A cause-and-effect relationship between leadership and corporate culture: An educational perspective

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UMI
A CAUSE-AND-EFFECT RELATIONSHIP BETWEEN
LEADERSHIP AND CORPORATE CULTURE:
AN EDUCATIONAL PERSPECTIVE

by

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a doctoral dissertation in partial fulfillment
of the requirements for the degree of

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in

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ABSTRACT

A Cause-and-Effect Relationship Between Leadership and Corporate Culture:
an Educational Perspective

by

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The purpose of this exploratory research was to examine the relationship between the corporate culture of four-year hospitality management programs and the leadership styles of individuals responsible for leading these programs. Separate instruments were used to survey faculty and program heads of four-year hospitality management programs in an attempt to explore numerous research questions. Certain questions focused on the leadership styles of individuals in positions of authority within the program's administration. Other questions were geared toward evaluating the strength of the program's culture measured along a number of criteria. By examining these questions a theoretical relationship between leadership and culture was identified and a hypothesis for future research was suggested.
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CHAPTER 5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

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CHAPTER I

THE RESEARCH PROBLEM

How do individuals in leadership positions influence the behavior of others? How are they able to create an atmosphere that motivates others to achieve certain goals? What relationship exists between the style of leadership these individuals demonstrate and the attitudes and beliefs of others? The exploration of these and related questions provided the impetus for this research. The primary focus was on the impact that the leadership style of a person in a position of authority and responsibility has upon the shared beliefs of other members of the organization. Specifically, the relationship between leadership style and corporate culture was analyzed among program heads and faculty of four-year hospitality management programs. Before this relationship could be explored, however, it was necessary to review the concepts of leadership and corporate culture as a basis for analysis.

Leadership

There are perhaps as many definitions of leadership as there are authors on the subject, and for each definition there seems to be a different theory to explain the mysteries of leadership. "Great man," trait, and situational theories are just a few that purport to explain the nature of leadership and the characteristics of leaders. Although
these theories have evolved over time, a clear and universally accepted understanding of, and agreement on, the phenomenon is persistently illusive.

James MacGregor Burns (1978) perhaps stated one of the most comprehensive definitions when he suggested that leadership was, "leaders inducing followers to act for certain goals that represent the values and the motivations—the wants and needs, the aspirations and expectations—of both leaders and followers" (Burns, 1978, p. 19). Other definitions have been provided by Paul Hersey and Kenneth Blanchard (1988), who stated that the function of a leader is to facilitate cooperative goal attainment among followers while providing opportunities for their personal growth and development.

Gerald Goll (1996) proposed a more recent approach to the concept of leadership contending that leaders help people to help themselves while being responsive to their needs. These definitions seem to suggest that leaders need followers, and that leadership is present in situations in which followers are able to attain their personal goals while simultaneously achieving group goals.

Even those who tend to agree on a definition of leadership often continue to disagree over what leaders actually do. Chester Barnard (1968) asserted that a leader’s role is to shape and guide values by harnessing the social forces in the organization. Edward Schein (1985) simply, yet insightfully, contributed to this debate by declaring that much of what is mysterious about leadership becomes clearer if leadership is separated from management and is linked specifically and directly to creating and/or changing culture.

In fact, there is a possibility—underemphasized in leadership research—that the only thing of real importance that leaders do is to create and manage
culture and that the unique talent of leaders is their ability to work with
culture (Schein, p.2).

Culture

Schein has inferred that the mysteries of leadership may be more readily
comprehended by establishing a relationship between leadership and culture. This
comprehension depends upon an understanding of what is meant by culture. The concept
of culture may have as many different understandings as leadership has definitions.
Corporate culture, corporate climate, organizational culture, and organizational
atmosphere are just a few of the terms used to identify a similar phenomenon.

Terrence Deal and Allen Kennedy (1982) offered a rather informal description of
culture as “the way we do things around here” (Deal and Kennedy, 1982, p.4). They
broke culture down into four elements; values, heroes and heroines, rites and rituals, and
cultural network. Deal and Kennedy then used these elements to measure the strength of
an organization’s overall culture. A portion of Schein’s (1985) earlier definition of culture
recognized that it is a pattern of shared basic assumptions developed by a group regarding
the correct way to perceive, think, and feel. Corporate culture has also been defined by
Rollin Glaser (1991) as the fabric of shared values and beliefs that are of paramount
importance to a given organization. Goll (1996) suggested that culture flows from values
which is consistent with Barnard’s assertion that a leader’s role is to shape and guide the
organization’s values.
Problem Statement

It has been suggested that leadership is difficult to define, and therefore leaders may be difficult to identify. It has also been suggested that leaders are responsible for creating and maintaining an organization’s culture. If a relationship between leadership and culture does exist, how can it be measured? Once it is measured, other questions arise. For example, does the leader’s style vary in different cultural situations? Does an individual’s leadership style determine the type of role s/he plays in developing the organization’s culture? Finally, once the leader’s style and role are determined, what relationship exists between them and the organization’s culture?

Research Purpose

Bellenger and Greenberg (1978) proposed that there were three basic reasons for conducting research projects. The first was to conduct exploratory research in order to develop hypotheses; the second was to test hypotheses about the states of nature; and the third reason was to test hypotheses regarding relationships between variables. The four research questions identified in the next section were intended to explore hypothetical relationships and to provide additional information for future research.

This exploratory research was designed to examine the possibility of a cause-and-effect relationship between leadership styles and corporate culture. The relationship that exists between the corporate culture of four-year hospitality programs and the leadership styles of the program’s head was explored. Program heads was the term used to identify individuals holding the title of dean, department head, chairperson, or director of the hospitality management program.
In addition, this research explored the work-roles that characterize the leader’s behavior. Administrator, supervisor, manager, and leader are terms used to describe the roles an individual may portray as a program head. It may be theorized that the leadership style of the program head and the program’s corporate culture will determine which work-role is best suited for the situation. Finally, the style and role which the program head display may not only effect the program’s culture, but also the productivity of individuals in that culture.

Research Questions

This research was designed to examine and provide insight into the following questions:

1. What leadership styles are displayed by heads of four-year hospitality management programs?
2. How strong is the program’s culture as measured by the four elements of: values, heroes and heroines, rites & rituals, and cultural network?
3. How are the work-roles of program heads differentiated along the classifications of: supervisor, manager, administrator, and leader?
4. What relationship exists between the leadership styles and work-roles of program heads and the cultural strength of four-year hospitality management programs?

An analysis of these research questions may prove useful to a number of parties. Firstly, the identification of leadership styles displayed by program heads may benefit university presidents and others responsible for the recruitment and selection of future
program leaders. Secondly, current faculty who aspire to be program head positions may benefit from the classification of leadership styles frequently displayed by current program heads. Finally, current program heads may benefit from a clearer understanding of how their leadership style affects the overall corporate culture of the program.

An appreciation of the corporate cultures of four-year hospitality management programs may be enhanced by the research results. The cultural characteristics of these programs have been addressed so that current program heads may use them for comparative evaluations. The results of this research are available to program heads who wish to determine how their respective programs compare to the cultural norms displayed by the majority of programs. It is anticipated that this may provide program heads with insight into strengthening areas where the program's culture is currently weak.

These research questions were examined by administering two separate survey instruments to program heads and faculty at four-year hospitality management programs. Although this research focused on hospitality management education, it was also designed to have implications beyond this arena attesting to the universality of the instruments. The Corporate Culture Survey (Appendix A) was not specifically designed for use in higher education, and may be utilized in other contexts in order to determine the strength of an organization's culture. Although the Leadership-Culture Dimensional Screening Scale (LCDSS) (Appendix B) was developed for use in schools, it may also be applied to other industries since it can be used to identify transactional versus transformational leadership styles. The results obtained from these instruments may assist members of any organization in identifying the strengths of its culture and the styles of its leaders.
The Research Approach

The preceding research questions were examined by administering two separate survey instruments. The leadership styles and work role orientations of program heads were ascertained by using a revised version of the Leadership-Culture Dimensional Screening Scale (LCDSS). This instrument was developed by Lorrie Reed (1995) to assess grade school principals' leadership styles and to gauge the level of cultural stability within a school community. The instrument was also designed to detect the extent to which principals exhibited behaviors characterized along the four executive work-roles of supervisor, manager, administrator and leader (p.32).

The culture of the hospitality program was measured by administering to a program's faculty The Corporate Culture Survey developed by Rollin Glaser. By examining four-year hospitality programs in this manner, it was anticipated that a relationship between leadership and culture would be identified.

Research Constraints

Limitations

This research was limited to faculty members and program heads of four-year hospitality management programs in the United States. The sampling frame of 578 hospitality education faculty was ascertained from a 1996 listing of members of the Council on Hotel, Restaurant and Institutional Education (CHRIE). The sampling frame of 153 program heads was obtained from the 1997 CHRIE Guide to College Programs in Hospitality and Tourism. The program head sample was chosen from a list of four-year, baccalaureate degree granting institutions in the United States.
A potential liability of using this population for this research is its relatively small size. Caution should be exercised when attempting to make generalizations regarding other programs in higher education from information obtained from this research.

**Delimitations**

The use of mailed questionnaires has some disadvantages over other survey methods. Generally, the use of complex open-ended questions is more limited, and there is little control over the response situation (Czaja & Blair, 1996). Another disadvantage of mailed questionnaires is low and differential response rates (Bourque and Clark, 1992). "Uninterested persons fail to return questionnaires, illiterate respondents cannot participate, and out-of-date or inaccurate address lists prevent questionnaires from reaching targeted persons" (Bourque and Clark, 1992, p.3). However, Dillman (1978) stated that some of these disadvantages can be reduced by restricting the use of mail questionnaires to literate, highly motivated populations, and by careful pilot testing.

Many of Dillman’s procedures regarding the use of mailed instruments were utilized in this research regarding instrument and cover letter design. However, his procedure of contacting non-respondents with three follow-up mailings was not observed. Although the response rate obtained in this research was deemed sufficient, it is likely that it could have been larger had Dillman’s Total Design Method been strictly adhered to.

Some researchers have questioned the use of formalized surveys to measure an organization’s culture. Schein (1985) stated that given his approach to culture, a group’s culture could not be adequately measured through the use of formalized tests. However, he does allow that the espoused values of group members may be measured with such
instruments. Since gaining insight into the values of group members is one of the intents of this research, the possible disadvantages of a formalized survey may be minimized and thus are not deemed critical.

Summary

This research surveyed faculty and program heads of four-year hospitality management programs in an attempt to examine numerous questions. Some of the questions focused on the leadership styles of individuals in positions of authority within the program’s administration. Other questions were geared toward determining the strength of the program’s culture measured along a number of criteria. It was anticipated that by identifying the leader’s style and the strength of the program’s culture, a cause-and-effect relationship between the two would be identified.
CHAPTER 2

LITERATURE REVIEW

A clearer understanding of the literature regarding leadership and corporate culture was necessary to properly determine the extent of a relationship between the two. To that end, a review was conducted of literature addressing these and related topics. The review began with a discussion regarding the evolution of leadership theory in general. Transactional and transformational leadership styles were defined and the characteristics of both styles were identified. The association between leadership, power, and values was then examined.

The presumption that a leader is a shaper of values led the review to an analysis of the concept of values and culture. In addition, previous research conducted on leadership in the hospitality industry, educational leadership, and leadership in hospitality education was reviewed and summarized. Finally, the literature review’s relation to each of the four research questions was discussed.

Leadership

The origins of the word “lead” can be traced back to the West and North Germanic “laithjan” derived from “laitho” which meant way or journey. So etymologically, lead means “cause to go along one’s way” (Ayto, 1990). The Oxford
English Dictionary (as cited in Stogdill, 1974) notes the appearance of the word “leader” in the English language as early as the year 1300. Interestingly, the word “leadership” did not appear until around 1800. Regardless of where and when the word originated, the concept of what leadership truly is remains a mystery. As James MacGregor Burns (1978) succinctly stated, “Leadership is one of the most observed and least understood phenomenon on earth” (p. 2).

Just as there is no one clear definition of the word, there is no one theory that fully encompasses the concept. Many of the early theories regarding leadership have been collectively referred to as the “great man theory of leadership.” These theories supposed that leaders were born and that heredity played a key role in defining leaders. F.A. Woods studied the ruling families of 14 nations over periods of five to ten centuries. He concluded that the man makes the nation and shapes it in accordance with his abilities (as cited in Stogdill, 1974).

Trait theories did not place an emphasis on the leader’s inheritance, but rather as Thomas Carlyle (as cited in Stogdill, 1974) purported, leaders were endowed with unique qualities that captured the imagination of the masses. Bernard Bass (as cited in Maxey, 1991) explained that these theories grouped the traits or abilities of leaders into categories such as physical characteristics, intelligence, and personality.

Theories regarding leadership evolved, and although the personal traits of the leader were still considered important, they were no longer believed to be the sole basis of leadership. Theorists began to concentrate their work on the leader’s behavior rather than on the leader’s characteristics. Studies conducted by Elton Mayo and also by researchers at Ohio State University concentrated more on the leader’s interactions with, and
consideration for, subordinates. Research geared toward measuring leadership traits and behavior yielded inconsistencies which lead scholars to focus on other factors accounting for leadership (Maxey, 1991).

Theses inconsistencies in previous studies led theorists to propose that leadership existed via a combination of the characteristics of the individual and the demands of the situation (Stogdill, 1974). Although this concept has received recent attention, it can be traced back centuries to the Chinese warrior, philosopher Sun Tzu. In *The Art of War*, Tzu (Griffith, 1963) wrote, “Therefore a skilled commander seeks victory from the situation and does not demand it from his subordinates... he selects his men and they exploit the situation” (p.93).

