results:

Range	Rating
1.00 – 1.49	Strongly Disagree
1.50 – 2.49	Disagree
2.50 – 3.49	Neither Agree nor Disagree
3.50 – 4.49	Agree
4.50 – 5.00	Strongly Agree

The ranges for strongly disagree and strongly agree are smaller due to the floor and ceiling effects of the scale.

The responses of employees and leaders are not compared statistically due to the small sample size of the senior leader group (N=7). A difference of 0.50 points or higher between item means was chosen as a criterion to identify perception gaps between these groups. To compare the responses of the three employee groups, Analysis of Variance (ANOVA) was tabulated for each item on the employee questionnaire using Minitab 15. ANOVA results are displayed in Appendix F.

Section IV: Perceptions of Leadership

Figure 4 displays perceptions of institutional leadership held by participating employees and leaders.

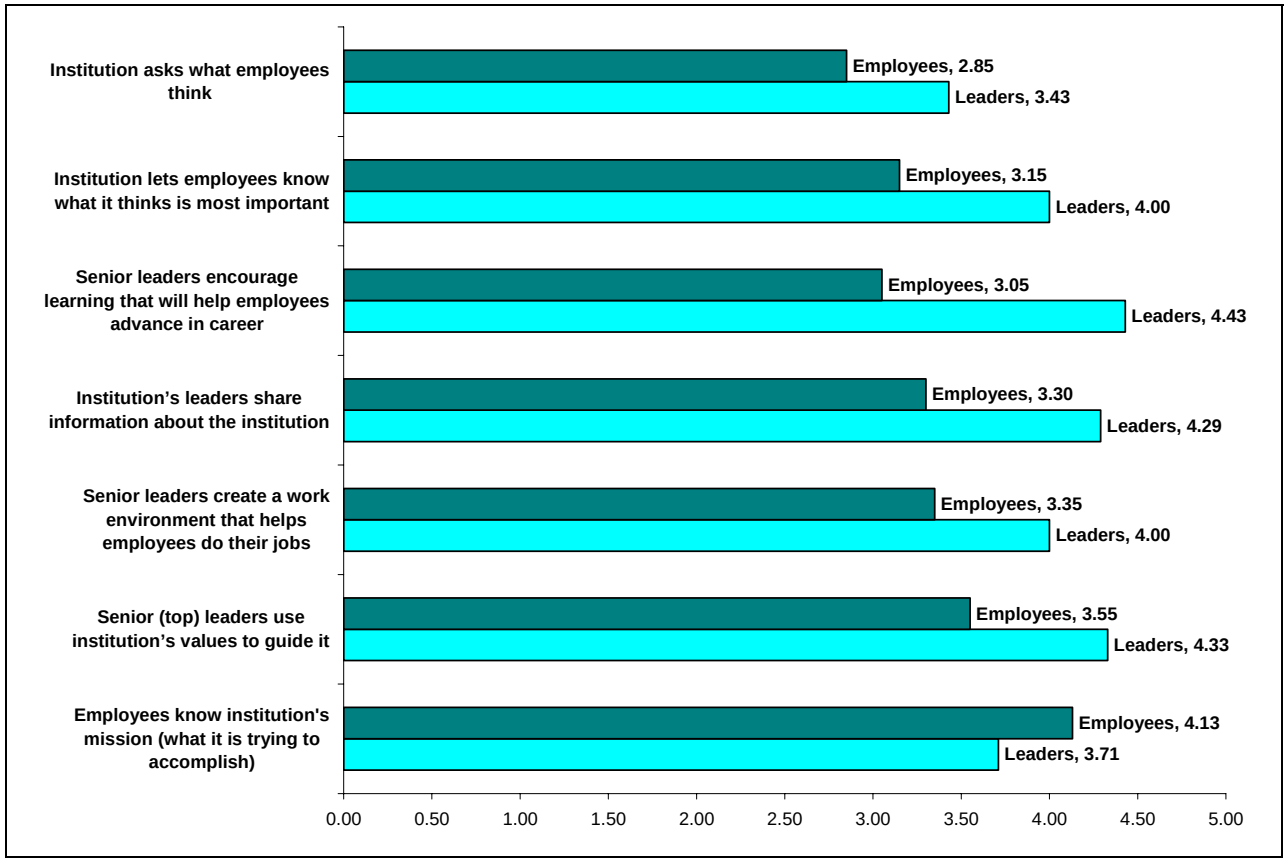

Figure 4. Comparison of leadership item means for employees and leaders

Highlights of the comparison of perceptions of LEADERSHIP for senior leaders and employees:

- Senior leaders tend to agree that institutional practices meet the leadership criteria except for leadership team asking employees what they think and employee knowledge of mission
- Employees tend to be uncertain whether institutional practices meet the leadership criteria, however, they tend to have a more positive opinion about their own knowledge of institutional mission
- Both senior leaders and employees tend to be uncertain that the leadership team asks employees what they think
- There appear to be perception gaps on all but one of the items (employees know mission), with senior leaders having more positive perceptions than employees (see Figure 5)

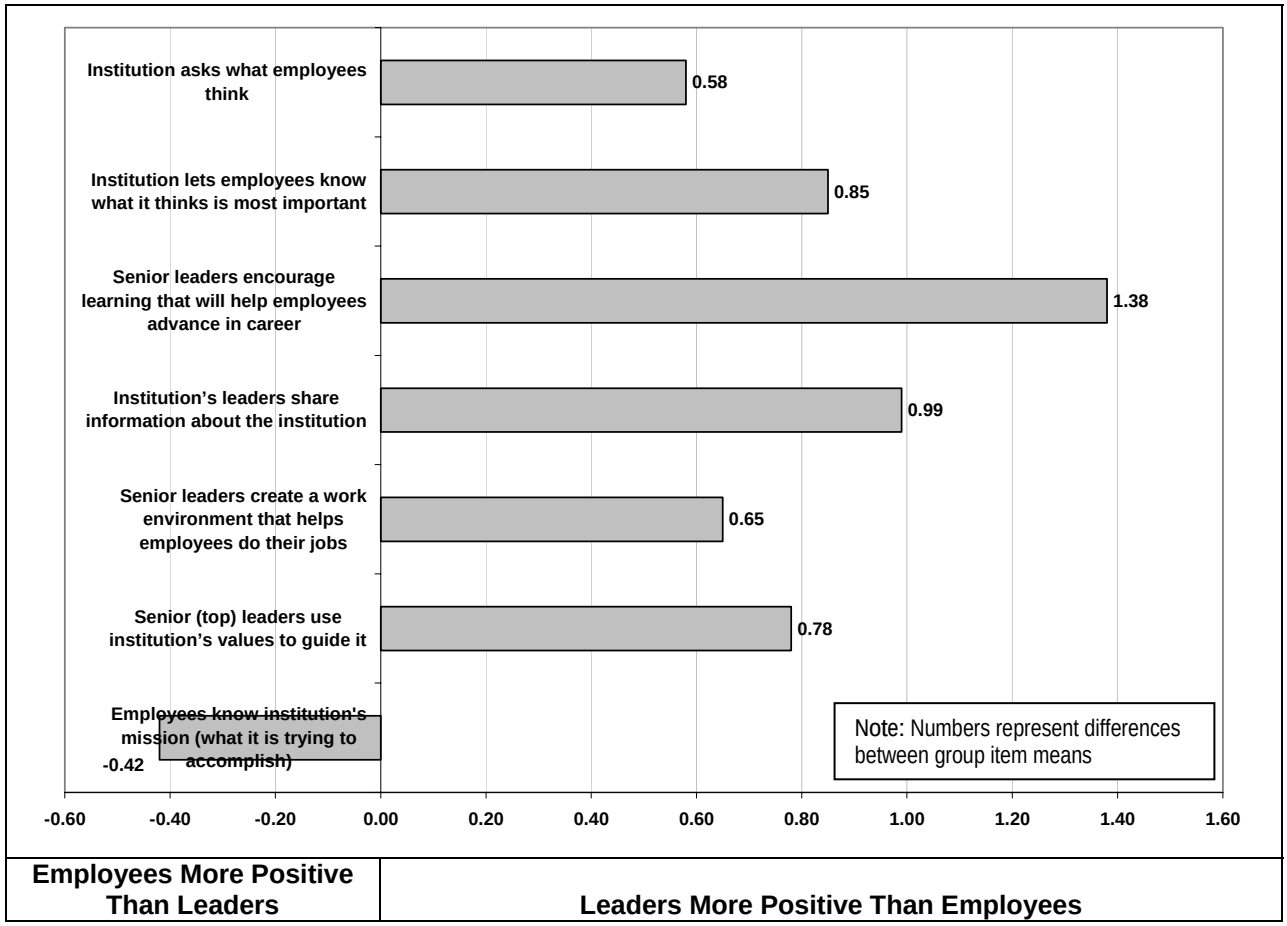

Figure 5. Gaps between leaders and employees in perceptions of leadership

Figure 6 compares the perceptions of staff, faculty, and directors on each of the leadership items.

Highlights of the perceptions of LEADERSHIP for each employee group:

- Directors tend to agree that the institution and its senior leaders meet the leadership criteria, however, they are less certain that senior leaders encourage learning that will help advance their careers and that the institution asks what they think
- Faculty members tend to be uncertain whether institutional practices meet the leadership criteria, however, they tend to have a more positive opinion about their own knowledge of institutional mission, that senior leaders use the institution's values, and that senior leaders encourage learning that will help them advance their careers
- Staff members also tend to be uncertain whether the institution meets leadership criteria, but positively rate their own knowledge of the institutional mission