Current studies suggest that leaders are not born, they are made, and a leader’s style and the effectiveness of that style depend on the situation that the leader faces. Thomas Peters and Robert Waterman (1982) summed up the importance of the situation when they stated that, “Leadership is being visible when things are going awry, and invisible when they are working well” (p.82).

In 1964, Fred E. Fiedler, proposed one of the first theories regarding the impact of the situation on leadership. His contingency model stated that leadership relied on the interaction between the situation and the leader’s behavior rather than simply on the leader’s personality. The effectiveness of a leader depended on the leader’s style and on the degree to which the leadership situation provided the leader with control and influence over the outcome (Fiedler, 1987).

Although the contingency model addressed the situation’s effect on leadership, a weakness of the model was that it viewed an individual’s leadership style as being fixed.
There were therefore only two ways to increase a leader's effectiveness: (a) change the leader to fit the situation, or (b) change the situation to fit the leader (Robbins, 1986). Despite this limitation, the model should not be discounted because perhaps its greatest contribution was not in the answers it provided, but in the direction that it took leadership research (Robbins, 1986).

Once leadership research began to focus more intently on the situation, others began to propose additional contingency theories. Paul Hersey and Kenneth Blanchard offered a situational leadership theory that stated that leadership may be viewed as a formula: $L = f(l, f, s)$. In this formula the leadership style ($L$) is a function of the leader ($l$), the follower ($f$) and the situation ($s$) (Hersey & Blanchard, 1988, p. 86).

Hersey and Blanchard’s ideas on situational leadership originated with Fiedler and proposed that leadership was based on the interaction between: (a) the amount of guidance a leader gives, (b) the amount of emotional support a leader provides, and (c) the readiness level of the follower (Hersey and Blanchard, 1988, p. 170). Basically, this model proposed that as followers (employees) mature in the workplace, the followers’ needs change and the leader must be aware of these different needs and adjust his/her leadership style accordingly. Critics of this model (Fiedler, 1987, Robbins, 1986) note the lack of evidence and empirical support for the theory.

It can be inferred from the work of Hersey and Blanchard, Fiedler, and Robbins that effective leadership not only depends upon the person, but also upon the followers and the overall situation. In fact, Hersey and Blanchard (1988, p. 128) examined the work of Bernard Bass and his distinction between successful and effective leadership. Bass stated that a leader is successful if s/he is able to “influence the behavior of a follower.” If
the leader gets the follower to do “something”, then the leader has been successful. But has s/he been effective? Effective leadership influences behavior of willingly followers. Effective leadership is displayed when the follower performs the task because s/he sees the relationship between the task and his/her personal values.

Being an effective leader also depends upon the leader’s personal situation. Abraham Maslow (1965) stated that a person who has gratified all of the basic needs would be a “strong boss” (p.130). A person operating on the lower level, physiological needs will not be effective because s/he will be too concerned with the need for food and shelter. If this person is operating on a social needs level s/he will be too concerned with hurting other people’s feelings and becoming unpopular. It would appear that a person will be able to meet the leadership needs for the largest number of situations the closer s/he approaches toward self-actualization (p.131). Although an individual should attempt to achieve self-actualization, it should not be done in quest of self-advancement. Instead, s/he will advance the collective purpose of the group that transcends the needs and ambitions of the individual (Burns, 1978, p.106).

Transactional

In his 1978 book Leadership, James MacGregor Burns used the terms transactional and transformational to describe two varying styles of leadership. However, the concept of leadership transforming others can also be traced back to Philip Selznick’s 1957 work entitled Leadership and Administration. Selznick (as cited by Peters and Waterman, 1982) proposed that the challenge for leaders involved, “transforming men and groups from neutral, technical units into participants who have a particular stamp,
sensitivity, and commitment” (p.85). He viewed this as an educational process and likened leaders to educators who must know the meaning and master the techniques of education.

Burns (1978) stated that “the relations of most leaders and followers are transactional--leaders approach followers with an eye to exchange one thing for another” (p.4). This quid pro quo outlook on leadership focuses on the task to be performed; pay for services. In this situation, both leaders and followers understand and agree upon what tasks should be performed. Transactional leaders are able to control the actions of followers through the distribution of incentives.

This style of leadership may be equated with haggling in a market. Each party to the bargain is conscious of the power resources and attitudes of the other. However, this relationship does not go beyond the point of bargaining. The bargainers have no enduring purpose that holds them together, after the transaction is completed they may go their separate ways. A leadership act may have taken place, but it did not bind the leader and follower together (Burns, 1978, p.19).

Task completion and employee compliance are the focus of transactional leaders. They emphasize the daily operational needs of the organization and they rely heavily on organizational rewards and punishment to influence employee performance (Tracey and Hinkin, 1994, p.20). Transactional leadership, then, depends heavily on rewards given for the completion of organizational tasks. Unfortunately, it only works “when both leaders and followers understand and agree about the important tasks to be performed” (Mitchell and Tucker, 1992, p.31).

Transactional leadership is not a joint effort of individuals acting in a collective manner, but rather it is a bargain to strengthen the individual interests of persons going
their separate ways (Burns, 1978, p.425). Burns (1978) further explained that, “pragmatic, transactional leadership requires a shrewd eye for opportunity, a good hand at bargaining, persuading, and reciprocating” (p.169).

The organization itself is the source of a transactional leaders power. French and Raven (1960) identified this power source as legitimate power. Legitimate power stems from the position the individual holds in the organization. The organizational position provides the leader with the necessary control over the incentive system in order to reward high performance and punish those who refuse to co-operate (Mitchell and Tucker, 1992, p.32).

This control over the incentive system allows transactional leaders to perform their primary task of maintaining the day-to-day routines of the organization (Leithwood, 1992). While tasks are accomplished, this style does not stimulate improvement. Transformational leadership, on the other hand, provides the incentive for individuals to attempt improvement in their practices (Leithwood, 1992, p.9).

Transformational leadership, while more complex than transactional, is more potent (Burns, 1978, p.4). They recognize the existing needs of potential followers. The leader attempts to fulfill this need for the follower and simultaneously seeks to satisfy higher level needs. The leader is able to transform the feelings, attitudes, and beliefs of the follower. The result of transformational leadership is a relationship of mutual stimulation and elevation. Transformational leadership occurs when an individual engages with
another is such a way that the leader and follower raise one another to higher levels of motivation and morality (Burns, 1978, p.4).

"Transforming leadership becomes moral in that it raises the level of human conduct and ethical aspiration of both leader and led, and thus it has a transforming effect on both" (Burns, 1978, p.20). These leaders receive great pleasure from the personal growth and development of their followers. Burns (1978) declared that Gandhi was the best modern example of a transformational leader because he "aroused and elevated the hopes and demands of millions of Indians and whose life and personality were enhanced in the process" (p.20).

Gandhi, and other transformational leaders create feelings of loyalty, trust, and respect from followers by, (a) generating awareness and acceptance of the purpose and mission of the organization, (b) inducing them to transcend their own self-interests for the sake of the organization, and (c) activating their higher-order needs (Tracey and Hinkin, 1994, p.20). These higher level needs refer to the followers needs for self-esteem, autonomy, and self-actualization. "It is this kind of leadership that operates at need and value levels that are higher than those of the potential followers (but not so much higher as to lose contact)" (Burns, 1978, p.42). Transformational leaders are able to meet these needs in followers because they "address themselves to follower’s wants, needs, and other motivations, as well as to their own, and thus they serve as an independent force in changing the makeup of the followers’ motive base through gratifying their motives" (Burns, 1978, p.20).

Leaders are transformational when they are more concerned with gaining cooperation and participation from organizational members than they are about getting
tasks accomplished (Mitchell and Tucker, 1992, p.32). Transformational leaders are concerned with influencing the attitudes of organizational members in order to build commitment to the organization's mission (Tracey and Hinkin, 1994).

Often, transformational leadership occurs during organizational crises or major organizational change (Tracey and Hinkin, 1994). It requires that a leader's vision, values, and behavior be consistent and focused on the future. "The leader's values must be congruent with those of the followers, and the leader must be able to convince the followers that she or he knows where the organization is going and to engender the commitment of the followers in getting them there" (Tracey & Hinkin, 1994, p.20).

Subordinates are the source of a transformational leader's power. French and Raven (1960) identified this power source as referent power. Referent power is obtained from followers and their desire to be associated with the leader. "Leaders with motive and power bases tap followers' motives in order to realize the purpose of both leaders and followers" (Burns, 1978, p.18). "Personal power is the extent to which followers see their goals as being satisfied by the goals of their leader" (Hersey and Blanchard, 1986, p.205).

Power is utilized by leaders in their interactions with followers. Power is a relationship in which two or more persons tap motivational bases in one another and bring varying resources to bear in the process (Burns, 1978, p.15). Transformational leaders then stimulate the follower's motives in order to meet the needs of both the leader and the follower.

Table 1 compares many of the criteria that differentiate transactional and transformational leadership. The two styles differ with regard to time orientation,
distribution of rewards, and attitude toward change, among other things. The distinction between the two styles' sources of power has already been addressed. However, the importance of power and its relationship to leadership is critical to leadership research.

Table 1

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Transactional</th>
<th>Transformational</th>
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<tbody>
<tr>
<td>Time orientation</td>
<td>Short, today</td>
<td>Long, future</td>
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<tr>
<td>Coordination mechanism</td>
<td>Rules and regulations</td>
<td>Goal and value congruence</td>
</tr>
<tr>
<td>Communication</td>
<td>Vertical, downward</td>
<td>Multidirectional</td>
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<tr>
<td>Focus</td>
<td>Financial goals</td>
<td>Customer (internal and external)</td>
</tr>
<tr>
<td>Reward systems</td>
<td>Organizational, extrinsic</td>
<td>Personal, intrinsic</td>
</tr>
<tr>
<td>Source of power</td>
<td>From position</td>
<td>From below</td>
</tr>
<tr>
<td>Decision making</td>
<td>Centralized, downward</td>
<td>Dispersed, upward</td>
</tr>
<tr>
<td>Employees</td>
<td>Replaceable commodities</td>
<td>Developable resources</td>
</tr>
<tr>
<td>Compliance mechanism</td>
<td>Directive</td>
<td>Rational explanation</td>
</tr>
<tr>
<td>Attitude toward change</td>
<td>Avoidable, resistance</td>
<td>Inevitable, embrace</td>
</tr>
<tr>
<td>Guiding mechanism</td>
<td>Profit</td>
<td>Vision and values</td>
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<td>Control</td>
<td>Rigid conformity</td>
<td>Self-control</td>
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<tr>
<td>Perspective</td>
<td>Internal</td>
<td>External</td>
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<tr>
<td>Task design</td>
<td>Compartmentalized</td>
<td>Enriched, groups</td>
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Power

No discussion of leadership could be complete without further examining its relationship with power. Power can be viewed as, "the ability or capacity to influence others", while leadership is, "the process or act of influencing" (Burke, 1982, p.129). Burns (1978) explained the relationship between the two concepts when he wrote, "All leaders are actual or potential power holders, but not all power holders are leaders" (p.18). In other words, a leader needs power but power does not make a leader.

Amitai Etzioni (1961) discussed two sources of power: position power and personal power. Position power refers to the authority delegated from above and derived from the organizational office. It can be viewed as, "the authority to use the rewards and sanctions that are delegated down" (Hersey and Blanchard, 1986, p.206). Personal power, on the other hand, comes from followers below the leader, and can be defined as, "the extent to leaders gain the confidence and trust of those people that they are attempting to influence" (Hersey and Blanchard, 1986, p.206).

Which source of power is best for a leader? Hersey and Blanchard (1986) recalled Machiavelli's statement in The Prince regarding whether it is better to have a relationship based on love (personal power) or fear (position power). The answer may be a balance of both. Sun Tzu (Griffith, 1963) stated that, "Good commands are both loved and feared. That is all there is to it" (p.129). Hersey and Blanchard (1986) conclude their discussion of power by summarizing that, "it is not sufficient just to have either position or personal power alone--you need to work at gaining both" (p.206).

These distinctions between sources of power raise an interesting question regarding the identification of leaders. Is an individual whose sole source of power stems
from the position truly a leader? This question is often a concern for individuals who conduct leadership research. Kenneth and Miriam Clark acknowledge that, "Good research on leadership cannot assume that the administrative process has worked efficiently and has identified leaders" (1990, p.31).

The difficulty in answering this question is that individuals who are "leaders" in an organization may or may not be people in a position of authority, because the exercise of authority alone is not an indication of leadership (Hollander and Offermann, 1993). Gilbert Fairholm (1991) agrees that holding a position of high status does not make someone a leader. Leadership focuses on, "those at any level who are perceived as leaders by followers and whose actions move the organization toward its goals" (Hollander and Offermann, 1993, p.79).

Perhaps Burns (1978) best described the relationship between power and leadership when he wrote, "To understand the nature of leadership requires understanding of the essence of power, for leadership is a special form of power" (p.12). The essence of power which Burns addressed refered to motive and resource. He further states that, "Lacking motive, resources diminish; lacking resources, motive lies idle. Lacking either one, power collapses" (Burns, 1978, p.12).

Burns (1978) also acknowledged that although power may come from different sources, it is at its very root a "relationship among persons" (p.12). Just as power exists in relationships so too does leadership. Sennett (as cited in Bolman and Deal, 1991) explained that leadership "exists only in relationships and only in the imagination and perceptions of parties to a relationship" (p.404). Since power is viewed as a relationship, it is not based on reality, but on the perceptions of the parties to the relationship. An
individual does not have power unless they are engaged in a relationship with someone who perceives that the individual has power. "All behavior is based on people's perceptions and interpretations of truth and reality" (Hersey and Blanchard, 1988, p.219).

Within these relationships leaders often must do things that their followers will not particularly like. However, if the ultimate purpose of leadership is to achieve organizational and personal goals, being liked is not especially necessary. "To be effective, leaders sometimes have to sacrifice short-term friendship for long-term respect if they are interested in the growth and development of the people with whom they are working" (Hersey and Blanchard, 1986, p.205).

Values

Organizations provide leaders many opportunities to deal with the growth and development of people, since one of the characteristics of an organization is that it is a group of people. Goll (1996) proposed that this group of people required a commonality of understanding of the organization's values and goals (p.58). Goll defined values as "the reason we exist." Values answer the question; Why? They provide the basis for all that we do as individuals as well as organizations (Goll, 1990, p.56).

Organizations do not exist on their own, they exist because people create them. Often the values of the organization stem from the founder's values. Edgar Schein (1985) suggested that values and culture were related when he wrote, "... all cultural learning ultimately reflects someone's original values, their sense of what 'ought' to be, as distinct from what is" (p.15). The organization's culture is then based upon the founder's values because his/her values gradually start a process of "cognitive transformation" into beliefs.
and, ultimately, into assumptions (Schein, 1985, p.16). These values then become the basis of the shared beliefs that form the organization’s culture.

One responsibility of a founder, then, may be to infuse his/her own values into the organization. In this sense, founders create the organization’s values based upon their personal values that are impacted by their personal experiences. Peters and Waterman (1982) solidified this point with their study on America’s best-run companies, witnessing that, “The excellent companies seem to have developed cultures that have incorporated the values and practices of the great leaders and thus those shared values can be seen to survive for decades after the passing of the original guru” (p.26).

Founders may also be responsible for making others more cognizant of their own values. Susan Langer (cited in Burns, 1978, p.44) said that, “Values exist only when there is consciousness”. Burns (1978) may have been defining this responsibility of founders stating, “the leaders fundamental act is to induce people to be aware or conscious of what they feel --- to feel their true needs so strongly, to define their values so meaningfully, that they can be moved to purposeful action” (p.44).

With his writing of The Functions of the Executive in 1938, Chester Barnard may have been the first theorist to discuss the role of the chief executive as the shaper and manager of shared values in the organization. Barnard added, “that organizational values and purpose are defined more by what executives do than by what they say” (Peters and Waterman, 1982, p.97).

The role of a leader as a promoter of values was also addressed by Selznick (as cited in Peters and Waterman, 1982) when he expressed that, “the art of the creative leader is ... to fashion an organism that embodies new and enduring values ... to infuse
with value beyond the technical requirements of the task at hand” (p. 85). Selznick addressed both previously discussed responsibilities of founders when he stated, “a leader is primarily an expert in the promotion and protection of values” (p. 85). Centuries before Selznick, Sun Tzu (Griffith, 1963) realized that a leader’s “only purpose is to protect the people and promote the best interests of his sovereign” (p. 128).

When a leader promotes and protects the values of the organization they become better understood and are shared by the organization’s members. Members are more likely to make the right decisions within the organization because they act based upon the shared values of the entire organization. An example of shared values is evident at The University of Virginia. Thomas Jefferson founded the university and to this day, its board’s decisions are often guided by the founder’s values. When the board is confronted by a particularly difficult decision they often ask themselves, “What would Mr. Jefferson do?” (Maxey, 1991).

A leader’s role in shaping the organization’s values has been emphasized by many theorists. Fairholm (1991) described a new philosophy on leadership which he labeled “values leadership”, while Kuczmarski and Kuczmarski (1995) coined their theory “values-based leadership”. Fairholm (1991) declared that leaders shape values and he also realized the impact of leadership on culture. He stated that, “values leadership is a culture-shaping, value-infusing activity” (p. 153).

Corporate Culture

If leadership shapes values and creates culture, then in order to more fully comprehend this relationship a closer examination of what is meant by corporate culture is
necessary. However, this is not an easy task, for as Raymond Williams (as cited in Taylor, 1984) maintained, culture is “one of the two or three most complicated words in the English language” (p.125). This stems from the fact that the word culture, like leadership, has a multitude of meanings. Schein (1985) defined culture as the basic assumptions and beliefs that are shared by members of an organization. He further stated that these beliefs eventually become unconscious and serve as the basis for the organization’s view of itself and its environment (p.6). Fairholm (1991) was consistent with this view of culture when he posed that culture consisted of patterns of basic assumptions which organizational members agreed upon.

Another definition of corporate culture was offered by Deal and Kennedy (1982) who suggested the rather informal explanation of culture as, “the way we do things around here” (p.4). While Rollin Glaser (1991) defined corporate culture as the fabric of shared values and beliefs that are of paramount importance to a given organization.

A comprehensive definition of corporate culture may be summarized from the above definitions. Basically, an organization’s culture consists of a set of shared values, beliefs or assumptions that describe acceptable behavior within the organization. These values are recognized by both employees and outsiders as being characteristic of the organization. They represent the image that the organization projects to others. These values act as a guide for organizational members to follow regarding their behavior within the organization.

This research is not concerned with whether or not corporate culture exists, but rather, with how strong corporate culture is in hospitality management programs. “A strong culture is a system of informal rules that spells out how people are to behave most
of the time" (Deal and Kennedy, 1982, p.15). In a strong culture it should be relatively easy for individuals to know what types of behavior are appropriate in the organization. Conversely, in a weak culture it is somewhat difficult for individuals to determine what behavior is desirable. To better understand the phenomenon of corporate culture a discussion of the four dimensions of culture identified by Deal and Kennedy (1982) is necessary.

1. Values are the basic beliefs of the organization and they form the heart of the corporate culture. "Values provide a sense of common direction for all employees and guidelines for their day-to-day behavior" (p.21). When values are strong, they provide individuals in the organization with a sense of identity and a clear understanding of what behavior is expected from them. In strong cultures these values are shared by all of the individuals in the organization.

2. Heroes and heroines personify the culture's values and provide role models for others to follow. These individuals show others what it takes to succeed in the organization. In a strong culture, heroes and heroines will be promoted to assure that they have a lasting influence on others by relating their success stories to other organizational members. Some heroes are born while others are made, but in a strong culture the message is clear that anyone can become a hero if they have the confidence and persistence to try (p.40).

3. Rites and rituals refer to the planned routines of day-to-day life in the organization. A ritual embodies the ideals of the organization and shows employees the kind of behavior that is expected of them. Organizations with strong cultures have certain ways of working, playing and even greeting one
another. In addition, these organizations celebrate major events and hold ceremonies special occasions. These ceremonies provide visible and potent examples of what the organization stands for (p. 15).

4. The cultural network refers to the informal means of communication that acts as a “carrier” of the organization’s values. Effectively working within the cultural network is often the only way to get things done or to understand what is really going on in the organization (p. 15).

The cultural network is composed of a number of characters who form the “hidden hierarchy” of the organization. Storytellers interpret what goes on in the organization and preserve values by imparting legends of the organization to new employees. Story telling is the most powerful way to convey information and shape behavior (Deal and Kennedy, 1982, p. 87). Priests are the designated worrys of the organization and the guardians of the culture’s values. Whisperers ingratiate themselves with a power figure and get things done by “whispering in the boss’s ear”. Gossips feed the cultural network with the trivial day-to-day goings on and disseminate their litany of information “around the water cooler”. These and other characters transmit and sustain the organization’s culture through the informal network they have created.

Another character in the cultural network is a cabal. A cabal is a group of two or more people who have a common purpose — which is usually to advance themselves in the organization (Deal and Kennedy, 1982, p. 94). It is wise for leaders to identify cabals and determine exactly what the cabal’s intentions are. Casey Stengel, the famed baseball manager, had a good understanding of cabals when he stated that “the secret of leadership
is to keep the six guys who hate your guts from talking to the six guys who haven’t made up their minds about you” (Greenfield, 1984).

If an organization’s culture defines how members are to behave, it would benefit management to understand how the culture is formed, and perhaps more importantly, how it can be perpetuated. Schein (1985) stated that corporate culture is “a learned product of group experiences” only found in groups with a significant history. As such, culture is formed in order to solve the group’s two basic problems: (a) survival in and adaptation to the external environment, and (b) integration of its internal processes (p. 50). Both problems are concerned with the same thing — the survival of the organization.

It appears that Schein was suggesting that survival in the business environment is the impetuous for the creation of an organization’s culture. Deal and Kennedy (1982) seemed to agree when they espoused that, “the business environment is the single greatest influence in shaping a corporate culture” (p. 13).

If organizations are to survive, it is often necessary for them to adapt to meet the changes occurring in the external environment. Unfortunately, members of an organization can not simply predict changes in the external environment and then mandate that a subsequent change occurs in the organization’s culture. A key characteristic of culture is that it is a learned behavior that evolves over time based upon the shared - successful and unsuccessful experiences of the organization’s members. Methods of dealing with problems that are successful become part of the core values of the organization’s culture. These values can eventually evolve into unconscious basic assumptions regarding the correct way to perceive, think and feel within the organization (Schein, 1985).
Since culture evolves over time based on trial and error by a group as it learns to cope with its survival problems, it is often difficult to change (Schein, 1985). Employees have a vested interest in the organization's culture because they have been through the tough times. It may be argued that a culture, once established, does not really change, but rather evolves over time. It can be added to, by building upon its strengths while allowing its weaknesses to atrophy (Schein, 1996). This can often be difficult since the people who must institute the "change" are often the same people who helped initially create the culture. George Washington succinctly realized this when he declared in his second inaugural address:

One of the difficulties in bringing about change in an organization is that you must do so through the persons who have been most successful in that organization, no matter how faulty the system or organization is. To such persons, you see, it is the best of all possible organizations, because look who was selected by it and look who succeeded most within it. Yet these are the very people through whom we must bring improvement (Clark and Clark, 1990, p.31).

One of the reasons why cultural "change" is difficult is that often when a culture is originally "built", the founder may have the tendency to surround him/herself with like-minded individuals. In fact, Schein (1996) stated that individuals can build cultures by hiring and keeping subordinates who think and feel the way they do; by socializing subordinates to the builder's way of thinking and feeling; and by acting as a role model that encourages subordinates to think and feel the way they do (p.61).

Frequently, the builder of a culture may become constrained by that very culture and can no longer lead the group into new and creative avenues (Schein, 1985, p.171).
Schein (1996) differentiated between builders, maintainers and changers of corporate culture, each with distinct characteristics that are difficult, if not impossible, to find in the same person. He described culture builders as having strong vision, conviction, and energy; maintainers as having great judgment, wisdom, and skill in coordinating people; and culture changer as having learning ability and personal flexibility in order to be effective (p.67).

These three distinctions are necessary because as the organization matures, the role of the cultural leader must change. In the early stages of organizational creation, the leader must provide the vision for the organization and must exert an enormous amount of energy in order to breath life into the organization (Schein, 1996). Once the organization begins to face maturing markets and more server competition, the leader must rely on judgement and wisdom to identify successful elements of the culture and give them permanence and stability. As the rate of environmental change increases the very elements that once provided stability may become liabilities. At this stage the leader must become a change agent and assist others in unlearning what they do so that the organization can have the flexibility to adapt new concepts and skills (Schein, 1996, p.63).

Regardless of the stage of cultural development, the leader is still, as previously discussed, responsible for protecting and promoting the values of the organization. These values can be embedded and reinforced in the culture by: (a) what the leader pays attention to, measures, and controls; (b) the leader’s reactions to critical incidents and organizational crises; (c) deliberate role modeling, teaching, and coaching by the leader; (d) criteria for allocating rewards and status, and by (e) criteria for recruitment, selection, promotion, retirement, and excommunication (Schein, 1985, p.224).
Perhaps one of the most effective ways to reinforce and perpetuate an organization's culture is to recruit, select and employ individuals who understand and agree with the values of the organization. Goll (1996) prescribed this method of values reinforcement through the selection of individuals into the organization who have compatible "action triads". An action triad consists of the interrelationship between the values, norms, and goals of an individual as well as an organization. The degree of consistency and balance between these elements is of paramount importance. If the action triad of an individual is compatible with the organization's action triad, the new employee will "fit in" to the organization and help perpetuate the culture. This reiterates the point made by Schein (1985) regarding the selection of subordinates who think and feel the way the leader does.

The recruiting of like-minded individuals is only one way to perpetuate an organization's culture. Another is what the leader pays attention to and rewards employees for. The leader of an organization can not simply mandate that the culture will change immediately by instituting new rules and procedures. The evolution of a culture takes time, and a good way for the leader to evolve a culture is by "walking the talk." (Schein, 1996) If the leader wants to change the organization's culture from one that is individualistic to one that is team oriented, s/he had better develop teams and reward others who develop teams within the organization. By developing teams, the leader acts as a role model and coach for other organization members regarding the importance of teamwork (Schein, 1996).
Integration of Concepts

Based upon the above literature review on leadership, values, and culture, it would appear that theorists propose that a leader is responsible for shaping values which in turn creates the culture of the organization. Values seem to be the mortar that holds leadership and culture together. Fairholm (1994) asserted that organizational values are at the heart of the organization's culture (p.15). Susan and Thomas Kuczmariski (1995) reiterated this point when they claimed that the critical challenge to leadership is the building, maintaining and perpetuating of the organization's culture. This can only be done through the creation of a value system that acts as the "steering wheel" for the entire organization (p.245).