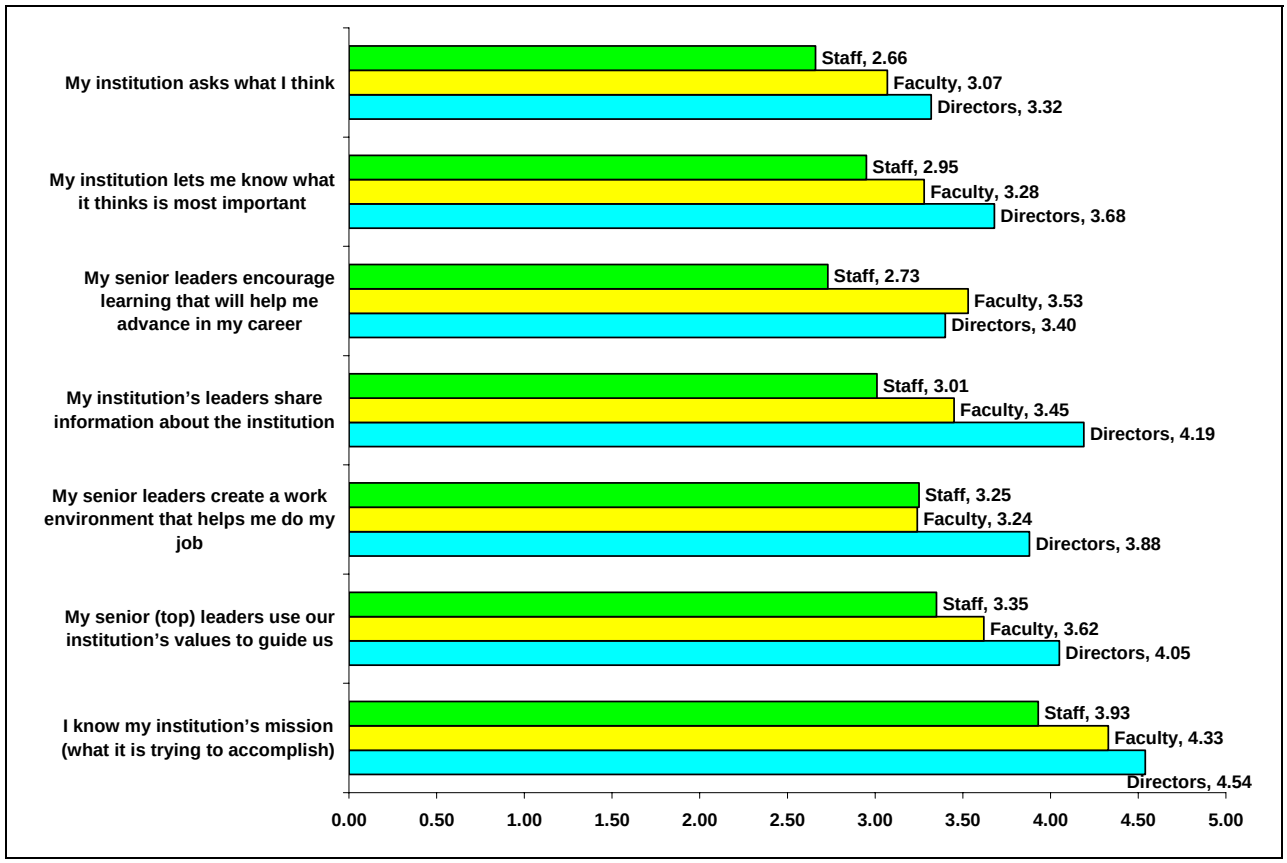

Figure 6. Comparison of leadership item means for employee groups

Highlights of the comparison of perceptions of LEADERSHIP among employee groups:

- All seven ANOVA tests are statistically significant at the $p<.01$ level, and significant differences between pairs of groups by item are shown in Table 2
- Directors rate every item significantly higher than staff members
- Directors rate three items significantly higher than faculty members – senior leaders use institutional values to guide us; senior leaders create a work environment that helps me do my job; and my institution's leaders share information about the institution
- Faculty members rate all but one item significantly higher than staff members (exception: Senior leaders create a work environment that helps me do my job)

Table 2. Significant differences in employee perceptions of leadership (p < .05)

Item	Directors > Staff	Directors > Faculty	Faculty > Staff
I know my institution's mission (what it is trying to accomplish)	✓		✓
My senior (top) leaders use our institution's values to guide us	✓	✓	✓
My senior leaders create a work environment that helps me do my job	✓	✓	
My institution's leaders share information about the institution	✓	✓	✓
My senior leaders encourage learning that will help me advance in my career	✓		✓
My institution lets me know what it thinks is most important	✓		✓
My institution asks what I think	✓		✓

Section V: Perceptions of Strategic Planning

Perceptions of senior leaders and employees about institutional strategic planning practices are displayed in Figure 7.

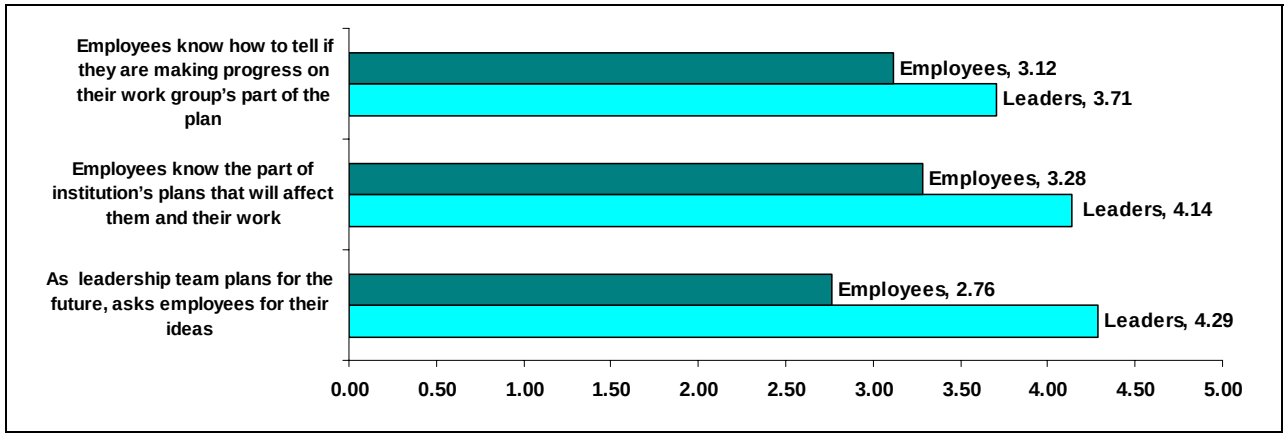

Figure 7. Comparison of strategic planning item means for employees and leaders

Highlights of the comparison of perceptions of STRATEGIC PLANNING for senior leaders and employees:

- Senior leaders tend to agree that institutional practices meet the strategic planning criteria
- Employees tend to be uncertain whether institutional practices meet the strategic planning criteria
- There appear to be perception gaps on all of the items, with senior leaders having more positive perceptions than employees (see Figure 8)

Figure 9 compares the perceptions of staff, faculty, and directors on each of the strategic planning items.

Highlights of the perceptions of STRATEGIC PLANNING for each employee group:

- Directors tend to agree that that they know the relevant parts of institutional plans, but tend to be less certain about how to determine progress on those plans and whether the institution asks for their ideas when planning for the future
- Faculty and staff members tend to be uncertain about their knowledge and role in institutional strategic planning

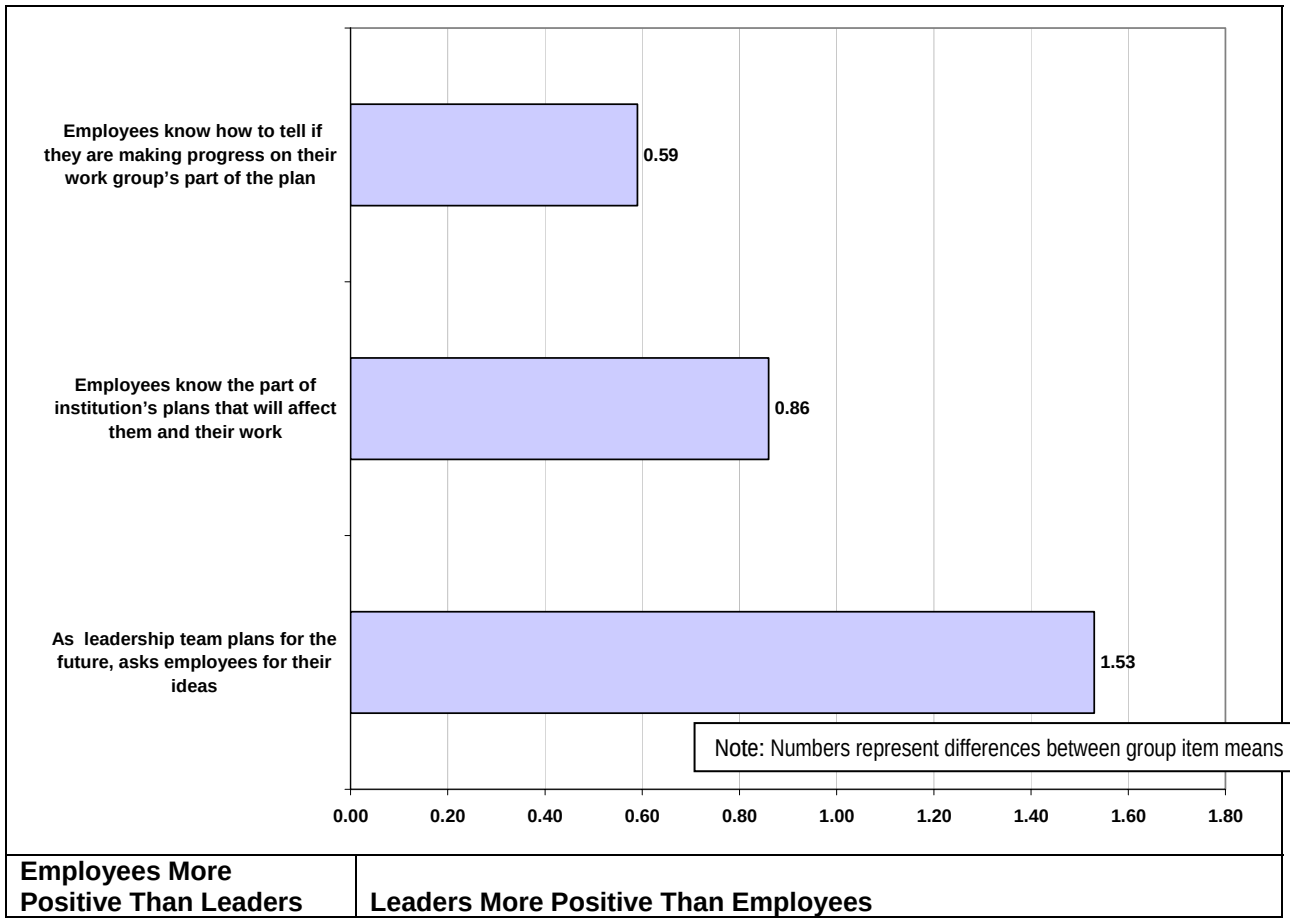

Figure 8. Gaps between leaders and employees in perceptions of strategic planning

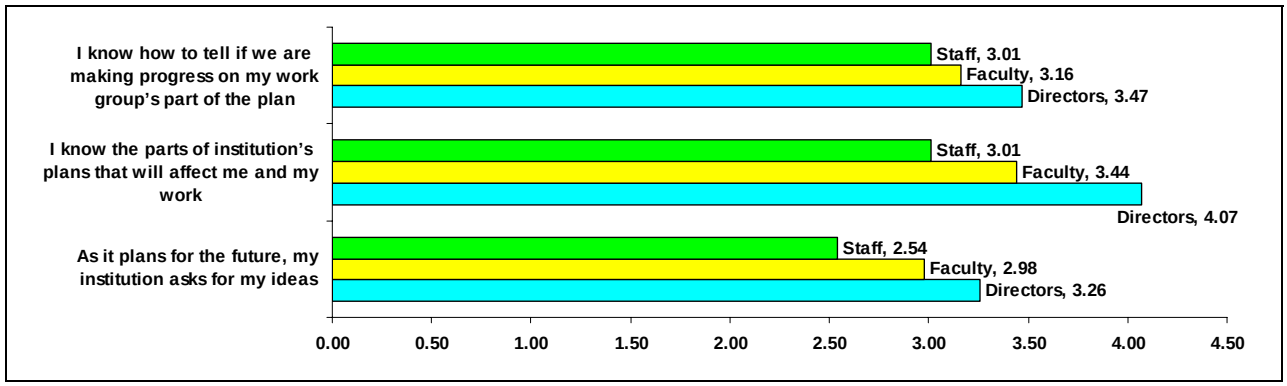

Figure 9. Comparison of strategic planning item means for employee groups

Highlights of the comparison of perceptions of STRATEGIC PLANNING among employee groups:

- When comparing the three employee groups for each item using ANOVA, two tests are statistically significant at the p<.01 level; Table 3 displays significant differences between pairs of groups by item
- Directors and faculty members rate their organizational input and knowledge of organizational plans significantly higher than staff members
- In addition, directors rate their knowledge of relevant parts of institutional plans significantly higher than faculty members
- There is no difference in perceptions among the three groups on their knowledge of how to determine progress on relevant parts of institutional plans

Table 3. Significant differences in employee perceptions of strategic planning (p < .05)

Item	Directors > Staff	Directors > Faculty	Faculty > Staff
As it plans for the future, my institution asks for my ideas	✓		✓
I know the parts of institution's plans that will affect me and my work	✓	✓	✓
I know how to tell if we are making progress on my work group's part of the plan			

Section VI: Perceptions of Student, Stakeholder, and Market Focus

Figure 10 suggests that senior leaders and employees share a positive opinion of the institution's focus on students and stakeholders.

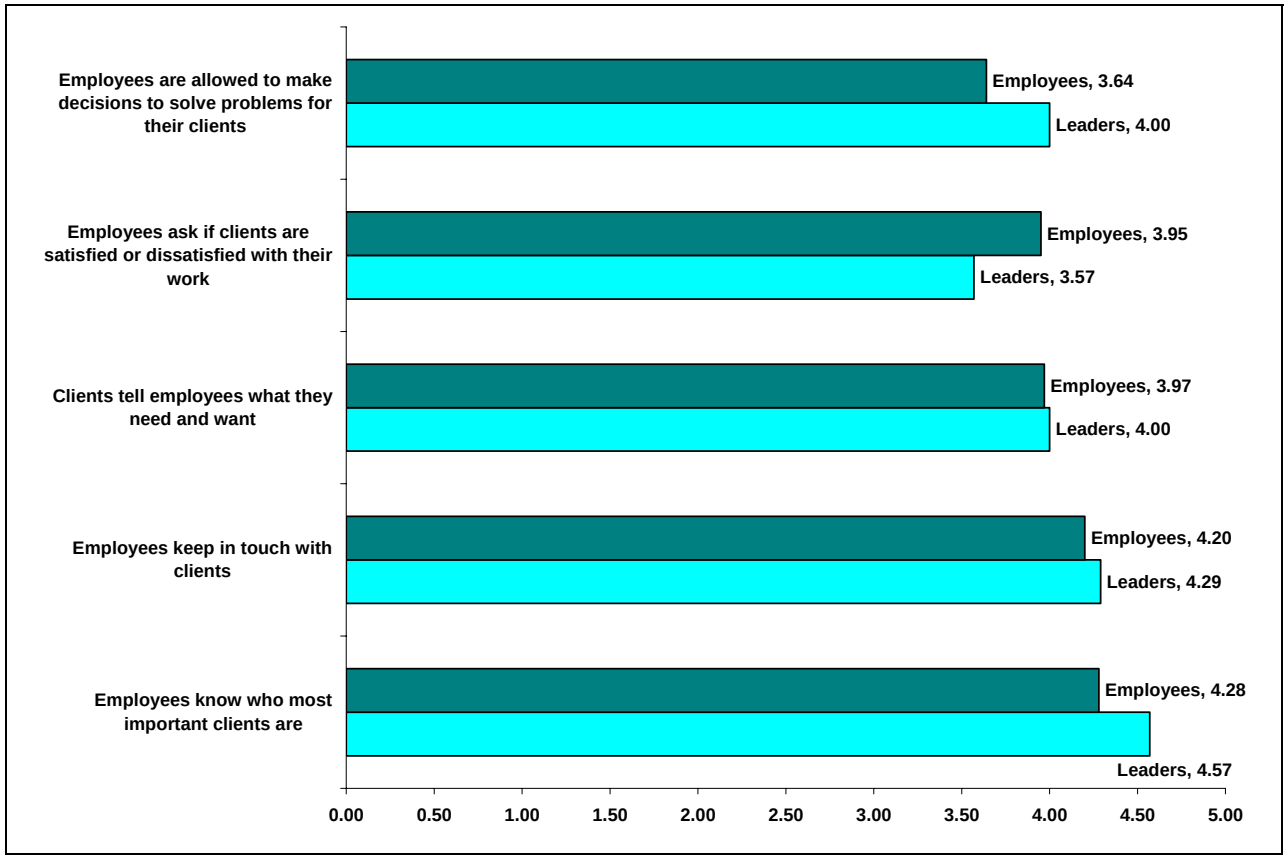

Figure 10. Comparison of student/stakeholder/market focus item means for employees and leaders

Highlights of the comparison of perceptions of STUDENT, STAKEHOLDER, AND MARKET FOCUS for senior leaders and employees:

- Senior leaders indicate high agreement with employee knowledge of important clients and contact with clients
- Employees also tend to agree that they know their important clients and keep in contact with them
- Based on the criterion of a difference of 0.50 or greater, there are no gaps in the perceptions of leaders and employees for student, stakeholder, and market focus

The perceptions of staff, faculty, and directors on each of the student, stakeholder, and market focus items are shown in Figure 11.

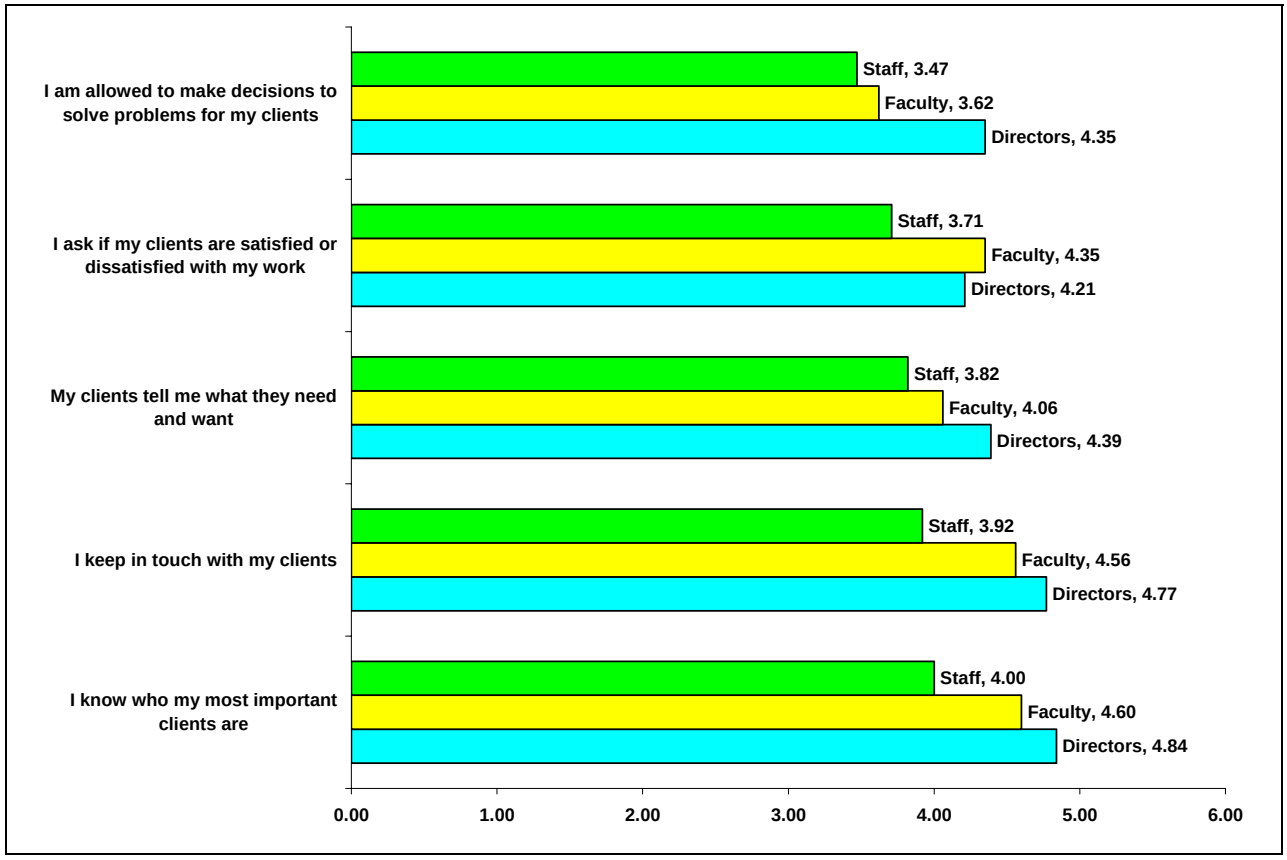

Figure 11. Comparison of student, stakeholder, and market focus item means for employee groups

Highlights of the perceptions of STUDENT, STAKEHOLDER, AND MARKET FOCUS for each employee group:

- Directors tend to strongly agree that that they know their important clients and keep in touch with them; and tend to agree that clients express their needs and wants, that they ask about their clients' satisfaction, and that they are empowered to help solve problems for clients
- Faculty members' responses follow the same pattern as those of directors
- Staff members tend to agree that they have good relationships with clients, ask about their satisfaction, and that they are allowed to make decisions to solve problems for clients

Highlights of the comparison of perceptions of STUDENT, STAKEHOLDER, AND MARKET FOCUS among employee groups:

- All five ANOVA tests are statistically significant at the p<.01 level and Table 4 displays the items for which ratings differ significantly between pairs of employee groups
- Directors and faculty members rate their knowledge of important clients, contact with clients, client expression of needs and wants, and monitoring of client satisfaction significantly higher than staff members
- In addition, directors rate their ability to make decisions to solve problems for clients significantly higher than staff members; and also rate client expression of needs and wants significantly higher than faculty members

Table 4. Significant differences in employee perceptions of student, stakeholder, and market focus (p < .05)

Item	Directors > Staff	Directors > Faculty	Faculty > Staff
I know who my most important clients are	✓		✓
I keep in touch with my clients	✓		✓
My clients tell me what they need and want	✓	✓	✓
I ask if my clients are satisfied or dissatisfied with my work	✓		✓
I am allowed to make decisions to solve problems for my clients	✓		

Section VII: Perceptions of Measurement, Analysis, and Knowledge Management

Perceptions of measurement, analysis, and knowledge management for leaders and employees are presented in Figure 12.