Edgar Schein (1985) has been cited frequently in this review because he wrote the seminal work on the relationship between culture and leadership, aptly entitled Organizational Culture and Leadership. Schein clearly stated that he considered culture and leadership to be two sides of the same coin, neither one of which can be fully understood without the other. "In fact, there is a possibility - underemphasized in leadership research - that the only thing of real importance that leaders do is to create and manage culture and that the unique talent of leaders is their ability to work with culture" (Schein, 1985, p.2).

Although this may be the case, John Kotter (1990) acknowledged that despite the increasing importance of leadership, the work experiences of most people actually seem to undermine the development of leadership. He proposed that organizations could better develop leaders by putting an emphasis on creating challenging opportunities for relatively young employees. Providing greater opportunities for employees to succeed and fail...
could help create a corporate culture where people value strong leadership. Kotter (1990) concluded his analysis of leadership’s role in corporate culture by stating that, “Institutionalizing a leadership-centered culture is the ultimate act of leadership” (p. 111).

Related to the discussion of leadership and culture is the association between transactional and transformational leadership styles and corporate culture. Mitchell and Tucker (1992) posed that in some cultures organizational goals are clear and an emphasis is placed on the distribution of incentives for hard work and successful performance of assigned tasks. In other cultures, the organizational goals are unclear and an emphasis is placed on transforming the feelings, attitudes, and beliefs of organizational members. In the former culture a transactional leadership style should be most effective, while a transformational style is better suited to the latter culture.

Mitchell and Tucker (1992) defined school cultures as either frontier or settled. A frontier culture is not yet fully developed because individuals in the community have not had common experiences and did not hold a shared commitment to the goals of the community. Frontier leadership empathizes culture building and problem solving. The same may be said about an organization characterized by a weak corporate culture as defined by Deal and Kennedy (1982). Since corporate cultures are developed over time through the shared experiences of organizational members, individuals who find themselves in leadership roles in these organizations must emphasize culture building in order to be effective.

In settled cultures well-established norms and shared beliefs guide the actions of the community’s inhabitants. In this type of community, effective leadership consists of coordination and expertise, since programs can be planned in detail due to the stable
Similarly, in a strong corporate culture, members are aware of what is expected of them and will waste little time in deciding how to act in a given situation (Deal and Kennedy, 1982, p.15). Recruiting good staff members and coordinating support services can provide effective leadership (Mitchell and Tucker, 1992).

Regardless of whether a culture is defined as frontier, weak, settled or strong, it would appear that theorists agree that a relationship between leadership and culture exists. F.A. Woods seemed to understand a leader's affect on a culture when, based upon his research of royal families, he stated that “a man makes the nation and shapes it in accordance with his abilities” (as cited in Stogdill, 1974, p.17). Aaron Wildavsky (as cited in Fairholm, 1991) agreed that “leadership is a consequence of organizational culture and culture is a consequence of leadership”.

Related Research

Since this research focused on leadership and corporate culture in hospitality education, a review of previous research in these areas was conducted. The review process began with a broad investigation of leadership research in the hospitality industry followed by an examination of research on educational leadership and culture. The review concluded with an analysis of previous research conducted on leadership in hospitality education.
Hospitality Industry

A number of studies have examined the phenomenon of leadership in the hospitality industry. Leadership characteristics were examined of financial executives in the lodging industry (Cichy & Schmidgall, 1996) as well as managers in the food service industry (Cichy, Sciarini, & Patton, 1992). The qualities of vision, communication, trust, and perseverance were identified by leaders in the lodging and food service industries as characteristics of effective leadership (Cichy, Sciarini, Cook, & Patton, 1991).

Although these studies addressed certain leadership characteristics of hospitality managers, they did not discuss the leadership styles of the managers. Tracey and Hinkin (1994) focused their research on transactional and transformational leadership styles in the hospitality industry. Tracey and Hinkin defined transactional leadership as being based upon bureaucratic authority. The transactional leader focuses on task completion and relies heavily on organizational rewards and punishments to influence employee performance (p.20). Transformational leaders, on the other hand, must develop a strong vision which must be communicated to employees in order to achieve organizational objectives and create a working environment that fosters motivation, commitment, and continuous improvement (p.19).

Tracey and Hinkin’s research was conducted by asking principal partners and corporate staff members of a hotel-management firm to rate the effectiveness of each partner. The six criteria for effectiveness were technical competence, interpersonal skills, procedural justice, organizational influence, communication, and goal clarification (Tracey and Hinkin, 1994, p.21).
In addition, each research participant completed the Bass Multifactor Leadership Questionnaire that measured the partners along several dimensions of transactional and transformational leadership. Transformational leadership was measured in terms of attributed charisma, intellectual stimulation, individualized consideration, idealized influence, and inspirational leadership. Transactional leadership was measured in terms of the use of contingent rewards, active and passive management by exception, and laissez-faire leadership. Each respondent was asked to indicate how frequently the partners demonstrated the described leadership behavior (p.22).

By combining these two survey methods, Tracey and Hinkin (1994) determined that the effective leaders of the firm demonstrated significantly more transformational leadership behavior and less transactional behavior than the ineffective leaders. The effective transformational leader was viewed as competent and persistent. Respondents also believed that these leaders acted with the organization’s best interests in mind, and they behaved consistently with the organization’s expressed values and beliefs (p.22).

**Educational Leadership**

The phrase “educational leadership” may be redundant, for as William Hocking (as cited in Norris, 1970, p.286) espoused, “Leadership which does not at the same time educate fails to lead”. However, in this context, the phrase refers to leaders in the field of education. John Dewey was one of the first theorists to write specifically about leadership’s role in education. He realized that a leader in public education must communicate ideals and standards and inspire others with enthusiasm for the function of intelligence and character in the transformation of society (Maxey, 1991).
While Dewey addressed public education, Edgar Cumings (1970) was referring to higher education when he proclaimed, "faculty members are a different breed" (p.165). Cumings believed that faculty were not easy to handle because they had been taught to think, to question, and to discuss freely and openly. He concluded that it took a gifted individual to "overlook their personal and curricular foibles and give them the kind of leadership they want and deserve" (p.165).

By no means do university faculty hold the exclusive rights to being difficult to lead. Fairholm (1991) argued that workers as a whole are becoming more educated, more demanding, and more articulate in voicing their needs. As has been discussed, many individuals in the hospitality industry have embraced transformational leadership as a means of dealing with these new challenges. The same can be said of education. Kenneth Leithwood (1992) stated that "transformational leadership" should replace "instructional leadership"--- which served as the guide for many school programs in the 1980's --- as the dominant image of school administration.

Leithwood's research suggested that transformational school leaders are in continuous pursuit of three fundamental goals: (a) helping staff members develop and maintain a collaborative, professional school culture; (b) fostering teacher development; and (c) helping teachers solve problems together more effectively (Leithwood, 1992).

Leithwood (1992) continued by stating that transformational leaders are able to communicate the school's values and norms through their everyday interpersonal contacts. In addition, once a collaborative professional culture has been established, the transformational leader can maintain it through selecting new staff members who have compatible values and are already committed to the school's mission.
School leaders who demonstrate a transformational leadership style are also concerned with the development of teachers. This follows from the characteristic of transformational leaders as individuals who receive great pleasure from the personal growth and development of their followers. Leithwood (1992) determined that an atmosphere of personal development was created when the teachers were involved in establishing a school mission to which they felt strongly committed.

This shared mission can also be used as a basis for improving group problem solving. Once teachers are committed to a common mission, the likelihood of them working harder and putting forth extra effort should increase. Transformational leaders also shared the belief that as a group their staff could develop better solutions to a problem than the leader could alone (Leithwood, 1992).

Thomas Sergiovanni (1992) also addressed many of these characteristics of transformational school leaders in his discussion of substitutes for leadership. He suggested that schools could be viewed more as communities than as organizations. These communities were then defined by their centers that governed the school values and provided norms that guided behavior. Once a center of shared values was constructed within the school community it acted as a “substitute for leadership” (p.41). The importance of shared values in a school is consistent with the earlier discussion of the importance of shared organizational values.

Transformational school leaders should strive to create an atmosphere of professionalism within the school community. Sergiovanni proposed that less leadership was needed as teachers acted in a professional manner that was consistent with the prescribed values of the community. “An important purpose of leadership is to establish
the professional ideal and community norms as conditions that make leadership no longer needed" (Sergiovanni, 1992, p.43).

The term collegiality is often used to describe this professional community amongst teachers. Susan Moore Johnson (as cited in Sergiovanni, 1992, p.43) considered teachers to be true colleagues when they were “working together, debating about goals and purposes, coordinating lessons, observing and critiquing each other’s work sharing successes and offering solace, with the triumphs of their collective efforts far exceeding the summed accomplishments of their solitary struggles.”

This creation of a professional community or collegiality is at the heart of a school’s culture (Saphier and King, 1985). Corporate culture has previously been defined as the fabric of shared values and beliefs that are of paramount importance to a given organization (Glaser, 1991). Similarly, school culture was viewed by Purkey and Smith (1982) as “a structure, process, and climate of values and norms that channel staff and students in the direction of successful teaching and learning” (p. 64).

This definition of school culture relates well to the definition of corporate culture. This being the case, it should follow that Schein’s statement that “the only thing of real importance that leaders do is to create and manage culture”(Schein, 1985, p.2) should also apply to schools. Saphier and King (1985) stated that “giving shape and direction to a school’s culture should be a clear, articulated vision of what the school stands for” (p.67). Fullan (1992) agreed that school leaders should be responsible for building collaborative work cultures.

Although school leaders should participate in developing the school’s culture, they should not try to strongly impose their own values upon others. All leaders must first
understand the values and the culture of an organization before trying to change them. As Saphier and King (1985) stated it “is important for school leaders to know the role of values as the fuel of school improvement. If core values are the fuel, then school culture is the engine” (p.67). This point reiterates Fairholm (1991) assertion that “values leadership is a culture-shaping, value-infusing activity” (p.153).

In a study, which identified a relationship between high-performing schools and a strong school culture, Jones (1996) identified some characteristics of schools with strong organizational cultures.

“These schools were viewed as professional places where high expectations were held of everyone... Dedication and cooperation were the norm, and everyone devoted a great deal of time and energy to ensure the success of both the students and the school. The organizations were seen as relatively open places where people felt free to make their opinions known, where issues were primarily resolved through discussion and debate, and where decisions were made either collegially or consultatively. Furthermore, they were considered to be friendly, happy places where confidence and trust existed among members” (p.8).

While Jones was describing the culture in high schools, William Taylor (1984) identified two cultures present in universities and colleges. The first is a material culture located in time and space which consists of the building, equipment, furniture, and books that represent the tangible aspects of the college. The second is the symbolic culture consisting of the language, rituals, ideologies, myths and beliefs. Taylor proposed that “every element of symbolic culture requires a vehicle for its transmission” (p.127). This association creates the link between the symbolic and material cultures.
Executive Work-Roles

Mitchell and Tucker (1992), from research performed on high school principals, defined four work-role quadrants based upon the intersection of the principal’s leadership style and the culture of the school community. The principal’s leadership style was determined to be either transactional or transformational. Borrowing the terms from Burns (1978), Mitchell and Tucker proposed that “some cultures emphasize control through the distribution of incentives, while others work by transforming the goals and aspirations of organization members” (p. 31).

No one work role was deemed to be superior to the others, the effectiveness of the role was dependent on the cultural situation and the principal’s leadership style. Although the benefits of effective leadership are often heralded, school performance is just as closely tied to competent administration, effective supervision, and dynamic management as it is to aggressive leadership (Mitchell and Tucker, 1992).

Following are the four work-roles defined by Mitchell and Tucker (1992):

1. Supervisors are educators who think about interpersonal influence in transactional, incentive-based ways. They tend to assume that educational goals are obvious to everyone. They are responsible for identifying specific tasks and directing staff in how each task is to be performed. Supervisors closely monitor staff to make sure directions are being followed. They view good teachers as loyal laborers who work on tasks defined by curriculum experts and overseen by principals. From a supervisor’s perspective, student achievement is equated with the mastering of materials, and teaching effectiveness with the careful implementation of established programs.
2. Managers are educators who sense that broad social support for education is no longer available. They often deem that change is more important than the implementation of established programs. Managers rely on transactional relationships and they view effective teaching as the result of competence and skill. To managers, task definition is more important than interpersonal relationships. Teaching is viewed as a skilled craft, which is improved through the use of sophisticated instructional techniques. Supervisors try to get people to work harder while managers attempt to get people to work smarter. Managers emphasize the importance of performance indicators and want explicit measures of school productivity.

3. Administrator's effectiveness rests more on the positive attitudes of teachers and students than on the implementation of specific curriculum programs. The goals of education are well understood by administrators. They do not see the need to redirect teachers or students to new learning objectives. They believe that high-quality teaching depends on giving teachers more professional autonomy. Administrators also believe that teaching and learning are rather private and individualized processes that do not lend themselves well to direct supervision. They frequently form cohesive teams in order to increase teaching effectiveness. These teams stress the importance of interpersonal relationships and good communication. Administrators also emphasize their role as a recruiter and staff activities coordinator. Finally, they counsel and develop teachers to ensure that they fully participate in established programs.
4. Leaders are necessary when there is weak cultural support coupled with a belief that high performance depends on transforming student and teacher attitudes and beliefs. Leaders recognize that support for their organization depends upon making qualitative changes in their performance. Transformational leaders see themselves as responsible more for redefining educational goals than for implementing existing programs. They view a high-performance teacher more like a creative artist than a skilled craftsperson. Leaders believe that teachers are creative, talented experts, and that effective leadership depends on everyone working together to develop and pursue common goals.

Although these four work-roles were defined by Mitchell and Tucker, they were not the first to make these distinctions. Specifically, Abraham Zaleznik and John Kotter had clearly differentiated between management and leadership.