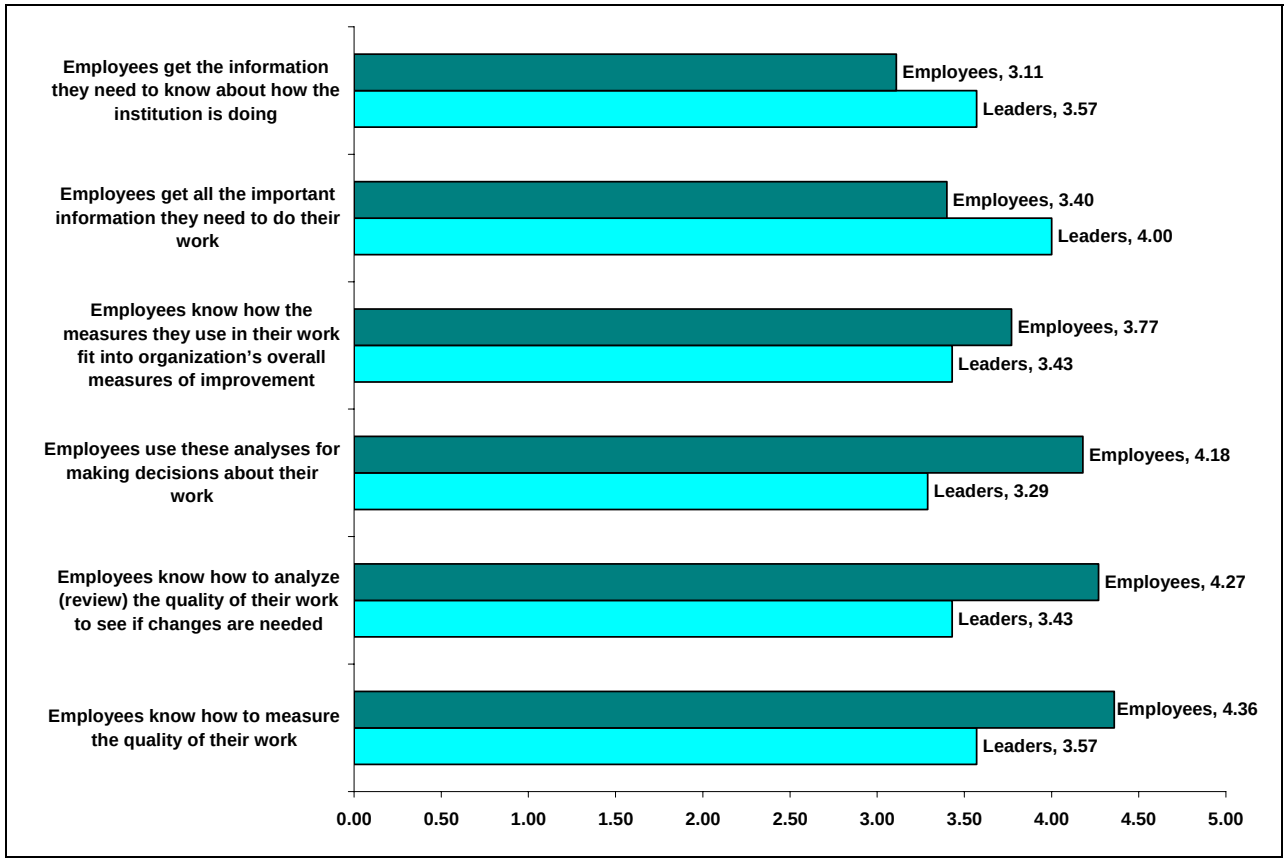

Figure 12. Comparison of measurement item means for employees and leaders

Highlights of the comparison of perceptions of MEASUREMENT, ANALYSIS, AND KNOWLEDGE MANAGEMENT for senior leaders and employees:

- Senior leaders tend to agree that employees get the information they need to do their work and to know how the institution is doing, and that they how to measure the quality of their work; however, they are uncertain whether employees know how to analyze if changes are needed, use analyses to make decisions, or know how those measures fit into the institution's overall measures of improvement
- Employees tend to agree that they know how to measure work quality, analyze need for changes, make decisions, and understand how their measures fit into the institution's overall measures; however, they are uncertain that they get the information they need to do their work and to know how the institution is doing

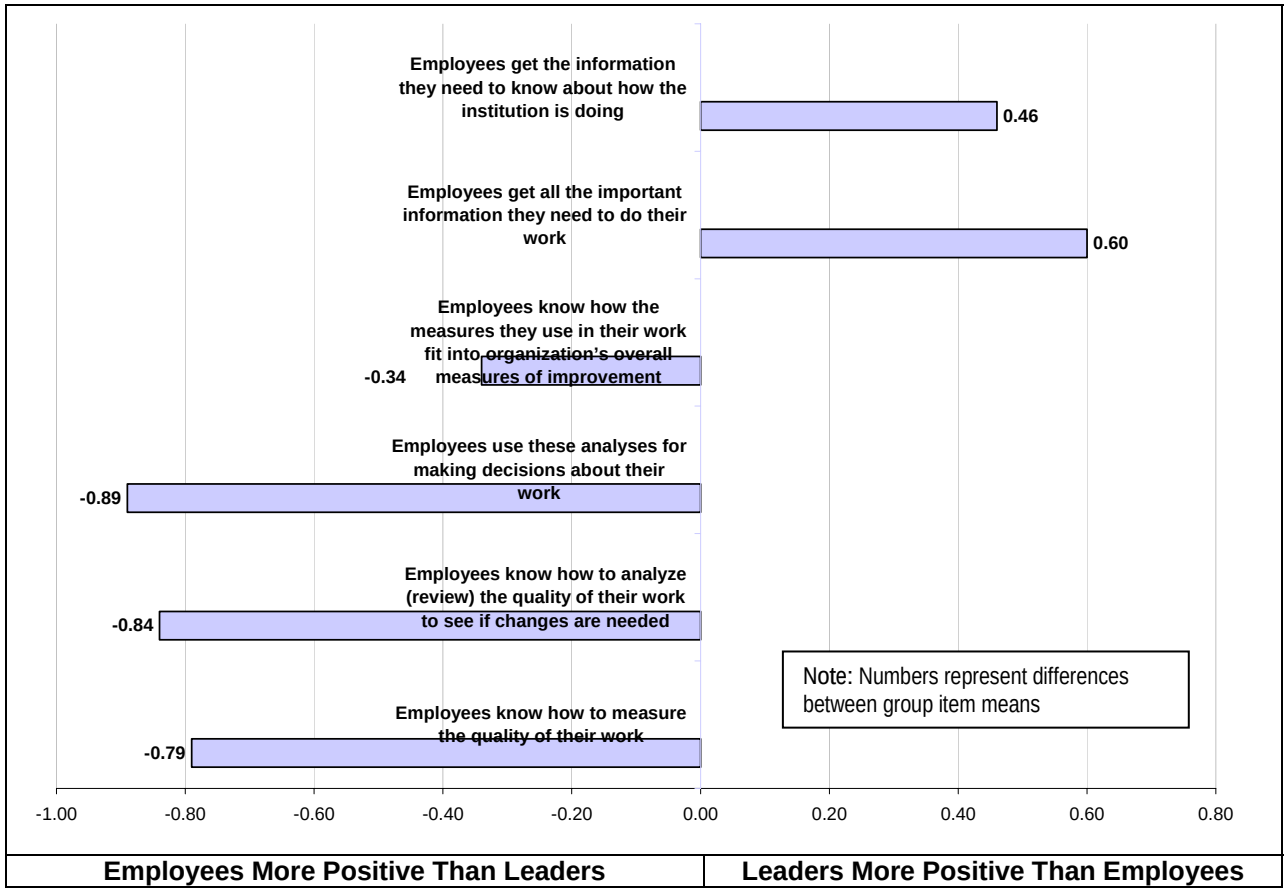

Figure 13. Gaps between leaders and employees in perceptions of measurement

- There appear to be perception gaps on four of the items, as shown in Figure 13:
  - Leaders seem to have a more positive perception than employees that employees get important work-related information
  - Employees generally have a more positive perception than leaders about their knowledge of quality measures and use of analyses to see if changes are needed and to make decisions

Figure 14 compares the mean perceptions of staff, faculty, and directors on each of the measurement, analysis, and knowledge management items.

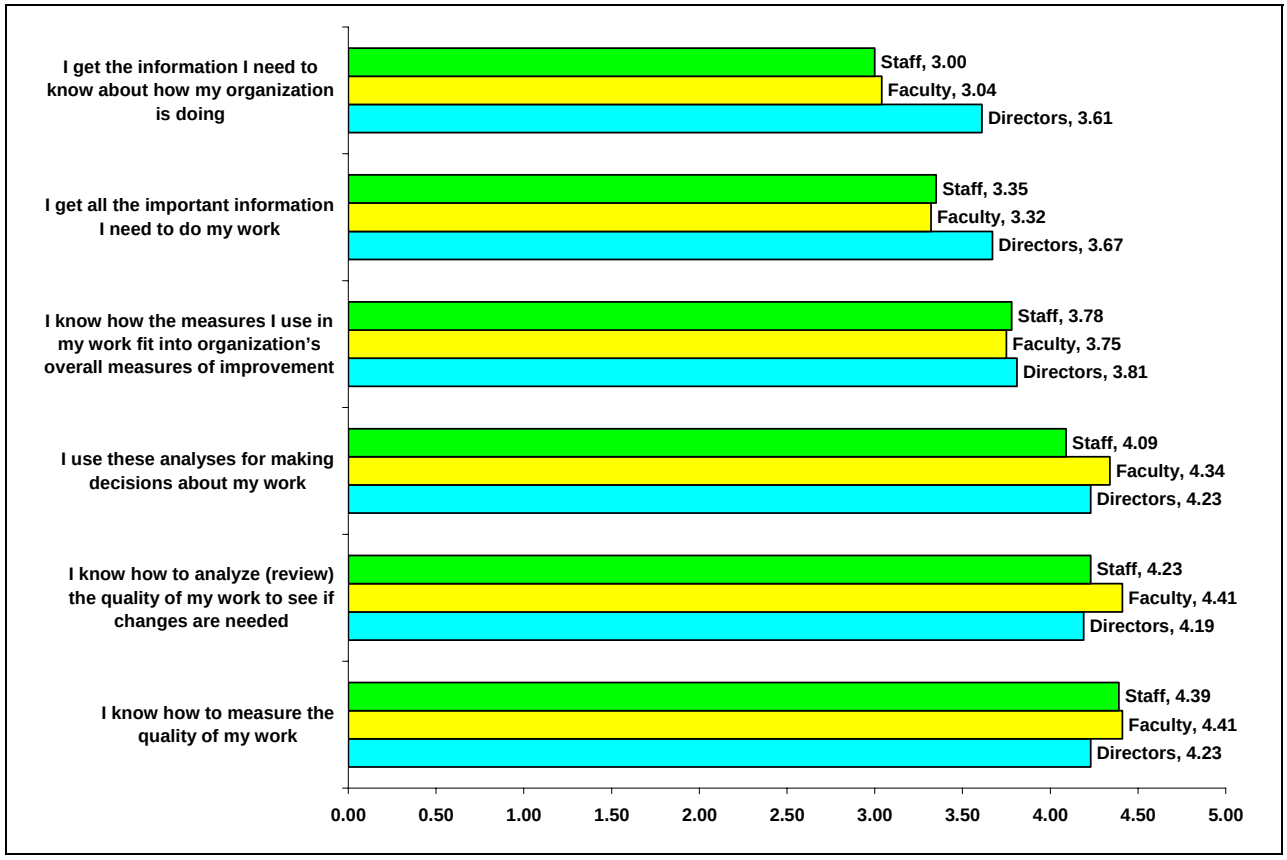

Figure 14. Comparison of measurement item means for employee groups

Highlights of the perceptions of MEASUREMENT, ANALYSIS, AND KNOWLEDGE MANAGEMENT for each employee group:

- Directors tend to agree that they receive the appropriate information to do their work and know how to measure and analyze the quality of their work
- Faculty and staff members tend to agree that they know how to measure and analyze the quality of their work, but are uncertain that they get the information they need to do their work and to know how the institution is doing

Highlights of the comparison of perceptions of MEASUREMENT, ANALYSIS, AND KNOWLEDGE MANAGEMENT among employee groups:

- Only one of the ANOVA tests is statistically significant at the $p<.01$ level and statistically significant differences between pairs of items are shown in Table 5.
- Directors rate their receipt of information about how the institution is doing significantly higher than both faculty and staff members

Table 5. Significant differences in employee perceptions of measurement (p < .05)

Item	Directors > Staff	Directors > Faculty	Faculty > Staff
I know how to measure the quality of my work			
I know how to analyze (review) the quality of my work to see if changes are needed			
I use these analyses for making decisions about my work			
I know how the measures I use in my work fit into institution's overall measures of improvement			
I get all the important information I need to do my work			
I get the information I need to know about how my institution is doing	✓	✓	

Section VIII: Perceptions of Faculty and Staff Focus

Figure 15 displays the average perceptions of leaders and employees about faculty and staff focus.

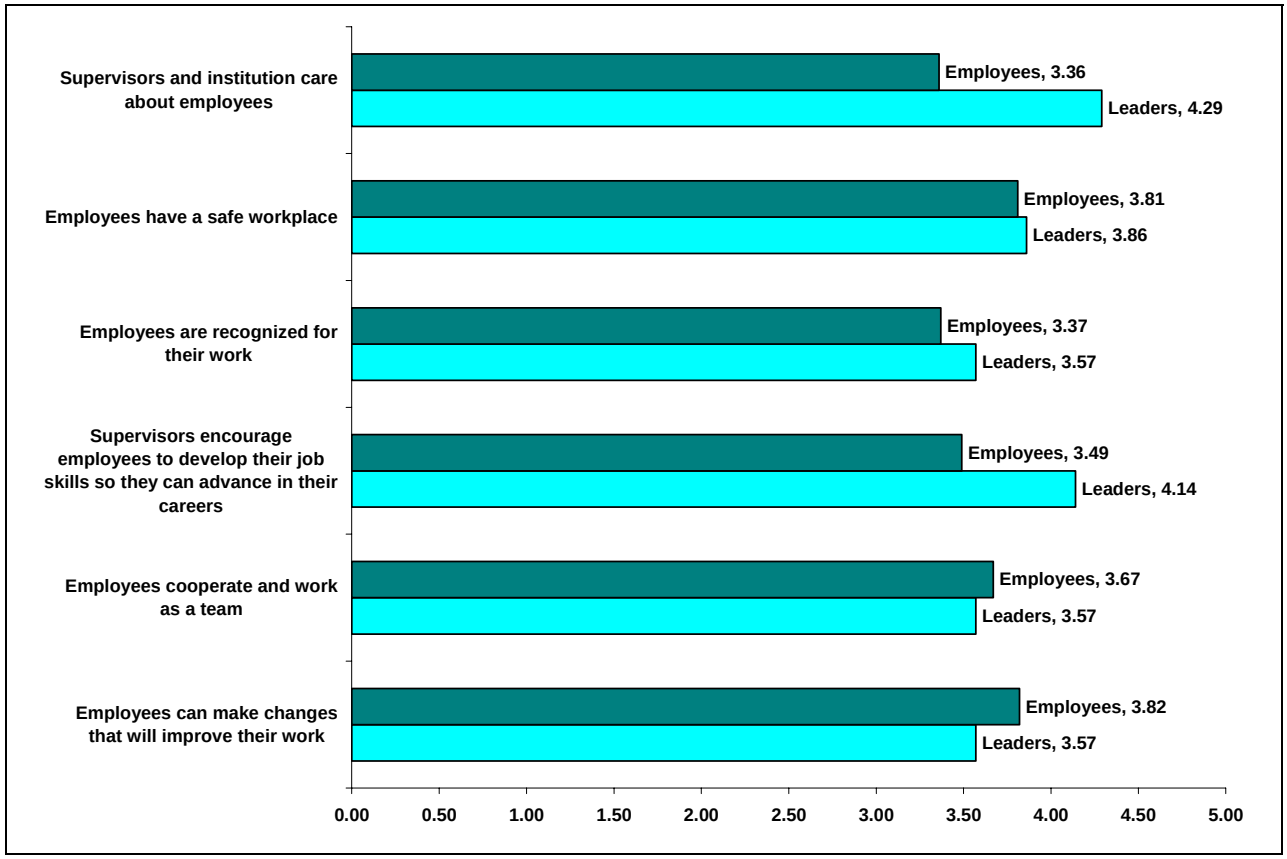

Figure 15. Comparison of faculty and staff focus item means for employees and leaders

Highlights of the comparison of perceptions of FACULTY AND STAFF FOCUS for senior leaders and employees:

- Leaders tend to agree that the institution focuses on faculty/staff work environment and professional development
- Employees tend to agree that they can make changes to improve their work, that they cooperate and work as a team, that their supervisors encourage job skill development, and that they have a safe workplace; but tend to be uncertain about whether they are recognized for their work and whether their supervisors and the institution care about them
- There appear to be perception gaps on two items, as shown in Figure 16:
    - Leaders appear to have a more positive perception than employees of the institution's demonstration of care for employees and supervisor encouragement of job skill development for career advancement

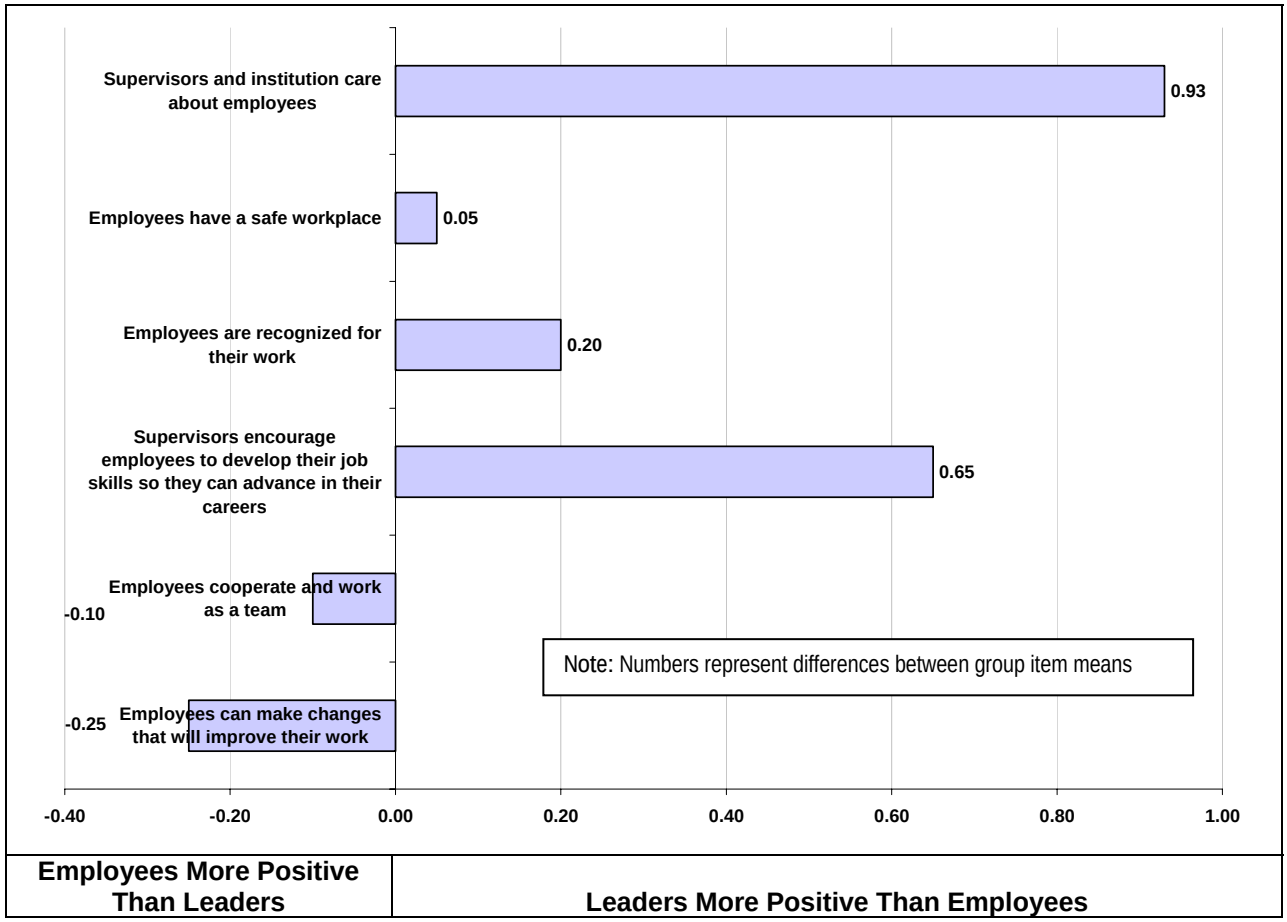

Figure 16. Gaps between leaders and employees in perceptions of faculty and staff focus

The mean perceptions of staff, faculty, and directors on each of the faculty/staff focus items are compared in Figure 17.

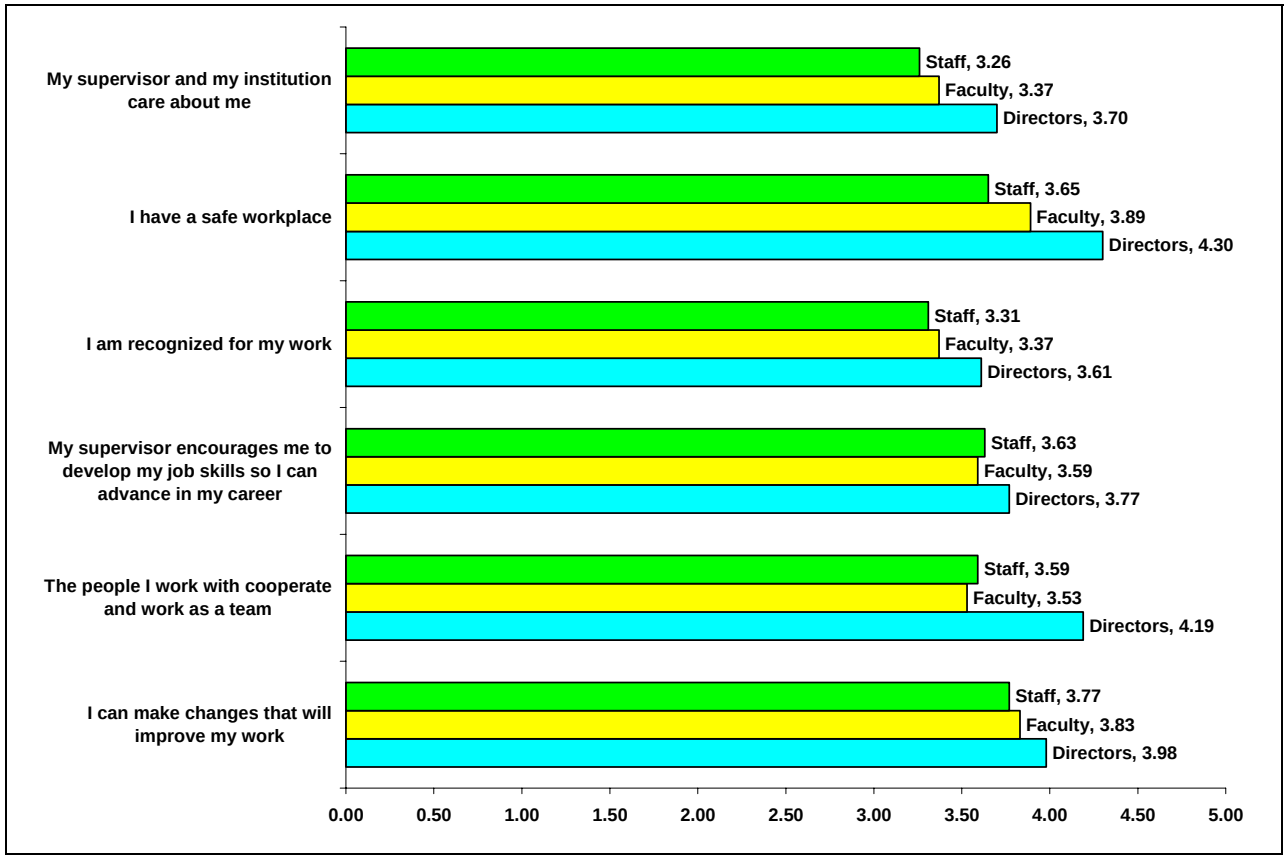

Figure 17. Comparison of faculty and staff focus item means for employee groups

Highlights of the perceptions of FACULTY AND STAFF FOCUS for each employee group:

- Directors tend to agree that the institution focuses on work environment and professional development
- Faculty and staff members tend to agree that they can make changes to improve their work, that they cooperate and work as a team with colleagues, that supervisors encourage job skill development, and that they have a safe workplace; however, tend to be uncertain that they are recognized for their work and that their supervisors and the institution care about them

Highlights of the comparison of perceptions of FACULTY AND STAFF FOCUS among employee groups:

- Four tests are statistically significant at the p<.05 level when using ANOVA to compare the three employee groups for each item; significant differences between pairs of groups are shown in Table 6
- Directors rate their cooperation and teamwork, encouragement by supervisors to develop job skills, workplace safety, and institutional demonstration of caring significantly higher than staff members
- Directors also rate cooperation and teamwork and workplace safety significantly higher than faculty members
- Faculty members rate workplace safety significantly higher than staff members

Table 6. Significant differences in employee perceptions of faculty and staff focus (p < .05)

Item	Directors > Staff	Directors > Faculty	Faculty > Staff
I can make changes that will improve my work			
The people I work with cooperate and work as a team	✓	✓	
My supervisor encourages me to develop my job skills so I can advance in my career	✓		
I am recognized for my work			
I have a safe workplace	✓	✓	✓
My supervisor and my institution care about me	✓		

Section IX: Perceptions of Process Management

Employee and leader perceptions of process management are shown in Figure 18.

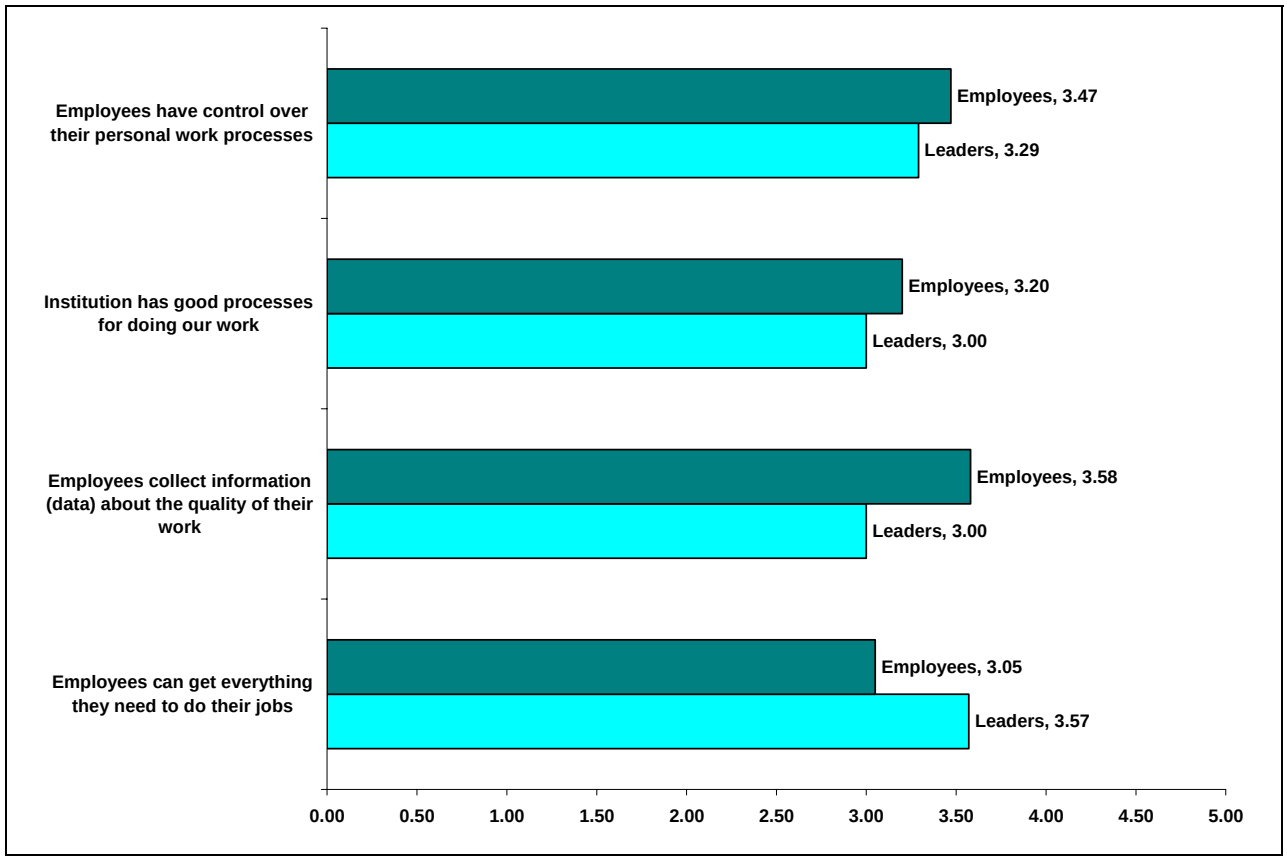

Figure 18. Comparison of process management item means for employees and leaders

Highlights of the comparison of perceptions of PROCESS MANAGEMENT for senior leaders and employees:

- Leaders tend to agree that employees can get everything they need to do their jobs, but tend to be uncertain whether employees collect data about work quality and have control over their work processes, and whether the institution has good work processes
- Employees tend to agree that they collect data on the quality of their work, but they tend to express uncertainty about whether they receive everything they need to do their jobs and have control over their work, and whether the institution has good work processes
- There appear to be perception gaps on two items as shown in Figure 19:
    - Leaders appear to have a more positive perception than employees about employees getting everything they need to do their jobs
    - Employees appear to have a more positive perception than leaders about their collection of data to monitor the quality of their work

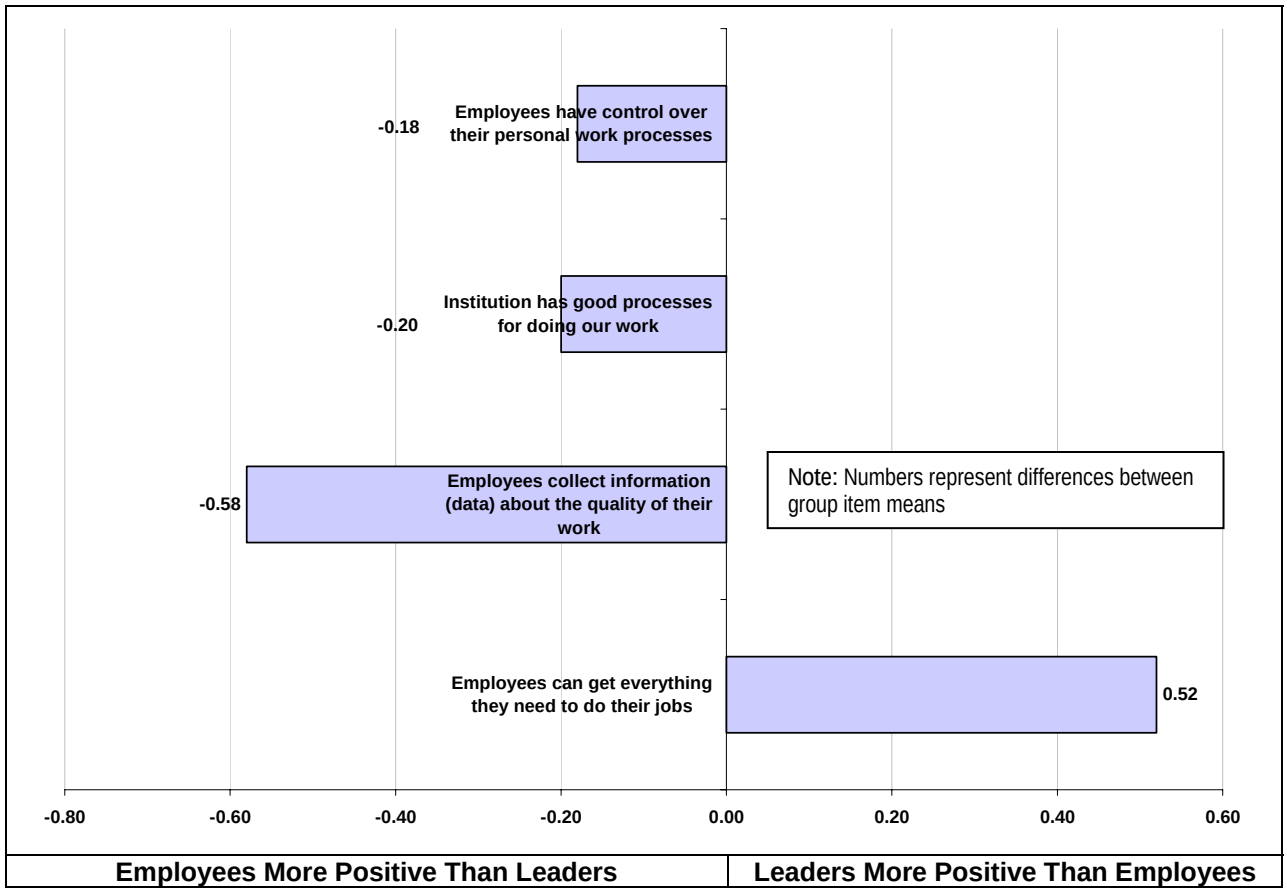

Figure 19. Gaps between leaders and employees in perceptions of process management

Figure 20 compares the mean perceptions of staff, faculty, and directors on each of the process management items.