Zaleznik (1992) stated that managers and leaders are very different kinds of people who differ with regard to motivation, personal history, and how they think and act. Leadership entails taking risks and it requires the use of power to influence the thoughts and actions of other people. In contrast, Zaleznik argued that, "It takes neither genius nor heroism to be a manager, but rather persistence, tough-mindedness, hard work, intelligence, analytical ability, and perhaps most important, tolerance and goodwill". (Zaleznik, 1992, p. 127).

Kotter (1990) agreed that leadership and management are different, but he stipulated that they also compliment one another and both are necessary for success. Kotter argues that the main distinction between the two is that management is about coping with complexity, while leadership is about coping with change. "These different
functions - coping with complexity and coping with change - shape the characteristic activities of management and leadership” (Kotter, 1990, p.104).

These distinction between management and leadership made by Zaleznik and Kotter relate directly to the characteristics defined by Mitchell and Tucker. Additional research has been conducted on administration in higher education which has been viewed as “the exercise of leadership toward rigorous and socially challenging intellectual goals” (Fishman, 1970, p.208). An administrator’s goal should be to inspire, lead and assist others toward a “socio-educational” philosophy. This philosophy relates intellect to society and allows the administrator to make decision from a university and societal perspective (p.208).

Work-Roles and Culture

Characterizing the differing roles played by individuals based upon their leadership style and cultural situation seems to be supported by Ralph Stogdill (as cited in Hersey and Blanchard, 1985). Stogdill stated, “the most effective leaders appear to exhibit a degree of versatility and flexibility that enables them to adapt their behavior to the changing and contradictory demands made on them” (p.102). As previously mentioned, one work-role is not superior to the others. Changing circumstances and changing beliefs encourage educators to emphasize the need for one role over another (Mitchell and Tucker, 1992).

The distinctions made by Schein (1985) regarding culture builders, maintainers and changers can be directly related to the work-roles proposed by Mitchell and Tucker (1992). Culture builders who have strong vision, conviction, and energy may be best suited for leader roles in weak cultural settings that require transformational skills. Culture
maintainers who have great judgment, wisdom, and skill in coordinating people may be best suited for supervisor and administrator roles in strong cultural settings that require effective implementation of existing programs. Finally, culture changer who have learning ability and personal flexibility may be best suited for manager and leader roles in weak cultural settings which require change.

A key distinction regarding the fusion of these theories is that a true “leader” will shift from one role to another predicated upon the needs of the individuals in the cultural setting. Generally, the individual’s leadership style will remain either transactional or transformational, but the role played will vary based upon the cultural needs. Managers in weak cultures may shift to a supervisory role as the culture becomes stronger. Likewise, leaders in weak cultures may shift to an administrative role as the culture strengthens.

The shift from leader to administrator seems to be supported by Sergiovanni (1992) who stated that an important purpose of leadership is “to establish the professional ideals and community norms as conditions that make leadership no longer needed” (p.43). He concluded that, “Leadership becomes less urgent once the wheels of professionalism begin to turn by themselves” (p.42). Once the leader establishes the values and the shared values begin to take hold, the need for leadership is diminished and administration becomes necessary.

Mitchell and Tucker were not the first to stress the importance of the leader’s style in determining the culture of an organization. George Litwin and Robert Stringer (1968) concluded that the most important determinant of an organization’s “climate” was the leadership style utilized by the managers or informal leaders (p.188). They further
emphasized that the greatest impact was due to the nature of the leader’s informal relationships and communications with his people.

This phenomenon was also studied by Rensis Likert (1967) when he observed that the top leader in an organization sets a climate or tone that permeates the leader’s style throughout. For example, an autocratic top executive, who does not desire input and participation from subordinates, can set a climate that limits the ability of leaders below to be participative. Likert therefore concluded that leadership style is to some degree a function of the climate and culture of the organization and that participative management is the only way to satisfy worker’s needs (p.120).

**Hospitality Education**

Having progressed through an inspection of the literature regarding leadership and culture in the hospitality industry and education, this review concludes with an examination of research conducted specifically on leadership in hospitality education.

Laudadio (1987) conducted a study in order to develop a psychosociological and demographic profile of hospitality program heads. A sample of 101 heads and 125 faculty of four-year hospitality programs were identified for the study. The program heads and faculty were profiled using the three managerial dimensions of abilities, personality traits and motivational traits. The level of each of these dimensions that the respondents possessed was ascertained using Ghiselli’s Self-Description Inventory.

These three dimensions were further subdivided to provide a complete psychosociological profile of the program heads. The study discovered that program heads scored significantly higher than faculty along seven scales: supervisory ability, self-
assurance, decisiveness, maturity, achievement motivation, self-actualization, and need for power over others (p. 112). These characteristics were not deemed more desirable than other characteristics. The study simply aimed to determine in what way program leaders differed from faculty.

This study also developed a demographic profile of the “typical” hospitality program head. This profile was compiled from information gathered from the 73 research respondents. In this study, 64.4% of the respondents were male, 59.7% held a doctorate, and 65.8% of the program heads were married. The average age of the program heads was 47 years. On average these program heads had been a faculty member at a four-year program for 12 years. In addition, the respondents averaged 7 years of educational experience prior to their appointment as program head and 7 years of experience as a program head.

Partlow and Grégoire (1993) performed another study conducted on hospitality management program administrators. The sample for this study consisted of 98 administrators of programs in the United States that granted baccalaureate degrees in hospitality management. This study's primary purpose was to determine what activities were important to program heads and how they spent their time.

The 69 respondents in this study identified teaching, public relations, and curriculum planning as the three most important activities they performed. Consequently, program heads spent most of their time teaching, advising students, and conducting public relations. Through the identification of these important and time consuming activities, a theoretical job description for the position of program administrator was created. The
responsibilities of this position were divided into three areas: program management, curricular affairs, and academic activities (p.25).

A demographic profile was also constructed in this study as well. The majority of the respondents were male (80%) with 64% between the ages of 41 and 60, and 65% of them held a doctorate degree. Most of the program heads had some industry experience with 43% spending more than 10 years in the hospitality industry. Some 76% of the respondents had been in education for more than 10 years and 48% of them had held their program head position for more than 6 years. Finally, 40% held the academic rank of associate professor, while 44% held the administrative title of director.

Summary

This review began by examining the expansive general literature on leadership. Although leadership theories have evolved over time, one, agreed upon definition of the phenomenon remains elusive. Most modern theorists will, however, agree that leadership is contingent upon the characteristics of the leader and the demands of the situation. The significance of values and power and their relevance to leadership was also addressed. Finally, the distinction between transactional and transformational leadership was made, and the importance of these concepts in this research was stressed. These two styles were used to examine the first research question regarding the leadership styles displayed by heads of four-year hospitality management programs.

Glaser (1991) defined corporate culture as the fabric of shared values and beliefs that are of paramount importance to a given organization. The cultural dimensions developed by Deal and Kennedy (1985) and adopted by Glaser in his development of the
Corporate Culture Survey were reviewed. These dimensions were used to examine the second research question regarding how strong the programs' culture was measured by the four elements of: values, heroes, rites & rituals, and cultural network.

The theoretical link between leadership and culture was founded upon Schein's (1985) statement that the only thing of real importance that leaders do is to create and manage culture. Once this connection was made between the two driving concepts of this research, an examination of previous related research was conducted. This review first analyzed research conducted on leadership in the hospitality industry. Educational leadership and its impact on school culture was then addressed. The model presented by Mitchell and Tucker (1992) was introduced and employed to examine the third research question regarding how program heads are differentiated along the work-role classifications of: supervisor, manager, administrator, and leader.

The review concluded with an evaluation of research conducted on leadership in hospitality education. Although both articles on hospitality education identified characteristics of hospitality program leaders, they did not address the leader’s role in creating and maintaining the program’s culture. This led to an examination of the fourth research question regarding the relationship between the leadership styles and work-roles of program heads and the cultural strength of four-year hospitality management programs.

Based upon the contents of this literature review, a conceptual foundation has been established for each of the four research questions. A review of literature addressing statistical analyses used to examine these questions is presented in the ensuing chapter.
CHAPTER 3

METHODOLOGY

The literature review addressed numerous theories that have been proposed regarding leadership and corporate culture. This chapter identifies the methodology used to examine a possible relationship between these concepts. Sampling procedures and the data collection process are addressed. Each instrument item is discussed as well as the means for conducting an in-depth analysis of these items.

The chapter continues with a discussion regarding the statistical analysis conducted on the data obtained from the instruments. The procedures for testing each sample for normality and missing values is discussed, as well as the methods of calculating means, standard deviations, correlations, and reliability coefficients. The chapter concludes with an explanation of how analyses of variance and discriminate function analyses were utilized in this research.

Research Questions

The first question this research addressed was the leadership styles displayed by heads of four-year hospitality management programs. The theoretical basis for this question was derived from Burns’ (1978) definitions of transactional and transformational leadership. The instrument administered to the program heads contained 17 questions.
designed by Reed (1995) to differentiate a leader's style as either transactional or transformational.

The second research question attempted to measure the cultural strength of hospitality education programs based upon Deal and Kennedy's four cultural dimensions of: values, heroes and heroines, rites & rituals, and cultural network. The strength of each dimension was determined using 5 questions contained in Glaser's (1991) Corporate Culture Survey. The instrument administered to faculty members consisted of 20 questions which were used to determine overall cultural strength of hospitality education programs.

The third research question was concerned with how the behavior of program heads could be differentiated along the classifications of: supervisor, manager, administrator, and leader. These work-role terms were based upon the research conducted by Mitchell and Tucker (1992). The work-roles of program heads were ascertained by asking 10 questions which related to each of the four work-roles. Reed (1991) designed these 40 questions to measure the attitudes and beliefs of the program heads regarding the nature of teaching and learning, the preferred relationships among school staff, the level to which staff activities should be controlled by the program head in order to accomplish school goals, and the major influences believed to affect school improvement (Reed, 1991, p. 33).

The fourth and final research question addressed the relationship between the leadership styles and work-roles of program heads and the cultural strength of four-year hospitality management programs. Program heads who displayed transformational styles
and resided in weak cultures, where the organizational goals were unclear and an emphasis was placed on transforming the feelings, attitudes, and beliefs of organizational members, were expected to rank highly on the leader work-role (Mitchell and Tucker, 1992). While transformational leaders found in strong cultures where expected to rank highly on the administrator work-role. Program heads with transactional styles found in weak cultures were anticipated to rank highly on the manager work-role. While transactional leaders in strong cultures, where organizational goals were clear and an emphasis was placed on the distribution of incentives for hard work and successful performance of assigned tasks, were expected to rank highly on the supervisor work-role (Mitchell and Tucker, 1992).

The Research Process

Sample Size

According to Devellis (as cited in Reed, 1995) 5 to 10 subjects per survey instrument item, up to approximately 300 subjects, represents an adequate number for item analysis. Devellis further notes that when the sample size is larger than 300, the ratio can be relaxed. Jum Nunnally (1978) agreed that a good rule of thumb is that there should be at least ten times as many subjects as items with five subjects per item considered the minimum that can be tolerated (p.279). Given these guidelines, an adequate sample size for the 57 item Leadership-Culture Dimensional Screening Scale administered to program heads would be between 285 and 570 subjects. While an adequate sample size for the 20-
The item Corporate Culture Survey administered to faculty members would have been somewhere between 100 and 200 subjects.

**Sampling Procedures**

The population for this research was all faculty and program heads from all four-year hospitality management programs in the United States. Since research conducted on an entire population is often not feasible, information is usually collected by taking a sample from the larger population. "Sampling is the selection of elements, following prescribed rules, from a defined population. There are two main reasons for sampling. One is to generalize to or make inferences about the population of interest for research questions" (Czaja and Blair, 1996, p.107). "The other reason for sampling is that it is more efficient and less expensive than a census, which attempts to include every member in the population" (Czaja and Blair, 1996, p.108).

A sampling frame, which is a listing of the members from which the actual sample will be drawn (Churchill, 1995), was obtained for this research. Actually this research required two sampling frames. The first sample frame consisted of 578 faculty members of four-year hospitality management programs in the United States. The second sampling frame consisted of 153 heads of four-year hospitality management programs.

The faculty sample consisted of 468 individuals obtained from a 1996 listing of members of the Council on Hotel, Restaurant and Institutional Education (CHRIE). The CHRIE listing was supplemented with 110 additional names obtained from the Internet web sites of 10 universities.
The supplementation of the original CHRIE directory was conducted for a number of reasons. Firstly, it was used in an attempt to increase the sample size, which was necessary for some of the statistical analyses performed in this research. Secondly, in order to test the theoretical model, it was necessary to obtain a response from the program head and at least one faculty member. Bosselman (1998) reported that 79.4% of all hospitality programs have 150 or fewer students, which is an indication of the relatively small size of most programs. Therefore, the supplementation of the sampling frame included larger schools where the probability of obtaining faculty responses was greater. Thirdly, the responses obtained from these non-members of CHRIE were analyzed to determine if their corporate culture scores differed from CHRIE members. In addition, scores obtained from faculty at these ten schools were compared to other schools to determine if a difference in cultural strength existed. Finally, the addition of 110 names from the Internet served as an expedient way to update the 1996 CHRIE listing.