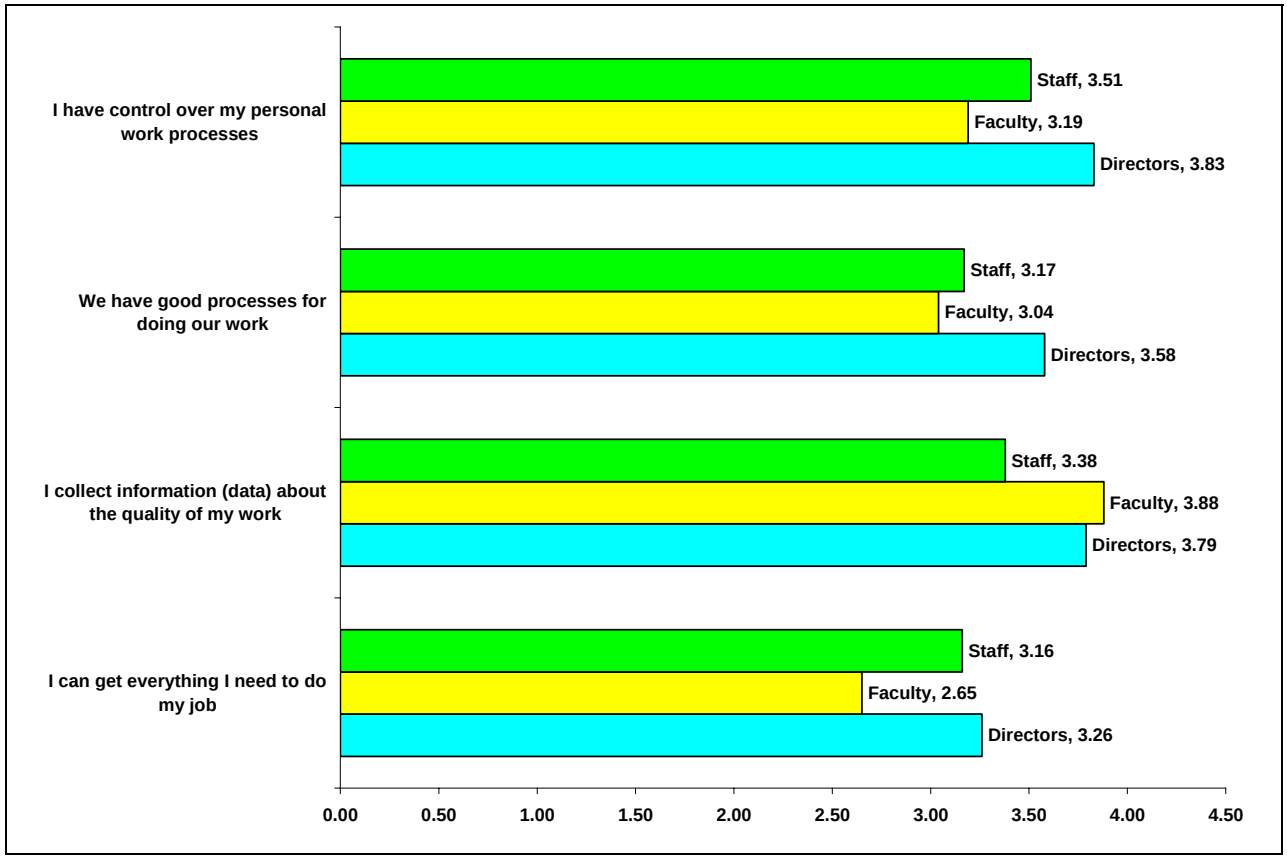

Figure 20. Comparison of process management item means for employee groups

Highlights of the perceptions of PROCESS MANAGEMENT for each employee group:

- Directors tend to agree that they collect information about the quality of their work, that the institution has good work processes, and that they have control over their personal work processes; however, they tend to be uncertain that they can get everything they need to do their jobs
- Faculty members tend to agree that they collect data about work quality, but tend to be uncertain whether they have control over work processes, can get everything they need to do their jobs or have good processes for doing work
- Staff members tend to agree that they have control over personal work processes, but tend to express uncertainty whether they collect data about work quality, get everything needed to do their jobs, and have good work processes

Highlights of the comparison of perceptions of PROCESS MANAGEMENT among employee groups:

- All four tests are statistically significant at the $p<.05$ level when using ANOVA to compare the three employee groups for each item; Table 7 displays significant differences between pairs of groups on each item

Table 7. Significant differences in employee perceptions of process management (p < .05)

Item	Directors > Staff	Directors > Faculty	Faculty > Staff	Staff > Faculty
I can get everything I need to do my job	✓	✓		
I collect information (data) about the quality of my work	✓		✓	
We have good processes for doing our work	✓	✓		
I have control over my personal work processes	✓	✓		✓

- Directors rate all items significantly higher than staff members
- Directors rate access to needed resources, control over personal work processes, and quality of work processes significantly higher than faculty members
- Faculty members rate their collection of work quality data significantly higher than staff members
- Staff members rate their control over work processes significantly higher than faculty members

Section X: Perceptions of Results

Figure 21 displays employee and leader perceptions of institutional results.

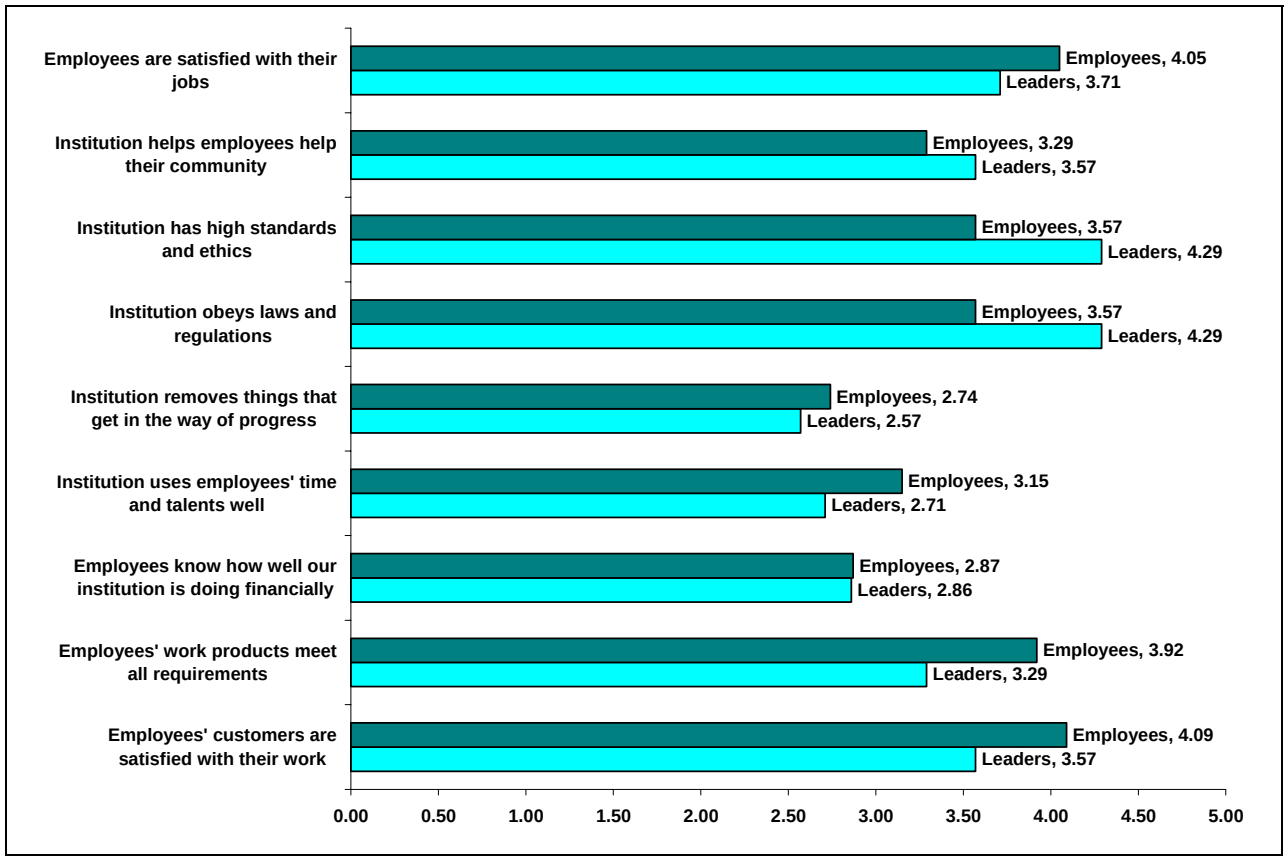

Figure 21. Comparison of results item means for employees and leaders

Highlights of the comparison of perceptions of RESULTS for senior leaders and employees:

- Leaders tend to agree that that the institution obeys laws and regulations, has high standards and ethics, and helps employees help the community; further, leaders tend to agree that both employees and their clients are satisfied
- Leaders tend to be uncertain whether employees know how well the institution is doing financially, whether work products meet all requirements, and whether the institution uses employees' time and talents well and removes things that get in the way of progress
- Employees tend to agree that they and their clients are satisfied, that their work products meet all requirements, and that the institution obeys laws and regulations and has high standards and ethics
- Employees tend to be uncertain whether the institution uses their time and talents well, removes things that get in the way of progress, and helps them help the community
- There appear to be perception gaps on four items, as shown in Figure 22:
  - Leaders appear to have a more positive perception than employees about the institution's adherence to standards, ethics, laws, and regulations
  - Employees appear to have a more positive perception than leaders about the quality of their work products and their job satisfaction