The sampling frame was supplemented with faculty from the following universities: California State Polytechnic University at Pomona; Cornell University; Florida International University; The University of Houston; The University of Massachusetts; Michigan State University; The University of Nevada, Las Vegas; Penn State University; Purdue University; and Washington State University. These universities were selected from an educators’ ranking of the top ten bachelor’s programs in hospitality management from a study conducted by Kent, Lian, Khan and Anene (1993). Their study established a reputational ranking of the top ten hospitality management schools by surveying the heads of 143 hospitality management programs.
The sample of 153 program heads was obtained from the 1997 CHRIE Guide to College Programs in Hospitality and Tourism. In fact, these 153 individuals do not comprise a sample, but rather, constitute the entire population. A population is defined as the totality of cases that conform to some designated specifications (Churchill, 1995, p.574). The specifications for this population are that the individuals are program heads of four-year, baccalaureate degree granting institutions in the United States. As such, these 153 individuals represent the entire population based upon these specifications.

Once both sampling frames were selected, separate Microsoft Excel for Windows 95, Version 7.0a spreadsheets were created for the faculty and program head samples. Each spreadsheet was sorted alphabetically and each entry was assigned an identification number that corresponded with the number on each mailed survey instrument. The number was necessary in order to cross names off the mailing list once the instruments had been returned.

Data Collection

A self-administered mail survey instrument was chosen over other survey methods for a number of reasons. Firstly, since this research was designed to be administered to members of hospitality management programs throughout the United States it would not be feasible to conduct face-to-face interviews. Secondly, telephone surveys were also not feasible due to time and money constraints. Telephone interviews would have required training and supervising a team of interviewers. Mail instruments, on the other hand, are well suited for samples which are widely geographically distributed (Czaja and Blair,
1996) and they substantially reduce the time and money spent on data gathering (Bourque and Clark, 1992).

A survey packet was mailed to each one of the 731 individuals identified from both samples. The packet contained a cover letter, survey instrument, and self-addressed stamped return envelope. The cover letter was designed to introduce the research and hopefully motivate the respondent to complete and return the enclosed survey. “The cover letter is virtually the only opportunity the researcher has for anticipating and countering respondent questions” (Dillman, 1978, p.165).

A cover letter was created for each of the samples. Each contained the same basic information with only minor alterations. The letter to sent to faculty members was addressed to hospitality educators and asked them to take approximately 15 minutes to complete the enclosed hospitality education program culture survey (see Appendix C). The letter sent to program heads was addressed accordingly and asked them to take approximately 25 minutes to complete the enclosed leadership style and work-role survey (see Appendix D). The stipulated completion times were based upon average approximations, and it was realized that the length of the instrument, particularly for program heads, may have had adverse effects on the response rate.

Each of the two cover letters assured the recipient that their participation in the study was voluntary, however it also stressed the importance of completing and returning the instrument in order to produce a representative sample. Participants were also encouraged to provide their names and addresses on the back of the return envelope if they wished to receive a summary of the research results.
The cover letter also contained information that was mandated by the University of Nevada, Las Vegas, regarding human subjects protocol (see Appendix E). This included identifying that the research was being conducted in partial fulfillment of the requirements for the degree of doctorate in hospitality management; stipulating that participation in the study was voluntary; and suggesting an expected length of time to complete the survey. In addition, respondents were instructed to contact the researcher or the UNLV Office of Sponsored Programs if they had any questions regarding the research or their rights as a research subject.

Confidentiality

The aforementioned cover letter was written using Don Dillman’s Total Design Method as a guide (Dillman, 1978). Dillman specifically stipulates what information should be contained within the cover letter. The cover letter for this research contained this generalized statement regarding confidentiality of respondents:

“You may be assured of complete confidentiality of your responses. The instrument has an identification number for mailing purposes only. This is so that your name may be crossed off the mailing list once your instrument is returned. Your name will never be associated with the instrument.” (Dillman, 1978, p.169).

Participants who requested a summary of the research results where instructed to provide their name and address on the return envelope only. They were reminded not to place this information on the instrument itself in order to assure confidentiality.
Data Handling

Both survey instruments were pre-coded for data entry purposes prior to mailing. Separate databases were created for each sample using the Statistical Program for the Social Sciences (SPSS) computer software. Each response was then entered into SPSS for Windows Release 7.0. After all of the responses were obtained, each database was printed and the entered responses were verified against each corresponding survey instrument.

Response Rate

A comparison of the demographic characteristics of this research's sample of program heads with characteristics obtained from research conducted by Laudadio (1987) and Partlow & Gregoire (1993) was conducted. The demographic characteristics of the faculty respondents in this research were also compared to the characteristics of respondents in research conducted by Pizam and Milman (1987) and Barrows (1990).

These comparisons were undertaken to determine if the current samples were representative of the overall population of program heads and faculty of four-year hospitality education programs compared with the samples from the four previous studies. In addition, by comparing the samples in this manner any potential nonresponse bias in the current sample could be identified.

As discussed in a later section, the pilot instrument did not differ significantly from the one sent to the final sample of faculty and program heads. Therefore, the 11 faculty
responses and the program head’s responses obtained from the pilot study were also included in the final analysis (Partlow and Gregoire, 1993, p.19).

The response rate for this research was calculated using the following formula suggested by Dillman (1978, p.50):

\[
\text{Response rate} = \frac{\text{number returned}}{\text{number in sample} - (\text{noneligible} + \text{nonreachable})} \times 100
\]

According to Dillman (1978), determining the response rate in this manner provides a more direct indicator of the method’s response-inducing capabilities (p.50). The response rate is calculated as the percentage of contacts with eligible respondents that result in competed instruments (p.50). The essential difference between this method and simply dividing the number of returned instruments by the number of individuals in the sample is that unmade contacts are excluded from consideration in this method.

Instrumentation

Instrument Format

The general format for each survey instrument was based upon the guidelines set forth by Dillman (1978). The instrument was designed as a booklet, the covers of which included graphic illustrations, which Dillman suggests in order to add interest and quickly gain the respondent’s attention. Dillman’s suggestion regarding placing the name and address of the study sponsor on the cover was not adhered to since technically this dissertation has no sponsor. Dillman warned against including the name of the researcher on the cover since this would be inconsistent with the way in which the researcher is
portrayed to the respondent in the cover letter (p.153). Therefore, no name or address was included on the cover.

The only other deviation from Dillman’s method concerned the back cover of the instrument booklet. Dillman suggested that the back cover consist of an invitation to make additional comments, a thank you, and plenty of white space (p.153). However, due to space limitations, in order to follow this format an additional cover page would have had to been added to each booklet. Although Dillman warns against including demographic questions on the back cover as was done in this research (p.153), the addition of an extra page solely for the purpose of providing a “blank” back cover was deemed inappropriate. The additional page would have made both instruments seem bulky, long, messy and disorganized which are some of the characteristics of surveys Dillman’s method attempts to overcome (p.121).

As previously stated, the instrument was designed in a booklet format as suggested by Dillman (p.121), however, advances in computer software and reprographic techniques have made some of Dillman’s specifications obsolete. The booklet was created using Microsoft Publisher 97 computer software which eliminated the need for Dillman’s procedures regarding photographically reducing the form in order to create the booklet.

Other Dillman suggestions regarding formatting and wording of demographic questions were followed in the design of the research instrument. In addition, the steps involved in the assemblage of the mail out package were strictly adhered to. The instrument was folded in three parts with bottom portion tucked under the flap of the business reply envelope. Both are placed in the center of the cover letter, which is then
folded in three and placed in the mailout envelope with the survey instrument resting, right-side up (Dillman, 1978, p.180).

**Instrument Scales**

Both of the original instruments which were adapted for this research were created using 5-point summative, or Likert scales. Subsequently, both revised instruments also utilized 5-point scales. This was done because it was presumed that a 5-point scale would provide a sufficient amount of response variance, it would make it easier for respondents to complete the survey (Steiber and Krowinski, 1990, p.104), and it would allow for comparisons between data obtained from each survey instruments.

Other reasons for using a Likert scale were reported by Nunnally (1978). Nunnally (1978) claimed that Likert scales have a number of attractive advantages over all other methods. He stated that these scales: (a) follow from an appealing model, (b) are rather easy to construct, (c) are usually highly reliable, (d) can be adapted to measure may different kinds of attitudes, and (e) have produced meaningful results in numerous studies (p.604). Another advantage of Likert scales is that finer distinctions can be made among respondents because the scores obtained have greater variability than other measures (Steiber and Krowinski, 1990, p.104).

Steiber and Krowinski (1990) recommend the use of five-level Likert scales with a neutral midpoint so that respondents are not forced to give an opinion if they do not have one (p.102). Furthermore, Matell and Jacoby (1971) concluded that both reliability and validity (the importance of both will shortly be discussed) are independent of the number
of scale points used for Likert-type items (p.666). Based upon the many reasons stated above, 5-point Likert scales were used for both survey instruments.

The order of questions intended to measure certain concepts was varied throughout each of the instruments. For example, as shown in Table 2 on page 68, it was intended that the transactional style would be measured with questions 1, 3, 6, 8, 9, 10, 12, 14, and 16. The questions were alternated in this manner in an effort to reduce the insight which respondents may develop into the items. This is often done in survey instrument design because often when respondents perceive that an item measures a certain trait, they answer based upon what they think the answer should be, rather than on what the answer really is (Kline, 1986).

One last comment regarding the instrument scales relates to the type of data that they provided. Technically speaking, items that are chosen on a scale from “not true” to “definitely true” do not provide the interval data that is necessary to perform proper statistical analysis. This is true because “definitely true” which is coded as “5” is not five times as great as “not true” which is coded as “1”. However, Nunnally (1978) stated that he strongly believed that it was permissible in psychology and other behavioral sciences to treat most measurement methods as leading to interval scales. He also argued that usually no harm is done in most studies by employing methods of statistical analysis which take intervals seriously (p.17).
Research Questions

Each of the four research questions was examined based upon the information obtained from the survey instruments. The first and third questions were examined based upon the data acquired from a revised version of The Leadership-Culture Dimensional Screening Scale (LCDSS) which was administered to the program heads. The second question was examined based upon the data attained from a revised version of The Corporate Culture Survey which was administered to faculty. While the fourth question was examined using the information obtained from both instruments. An in-depth analysis of how the instruments were used to examine each question follows.

First Research Question

The first research question which was concerned with the leadership styles displayed by heads of four-year hospitality management programs was examined by administering a revised version of The Leadership-Culture Dimensional Screening Scale (LCDSS) to faculty members. Reed (1995) created the LCDSS to assess a principal’s leadership style and gauge the level of cultural stability within a school community. Reed granted permission to use the LCDSS in this research (Appendix F), and the instrument was used to examine the first, third and fourth research questions.

The LCDSS needed to be revised in order for it to meet the needs of the current research. The primary alteration to the original instrument was the removal of 10 questions designed to measure the school community’s culture. These school community questions were deleted from the instrument administered to the program heads and instead the culture of
the program itself was measured by administering the corporate culture survey to faculty members.

With the deletion of the school community questions, the first section of the revised LCDSS now addressed the leadership style of the respondent. The first 17 questions of the instrument were used to examine the first research question regarding the leadership styles displayed by heads of four-year hospitality management programs. Each of these questions was measured on a 1 to 5 Likert scale with 1 representing "Never Characteristic" of the program head's leadership style and 5 representing "Definitely Characteristic" of the program head's leadership style.

A slight wording change was made to the scales in order to make the categories of never, seldom, occasionally, mostly, and definitely consistent across both revised versions of the LCDSS and Corporate Culture Survey. This was viewed as a minor change since the original wording of the LCDSS scale was never, rarely, sometimes, often, usually, and always. An additional category of not applicable, which was coded as zero, was added to the instrument per suggestions from pilot study participants.

Additional, minor rewording changes were made to some of the questions of the LCDSS in order to adapt the instrument for higher education. The rewordings consisted of changing the word "school" to "program", "principal" to "program head", and "teachers" to "faculty". The compete revised version of the instrument which was administered to program heads is presented in Appendix G.
The first 17 questions were designed to measure whether a program head displayed a transactional or transformational leadership style. The nine questions in Table 2 on page 66 were intended to measure the program heads’ propensity to lead with a transactional style. While the eight questions in Table 3 on page 67 were intended to measure the program heads’ propensity to lead with a transformational style. Each question was assigned a variable name indicating whether it was intended to measure transactional (TA) or transformational (TF) styles. The variable name also included the question number. Therefore, variable TA1 was used to measure the transactional style and was the first question on the instrument. This variable naming procedure was followed for all of the questions on each instrument.

Each respondent’s leadership style score was then calculated by summing the values, ranging from 0 to 5, for every variable. The respondent was then classified as either having a transactional or transformational leadership style based upon the scale with the higher score.

These transactional questions were related to the program ability to control the actions of followers through the distribution of tangible incentives. These questions also related to the program head’s focus on task completion and employee compliance. Program heads who rated highly on this scale may be more concerned with task completion geared toward maintaining the day-to-day routines of the program.

The transformational questions were related to the program head’s ability to transform the feelings, attitudes, and beliefs of the follower. These questions also related to the program head’s desire to generate awareness and acceptance of the purpose and mission of the program. Program heads, who rated highly on this scale, may be more concerned with
gaining cooperation and participation from faculty members than they are about getting tasks accomplished.

Table 2

**Transactional Style Questions**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA1.</td>
<td>I give faculty material rewards for achieving program goals.</td>
</tr>
<tr>
<td>TA3.</td>
<td>I praise faculty publicly for completing projects on time.</td>
</tr>
<tr>
<td>TA6.</td>
<td>I insist that faculty use instructional materials that have been endorsed by the university.</td>
</tr>
<tr>
<td>TA8.</td>
<td>I spend a great deal of my time working in my office solving problems.</td>
</tr>
<tr>
<td>TA9.</td>
<td>I oversee program implementation by checking on how closely faculty follow approved curriculum.</td>
</tr>
<tr>
<td>TA10.</td>
<td>I strictly enforce building procedures.</td>
</tr>
<tr>
<td>TA12.</td>
<td>I review job descriptions with personnel involved to ensure that faculty perform as intended.</td>
</tr>
<tr>
<td>TA14.</td>
<td>I write memos to faculty about how programs should be implemented.</td>
</tr>
<tr>
<td>TA16.</td>
<td>I encourage faculty to use standardized test results to set educational targets.</td>
</tr>
</tbody>
</table>
Table 3

**Transformational Style Questions**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF2.</td>
<td>I promote comprehensive program improvement by emphasizing faculty collaboration.</td>
</tr>
<tr>
<td>TF4.</td>
<td>I motivate faculty to perform extra tasks by promoting strong belief in the program’s vision.</td>
</tr>
<tr>
<td>TF5.</td>
<td>I elicit cooperation from faculty by encouraging them to believe in themselves.</td>
</tr>
<tr>
<td>TF7.</td>
<td>I help faculty sort through their feelings about organizational issues.</td>
</tr>
<tr>
<td>TF11.</td>
<td>I visit faculty in their classrooms to exchange ideas about teaching and learning.</td>
</tr>
<tr>
<td>TF13.</td>
<td>I provide time at faculty meetings for people to discuss educational trends.</td>
</tr>
<tr>
<td>TF15.</td>
<td>I provide opportunities for faculty to discuss their professional aspirations.</td>
</tr>
<tr>
<td>TF17.</td>
<td>I meet with faculty informally to discuss collaborative approaches to meeting educational outcomes.</td>
</tr>
</tbody>
</table>

**Second Research Question**

The Corporate Culture Survey, developed by Glaser (1991) and based upon the work of Deal and Kennedy, was used to examine the second research question which addressed the strength of the program’s culture. The survey instrument was designed to measure culture along four dimensions: values, heroes and heroines, rites and rituals, and
cultural network. The 20-question instrument consisted of 5 questions designed to measure each of the 4 dimensions. The scores along each of these dimensions could then be combined to determine the organization’s overall cultural strength. These scores were used to examine the second and fourth research questions.

The Corporate Culture Survey required some rewording in order to adapt it to higher education. This was necessary since the original survey was intended for business organizations. Organization Design and Development, Inc., a consulting firm which holds the copyright to the survey (Appendix H), agreed to the changes made and granted permission to use the revised instrument in this research. The rewording included changing the word “employee” to “faculty”, and “organization” to “program”. Additionally, some of the examples given in the original survey were changed to better represent examples present in college and university settings. An example of the revised Corporate Culture Survey administered to the faculty is shown in Appendix I.

Two other changes were made to the survey as a result of suggestions obtained during the pilot study. The first suggestion was to include a “do not know” category, which was subsequently coded as zero. The second suggestion was to provide an abbreviated scale at the top of each page. Both of these suggestions were incorporated into the final instrument to provide greater clarity for future respondents.

The four cultural dimensions are illustrated in Tables 4 through 7. All 20 of the questions presented in Tables 4 through 7 were intended to measure cultural strength.
Table 4  

Values Questions  

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.</td>
<td>New faculty are carefully oriented to the program's traditions, that is, &quot;the way things are done around here&quot;.</td>
</tr>
<tr>
<td>V5.</td>
<td>Our program's values are clearly reflected in our physical facilities.</td>
</tr>
<tr>
<td>V9.</td>
<td>Our program has established traditions that focus people's attention on important goals, or school beliefs (e.g., participation in community affairs).</td>
</tr>
<tr>
<td>V13.</td>
<td>People in this program recognize a concept or ideal that symbolizes what we stand for (e.g., student service, research).</td>
</tr>
<tr>
<td>V17.</td>
<td>Our senior faculty traditionally participate in selecting new faculty.</td>
</tr>
</tbody>
</table>

Table 5  

Heroes and Heroines Questions  

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2.</td>
<td>When someone performs well in our program, a great deal of recognition is provided.</td>
</tr>
<tr>
<td>H6.</td>
<td>The heroes of this program are kept meaningful to us through their stories, even though some of them are no longer present.</td>
</tr>
<tr>
<td>H10.</td>
<td>This program publicly rewards faculty for work that furthers the goals of the school.</td>
</tr>
<tr>
<td>H14.</td>
<td>There are people in this program whose success serves as a model for others to follow.</td>
</tr>
<tr>
<td>H18.</td>
<td>Nonconformity is accepted, even applauded, in this program if the nonconformist produces outstanding work.</td>
</tr>
</tbody>
</table>
It was intended that the first cultural dimension, the program’s value system (V), would be measured by the results obtained from the five questions in Table 4. Table 5 indicates the five questions intended to measure the second cultural dimension of heroes and heroines (H). It was intended that the third cultural dimension of rites and rituals (R) would be measured using the five questions in Table 6. Finally, it was intended that the cultural network (C) of the program would be measured with the five questions displayed in Table 7.

Table 6

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3.</td>
<td>In this program we have a number of well-established traditions (e.g., annual picnics).</td>
</tr>
<tr>
<td>R7.</td>
<td>Program heads often develop personal rituals through which they are identified (e.g., congratulate staff on the anniversary of their joining the program).</td>
</tr>
<tr>
<td>R11.</td>
<td>Faculty and staff have certain ways of communicating with and relating to one another (e.g. The way we address one another and the style of interactions).</td>
</tr>
<tr>
<td>R15.</td>
<td>At faculty meetings small rituals are commonly observed (e.g., the program head always begins by asking each participant to share a recent teaching/research success).</td>
</tr>
<tr>
<td>R19.</td>
<td>People in this program take seriously our important ceremonies (e.g., the university president’s annual address or retirement celebrations).</td>
</tr>
<tr>
<td>Variable</td>
<td>Question</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>C4.</td>
<td>Our program has people who are good at telling the school's legends and folklore to newcomers.</td>
</tr>
<tr>
<td>C8.</td>
<td>Senior faculty members share stories that communicate a philosophy of what the program is all about.</td>
</tr>
<tr>
<td>C12.</td>
<td>There is a strong, informal communication network that ensures that significant stories are widely shared within the program.</td>
</tr>
<tr>
<td>C16.</td>
<td>Our program has respected old-timers who possess a rich reservoir of school history at their fingertips and who share this through stories about the school's past.</td>
</tr>
<tr>
<td>C20.</td>
<td>New faculty feel like they are part of a team because other faculty show them around and help them learn how to do their job.</td>
</tr>
</tbody>
</table>

Glaser (1991) identified characteristics of organizations with strong cultures along each dimension. He stated that when values are strong, they provide the organization and its members with a sense of identity and with a clear direction for behavior (p.5). Organizations with a strong culture also promote heroes and heroines and make sure that they have a lasting influence by relating their deeds in stories to new members (p.5).
Organizations with strong cultures also have rituals for everything from the celebration of major events to trivial activities such as how people greet each other. These organizations also have ways of playing, rules that guide everyday behavior, and ceremonies to mark important experiences (p.6). Finally, in organizations with strong cultures, several characters in the cultural network do their part to spread the organization's message. Each of these characters plays his/her role in transmitting and sustaining the corporate culture (p.6).

The individual respondents score for each of the four scales (values, heroes, rites and rituals, and cultural network) were calculated in the same manner. The scores, ranging from 0 to 5, for every variable on each scale were summed to determine the respondents overall score on that particular scale. The four scale totals were then summed to ascertain the respondent's total cultural strength score which was used to examine the second research question.

Based upon the score obtained from the summation of the four cultural dimensions, the respondent was classified as being a member of either a strong, average, or weak corporate culture. Table 8 indicates the ranges used to determine a program's cultural strength. The variations in the ranges were determined based upon research conducted by Organization Design and Development, Inc. during the development of the instrument. These ranges were adapted for this research and proved to be appropriate measures of the program's cultural strength. These ranges were used to compare the cultural strength scores obtained from all faculty respondents with those obtained from CHRIE members, non-CHRIE members, and members of the top ten programs.
Table 8

Ranges for Strength of Corporate Culture Dimensions

<table>
<thead>
<tr>
<th>Culture</th>
<th>Values</th>
<th>Heroes</th>
<th>Rites &amp; Rituals</th>
<th>Cultural Network</th>
<th>Total Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weak</td>
<td>0-17</td>
<td>0-14</td>
<td>0-14</td>
<td>0-16</td>
<td>0-61</td>
</tr>
</tbody>
</table>


Third Research Question

The third research question examined how the work-roles of program heads differentiated along the classifications of: supervisor, manager, administrator, and leader?

The LCDSS, which was administered to the program heads, was also used to examine this question. The instrument was designed to detect the extent to which a high school principal exhibits behavior characterized along the four executive work-roles of supervisor, manager, administrator and leader. The first 17 questions of the instrument were used to explore the first research question, while the last 40 questions were used to explore the third research question.

Once again, a minor change was made to the wording of the scales. In the original LCDSS the scale for the executive work-role questions appeared to be skewed toward the positive with three agree categories and only two disagree categories. Therefore, the scale was revised for this research to include a strongly disagree, disagree, neither disagree nor
agree, agree, and a strongly agree category. As was the case in the original instrument, a no opinion category coded as zero was included in the scale.

The 40 question second portion of the revised LCDSS consisted of 10 questions designed to measure each of the 4 work-roles. It was intended that the supervisor (SU) work-role would be measured by the ten questions in Table 9. Table 10 displays the ten questions intended to measure the manager (MG) work-role. It was also intended that the administrator (AD) work-role would be measured by the ten questions in Table 11. While Table 12 presents the ten questions intended to measure the leader (LD) work-role.

The 10 questions in Table 9 on page 75 were intended to measure the program head’s propensity to display supervisory characteristics. Program heads that rated high on this scale may believe that they are responsible for identifying specific tasks and directing faculty in how each task is to be performed. They may also closely monitor faculty to make sure directions are being followed and carefully established programs are being implemented.

The questions in Table 10 on page 76 were intended to measure the program head’s propensity to display managerial characteristics. Program heads who rated high on this scale may believe that change is more important than the implementation of established programs, and task definition is more important than interpersonal relationships. These program heads may view teaching as a skilled craft whose effectiveness is based upon competence and skill. They may also emphasize the importance of performance indicators and want explicit measures of school productivity.
### Table 9

**Supervisor Work-Role Questions**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>SU19.</td>
<td>Faculty are most effective when they are required to work on tasks developed by university curriculum specialists.</td>
</tr>
<tr>
<td>SU21.</td>
<td>Program heads have the greatest impact on program improvement when they promote accountability systems based on mastery of specific objectives.</td>
</tr>
<tr>
<td>SU26.</td>
<td>Program heads have the greatest impact on program improvement when they closely monitor faculty to ensure that administrative directives are followed.</td>
</tr>
<tr>
<td>SU32.</td>
<td>Curriculum and instruction are most effective when faculty are required to adhere to strict time lines in presenting subject matter.</td>
</tr>
<tr>
<td>SU35.</td>
<td>Programs operate best when acquisition of basic skills is the major theme of higher education.</td>
</tr>
<tr>
<td>SU37.</td>
<td>Program heads have the greatest impact on program improvement when they closely scrutinize tasks performed by faculty.</td>
</tr>
<tr>
<td>SU44.</td>
<td>Faculty are most effective when they are required to teach socially accepted bodies of knowledge.</td>
</tr>
<tr>
<td>SU47.</td>
<td>Faculty are most effective when they implement “good old fashioned” classroom practices.</td>
</tr>
<tr>
<td>SU53.</td>
<td>Program heads have the greatest impact on program improvement when they acknowledge that any intelligent person who makes a good faith effort can be a decent teacher.</td>
</tr>
<tr>
<td>SU56.</td>
<td>Programs are most effective when faculty are required to implement curriculum without variation from university approved procedures.</td>
</tr>
</tbody>
</table>
Table 10

**Manager Work-Role Questions**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG23.</td>
<td>Faculty are most effective when they are expected to implement research-based programs.</td>
</tr>
<tr>
<td>MG28.</td>
<td>Faculty are most effective when they are expected to utilize their assessment skills to improve student outcomes.</td>
</tr>
<tr>
<td>MG30.</td>
<td>Curriculum and instruction are most effective when test data are used to adjust educational programs.</td>
</tr>
<tr>
<td>MG33.</td>
<td>Faculty are most effective when they are expected to select appropriate strategies from a repertoire of techniques at their disposal.</td>
</tr>
<tr>
<td>MG36.</td>
<td>Programs are most effective when faculty are expected to implement instruction based on learning styles research.</td>
</tr>
<tr>
<td>MG38.</td>
<td>Student academic performance is most likely to improve when assessment of student interest is viewed as a critical part of the teaching process.</td>
</tr>
<tr>
<td>MG40.</td>
<td>Faculty are most effective when they are expected to engage in research on techniques to accelerate learning.</td>
</tr>
<tr>
<td>MG43.</td>
<td>Program heads have the greatest impact on faculty when they objectively analyze all the facts before making personnel decisions.</td>
</tr>
<tr>
<td>MG46.</td>
<td>Programs operate best when faculty are required to use carefully validated techniques in the classroom.</td>
</tr>
<tr>
<td>MG51.</td>
<td>Program heads have the greatest impact on program improvement when they focus on explicit measures of productivity.</td>
</tr>
</tbody>
</table>
### Table 11