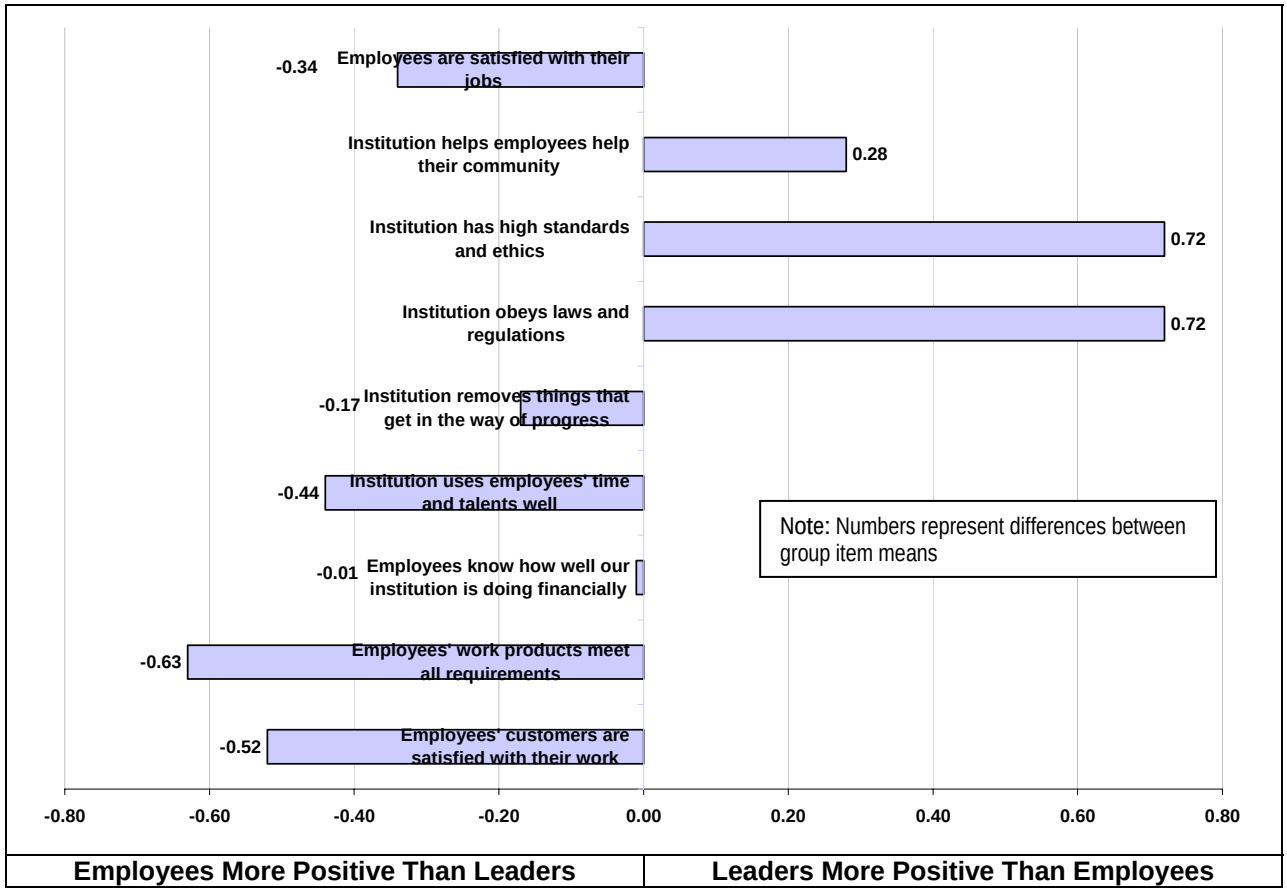

Figure 22. Gaps between leaders and employees in perceptions of results

Figure 23 compares the mean perceptions of staff, faculty, and directors on each of the results items.

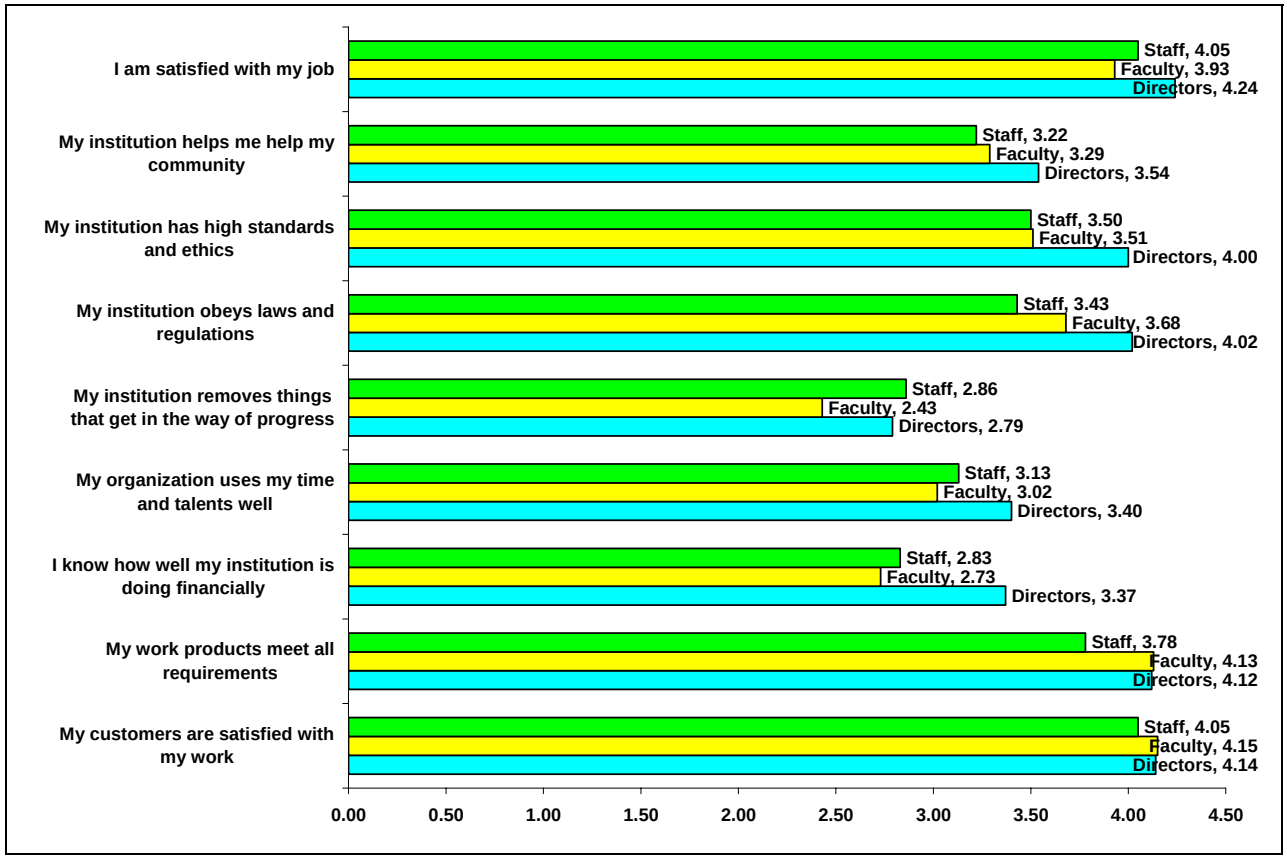

Figure 23. Comparison of results item means for employee groups

Highlights of the perceptions of RESULTS for each employee group:

- Directors tend to agree that they and their clients are satisfied, that their work products meet all requirements, and that the institution helps them help the community, obeys laws and regulations, and has high standards and ethics
- Directors tend to be uncertain of how well the institution is doing financially and whether the institution uses their time and talents well and removes things that get in the way of progress
- Faculty members tend to agree that they and their clients are satisfied, that their work products meet all requirements, and that the institution obeys laws and regulations and has high standards and ethics
- Faculty members appear to be uncertain of how well the institution is doing financially and whether the institution uses their time and talents well, helps them help the community, and removes things that get in the way of progress
- Staff members tend to agree that they and their clients are satisfied, that their work products meet all requirements, and that the institution has high standards and ethics
- Staff members express uncertainty about how well the institution is doing financially and whether the institution uses their time and talents well, helps them help the community, obeys laws and regulations, and removes things that get in the way of progress

Highlights of the comparison of perceptions of RESULTS among employee groups:

- Five tests are statistically significant at the p<.01 level when using ANOVA to compare the three employee groups for each item, and significant differences between pairs of groups are shown in Table 8
- Directors rate the quality of their work products, knowledge of institution's financial situation, and institutional adherence to laws, regulations, standards, and ethics significantly higher than staff members
- Directors also rate their knowledge of the institution's financial situation and the institution's adherence to high standards and ethics significantly higher than faculty members
- While faculty members rate the quality of their work products more positively than staff members, staff members rate more favorably than faculty members the institution removing things that get in the way of progress

Table 8. Significant differences in employee perceptions of results (p < .05)

Item	Directors > Staff	Directors > Faculty	Faculty > Staff	Staff > Faculty
My clients are satisfied with my work				
My work products meet all requirements	✓		✓	
I know how well my institution is doing financially	✓	✓		
My institution uses my time and talents well				
My institution removes things that get in the way of progress				✓
My institution obeys laws and regulations	✓			
My institution has high standards and ethics	✓	✓		
My institution helps me help my community				
I am satisfied with my job				

Section XI: Summary

Strengths

Commonly perceived STRENGTHS (average rating of 4.00 or higher):

- Employees know who important customers are and keep in contact with them (employees and leaders)
- Employees know how to measure the quality of their work, analyze quality to determine if changes are needed, and make decisions based on analysis (employee groups)
- Clients are satisfied with employees' work (employee groups)

Highlights of STRENGTHS perceived by participant groups:

- Senior leaders rated sixteen (16) items as strengths, including five in Leadership; four in Student, Stakeholder, and Market Focus; and none in Process Management
- Directors rated eighteen (18) items as strengths, including five in Student, Stakeholder, and Market Focus; five in Results; and none in Process Management
- Faculty members rated nine (9) items as strengths, including four in Student, Stakeholder, and Market Focus and three in Measurement, Analysis and Knowledge Management; but none in Leadership, Strategic Planning, Faculty and Staff Focus or Process Management
- Staff members rated six (6) items as strengths, including three in Measurement, Analysis and Knowledge Management and two in Results; but none in Leadership, Strategic Planning, Faculty and Staff Focus or Process Management

Overall categories of perceived STRENGTHS:

- Student, Stakeholder, and Market Focus
- Measurement, Analysis, and Knowledge Management
- Results (employee role)

The strengths perceived by each participant group, by category, are shown in Appendix G.

Opportunities for Improvement

Commonly perceived OPPORTUNITIES FOR IMPROVEMENT (average rating of 3.49 or lower):

- As it plans for the future, institution asks for employees' ideas (faculty and staff)
- Employees know how well the institution is doing financially (leaders and employees)
- Institution removes things that get in the way of progress (leaders and employees)

Highlights of OPPORTUNITIES FOR IMPROVEMENT perceived by participant groups:

- Senior leaders rated ten (10) items as opportunities for improvement, including three each in Measurement, Analysis, and Knowledge Management; Process Management; and Results
- Directors rated five (5) items as opportunities for improvement, including two within Leadership, and one each within Strategic Planning, Process Management, and Results
- Faculty members rated sixteen (16) items as opportunities for improvement, including four within Leadership, three each within Strategic Planning and Process Management, and two each within Measurement, Analysis, and Knowledge Management; Faculty and Staff Focus; and Results
- Staff members rated eighteen (18) items as opportunities for improvement, including six within Results, three within Strategic Planning, and two each within Measurement, Analysis, and Knowledge Management; Faculty and Staff Focus; Process Management; and Results

Overall perceived categories of OPPORTUNITY FOR IMPROVEMENT:

- Leadership
- Process Management
- Results (institutional role)

The opportunities for improvement perceived by each participant group, by category, are shown in Appendix H.

Perception Gaps

Highlights of PERCEPTION GAPS for leaders (difference of 0.50 or higher from employee mean):

- Provision of information and resources to employees
- Employee opportunities for input into planning and professional/job skill development
- Institutional adherence to regulations and standards

Highlights of PERCEPTION GAPS for employees (difference of 0.50 or higher from leader mean):

- Employee knowledge and use of measurement, analysis, and knowledge management practices
- Quality of employee work products
- Employee job satisfaction

Perception gaps between leaders and employees are detailed in Appendix I.

Highlights of PERCEPTION GAPS among employee groups (significant pairwise differences at $p<.05$ level):

- Greatest differences in perception within Leadership category, followed by Student, Stakeholder, and Market Focus; Process Management; Faculty and Staff Focus; and Results
- Few differences in perceptions were seen within the Measurement, Analysis, and Knowledge Management category
- In general, Directors have the most positive perceptions across all categories, followed by faculty, then staff members

Perception gaps among employee groups are shown in Appendix J.

References

National Institute of Standards and Technology (NIST). (2006). *Baldrige National Quality Program education criteria for performance excellence*. Gaithersburg, MD: Author.