**Administrator Work-Role Questions**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD18.</td>
<td>Program heads have the greatest impact on program improvement when they view faculty as experts in diagnosing student learning problems.</td>
</tr>
<tr>
<td>AD20.</td>
<td>Program heads have the greatest impact on program improvement when they view faculty as highly competent professionals.</td>
</tr>
<tr>
<td>AD24.</td>
<td>Student academic performance is most likely to improve when faculty are given latitude to adjust instructional routines as they see fit.</td>
</tr>
<tr>
<td>AD25.</td>
<td>Faculty are most effective when they are given the latitude to oversee their own work.</td>
</tr>
<tr>
<td>AD29.</td>
<td>Faculty are most effective when they are given autonomy in performing their jobs.</td>
</tr>
<tr>
<td>AD39.</td>
<td>Curriculum and instruction are most effective when professional educators are trusted to remediate student learning problems.</td>
</tr>
<tr>
<td>AD45.</td>
<td>Program heads have the greatest impact on program improvement when they view faculty as specialists in the education of students.</td>
</tr>
<tr>
<td>AD48.</td>
<td>Faculty are most effective when they are given opportunities to share their professional expertise with each other.</td>
</tr>
<tr>
<td>AD50.</td>
<td>Program heads have the greatest impact on program improvement when they minister to the needs of the faculty.</td>
</tr>
<tr>
<td>AD54.</td>
<td>Program heads have the greatest impact on program improvement when they encourage faculty to establish personal relationships with students as clients.</td>
</tr>
</tbody>
</table>
Table 12

Leader Work-Role Questions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD22.</td>
<td>Program heads have the greatest impact on program improvement when they work with faculty to redefine educational goals.</td>
</tr>
<tr>
<td>LD27.</td>
<td>Programs operate best when goals are developed by everyone working together.</td>
</tr>
<tr>
<td>LD31.</td>
<td>Curriculum and instruction are most effective when faculty are encouraged to work collaboratively to develop integrated programs.</td>
</tr>
<tr>
<td>LD34.</td>
<td>Faculty are most effective when they are given the latitude to make programs work for students.</td>
</tr>
<tr>
<td>LD41.</td>
<td>Programs are most effective when faculty are encouraged to work together to realign curriculum with the needs of the community.</td>
</tr>
<tr>
<td>LD42.</td>
<td>Program heads have the greatest impact on program improvement when they facilitate work activities carried out by faculty.</td>
</tr>
<tr>
<td>LD49.</td>
<td>Faculty are most effective when they are encouraged to employ creative instructional styles similar to those used by performing artists.</td>
</tr>
<tr>
<td>LD52.</td>
<td>Program heads have the greatest impact on program improvement when they coordinate problem solving activities among faculty in order to strengthen the organization.</td>
</tr>
<tr>
<td>LD55.</td>
<td>Program heads have the greatest impact on faculty when they emphasize shared commitment to organizational goals.</td>
</tr>
<tr>
<td>LD57.</td>
<td>Programs operate best when faculty are given opportunities to participate in program-wide decisions.</td>
</tr>
</tbody>
</table>
The questions in Table 11 on page 77 were intended to measure the program head's propensity to display administrative characteristics. Program heads who rated high on this scale may believe that effectiveness rests more on the positive attitudes of faculty and students than on the implementation of specific curriculum programs. These program heads may believe that high-quality teaching depends on giving faculty more professional autonomy. They may also stress the importance of interpersonal relationships and good communication through the creation of cohesive teams designed to increase teaching effectiveness.

Finally, the questions in Table 12 on page 78 were intended to measure the program head's propensity to display leadership characteristics. Program heads who rated high on this scale may believe that high performance depends on transforming student and faculty attitudes and beliefs. These program heads may view themselves as responsible more for redefining educational goals than for implementing existing programs. They may also believe that faculty are "creative artists" and that effective leadership depends on everyone working together to develop and pursue common goals.

The individual respondent's score for each of the four scales (supervisor, manager, administrator, and leader) were calculated in the same manner. The values, ranging from 0 to 5, for every variable on each scale were summed to determine the respondents overall score on that particular scale. The respondent was then classified as either a supervisor, a manager, an administrator, or a leader based upon the highest work-role score. These scores, obtained from the revised LCDSS, regarding leadership styles and work-roles were
combined with the culture scores obtained from the faculty to examine the fourth research question.

**Fourth Research Question**

The fourth research question regarding the relationship between the leadership styles of program heads and the cultural strength of four-year hospitality management programs was examined by combining the information obtained from both survey instruments. The theoretical model proposes that the work-roles of the program head can be predicted based upon the leadership style and corporate culture present in the program. The work-roles were measured with the last 40 questions of the Leader Cultural Dimension Screening Scale (LCDSS). The program heads leadership style was ascertained from the first 17 questions of the LCDSS. While the cultural strength of the programs was determined from the 20 question Corporate Culture Survey.

**Pilot Study**

In a pilot study the entire survey instrument as well as the administrative and data analysis procedures are tested in a miniature study. Pilot studies can be particularly useful when researchers want to learn how well their instrument questions and instructions are understood by potential respondents. This stage of the research can be used to identify potential problems with the instrument and obtain suggestions for solutions from the pilot study sample. (Bourque & Clark, 1992, p. 32).

The pilot study for this research was conducted with the faculty and program heads of a large, autonomous hospitality management college. In order to obtain several
responses to the revised LCDSS, the dean, assistant dean, and department heads of this college were surveyed. The pilot study consisted of 11 faculty responses and four program head responses. A memo was sent to both pilot study samples asking them to complete the appropriate survey instrument (Appendix J).

In addition, each respondent was asked to provide any comments regarding the wording or format of the survey. The participants were encouraged to provide these comments directly on the survey instrument itself. Overall, both instruments were well received by the pilot study participants. A summary of the comments made by the pilot study participants has already been addressed in the previous discussion of each instrument.

Statistical Analysis

Normality

In order to perform certain statistical analyses, the assumption of normally distributed data must be met. A normal distribution is a bell shaped, symmetric distribution in which the mean, median, and mode all coincide (Norusis, 1986, p.208). Analyzing data that is exactly normal is quite simple because approximately 68% of all values fall within one standard deviation of the mean and 95% of all values fall within two standard deviations of the mean (Norusis, 1986).

Each instrument scale in this research was tested for normality with the use of histograms and boxplots. Histograms are simply bar charts where each bar represents a range of values. Each scale histogram displays the distribution of the data values.
Boxplots show the median, interquartile range, outliers, and extreme cases of individual variables (SPSS, 1995). The dark line in the center of the box indicates the median and it should be located near the middle of the box for normally distributed variables. An example of a histogram with an accompanying normal curve is shown in Figure 1. An example of a boxplot is shown in Figure 2.

Figure 1

Example Histogram
Both data sets were examined for patterns of missing data. First, since both sets were relatively small, they were printed out and a visual inspection of each was conducted. Since both instruments contained a “do not know” or “no opinion” response, this inspection was specifically designed to find missing values for both subjects and variables. Bourque and Clark (1992) suggest that if a subject has many missing values the simplest procedure is to eliminate the case from the data set. Likewise, variables that have many missing values should also be eliminated. The objective is to reduce the missing values to a minimum, scattered throughout the data set rather than clustered in a few subjects or variables (p.60).
For subjects and variables that had only a few missing values, the listwise deletion method was used. In this method only cases with valid values for all variables are included in the analyses. Although this method can result in an appreciable loss of cases when many variables are used, it is preferred over the pairwise deletion and replacement with means methods (Bourque and Clark, p.61, 1992).

Both data sets were also analyzed to determine if there were any outliers present. Frequencies were run for all variables to assure that the responses were within the acceptable ranges. Since all of the variable responses were on a five point scale, any outliers caused by data entry error were detected in this stage of the analysis. In addition, all of the boxplots, like the one shown in Figure 3, were examined for potential outliers. Finally, any unreasonable demographic values regarding age, years of hospitality industry and educational experience, and years at current institution were identified and the reasons for the unusual values were explored.

Means and Standard Deviations

The mean of a sample is a measure of the central tendency of the data. The sample mean is simply the average of all observations in the data set (Dielman, 1996). It is defined as the sum of the scores divided by the total number of cases involved (Blalock, 1979). Mean scores that fall approximately midpoint on the scale are considered to be good discriminators (Reed, 1995).

The standard deviation is a measure of the variability within the data that is calculated by taking the square root of the variance. The variance is calculated by
subtracting the mean from each item value, squaring the differences, and then multiplying the sum of the differences times the probability of the value of that item occurring. The variance represents an average squared distance of each item value to the center of the data distribution (Dielman, 1996).

For data interpretation it is often easier to take the square root of the variance so that the variability is expressed in the item’s original units. Churchill (1995) reported that the typical range of variances for a 5-point scale is from 1.2 to 2.0 (p.633). This would equate to a standard deviation range of between 1.09 and 1.4.

The standard deviation can be used to measure the variability of each survey instrument item. Extremely low standard deviations for items may indicate that within group variability are small which suggests that most respondents answered similarly. In contrast, extremely high standard deviations may indicate a broad variability of responses which may make detection of patterns in the data set difficult (Reed, 1995).

Mean scores and standard deviations were calculated on all of the variables from both survey instruments. These statistics are displayed in separate tables for each subscale. Typically, if the items in a subscale are homogeneous, the means and standard deviations for each item will be similar because each represents a close approximation of the true means (Reed, 1995, p.45).

**Validity**

High validity and reliability are essentials of a good instrument (Bourque and Clark, 1992). Validity is concerned with whether a variable measures what it is intended
to measure (Bollen, 1989, p. 184). Questions of validity can never be answered with absolute certainty. However, although validity can never actually be proven, strong support for validity can be developed (Bollen, 1989, p. 185).

Three of the more prominent types of validity are content, criterion, and construct validity (Zeller and Carmines, 1980). Each type attempts to show whether a measure corresponds to a particular concept (Bollen, 1989). Content validity is a qualitative test concerned with the extent to which a set of items fully represents the content of some domain of interest (Zeller and Carmines, 1980). Criterion validity is a more empirically based test which determines the degree of correspondence between a measure and some criterion variable (Bollen, 1989). Finally, construct validity determines whether a measure relates to other observed variables in a manner that is consistent with theory driven predictions (Bollen, 1989, p. 188).

Reed (1995) conducted content validity during the development of the original LCDSS. She employed experts familiar with the subject matter to review an extensive list of items on which the instrument was then based. No such analysis was conducted by Organization Design and Development, Inc. with regard to the Corporate Culture Survey. Furthermore, criterion validity was not conducted for either test since there is no "actual" criterion to validate an individual's leadership style or beliefs regarding corporate culture.

Construct validity of a measure depends on whether the measure correlates with other measures of other constructs. If the constructs are associated, a high degree of correlation is expected (Bollen, 1989, p. 190). Nunnally (1978) stated that a construct often represents a half-formed hypothesis that a variety of behaviors will correlate with
one another (p.96). According to Richard Zeller and Edward Carmines (1980), "construct validity is the most appropriate and generally applicable type of validity used to assess measures in the social sciences" (p.83).

This being the case, construct validation was performed for each of the instrument scales used to examine the four research questions. There are three steps necessary in construct validation. First, the theoretical relationship between the concepts themselves must be determined. Second, empirical research and statistical analysis are used to determine the extent of a relationship between the concepts. Finally, the empirical evidence must be interpreted in terms of how it clarifies the construct validity of each measure (Nunnally, 1978, p.98; Zeller and Carmines, 1980, p.81).

With regard to the first step in construct validation, Nunnally (1978) stated that there is no precise method for outlining the domain of variables for a construct since the outline is based upon theory regarding how the variables will relate to one another. The theoretical foundation for the items used in this research has already been established in the Chapter 2 literature review. Based upon these theories, it was proposed that the five questions asked regarding each of the four cultural dimensions did indeed measure the values, rites, heroes and heroines, and cultural network of the program. These constructs were used to examine the second research question regarding the cultural strength of hospitality management programs.

The nine questions measuring transactional style and eight questions measuring transformational style were intended to measure each of these constructs in order to examine the first research question. The second research question was examined with five
questions for each of the four cultural dimensions of values, heroes and heroines, rites and rituals, and cultural network. The four work-role scales were intended to be measured by ten questions for each construct in order to explore the third research question. Finally, the theoretical relationship among the individual constructs was the basis for the fourth research question. How the two leadership styles related to the four work-roles and how all six constructs related to the cultural constructs was crucial to the examination of this research question.

During the second step of construct validity, scores are obtained for a sample of individuals on the measures and each measure is correlated with all of the other measures. An analysis of the resulting correlations provides evidence regarding the extent to which all of the measures relate to the same thing (Nunnally, 1978, p.100). For this research, correlations matrices were created for all of the scales and subsequent theorized relationships between scales. If the proposed measures show high correlations with one another in these tables, it can be concluded that they all measure much the same thing (Nunnally, 1978).

Although the procedure of examining correlations is similar to the one used for criterion validity, the size of the correlations differs. With criterion validation a sizable correlation that is at least 0.60 is expected between the new scale and an existing fully validated scale of the same construct (Steiber and Krowinski, 1990). However, with construct validation, somewhat weaker correlations in the range of 0.20 to 0.40 are expected between theoretically related constructs.
Finally, the results of this empirical analysis must be interpreted in terms of how it clarifies the construct validity of each measure. Sufficient evidence for construct validity is present when the supposed measures of the construct "behave as expected" (Nunnally, 1978, p.103). Convergent validity, which is a subclass of construct validity, is demonstrated when scores on a scale are found to correlate as predicted with other related constructs (Steiber and Krowinski, 1990, p.138). In this research, the theorized relationship between the each of the constructs was examined based upon the correlations of the summated scale scores.

Although this was the final step performed for construct validity in this study, Zeller and Carmines (1980) warn that true construct validity can not be ascertained during a single study. They stated that ideally construct validity requires a pattern of consistent findings conducted by different researchers over a significant period of time. They concluded that only when these conditions are met could one be confident of the construct validity of a particular measure (p.82).

Reliability

An instrument must not only measure what it is intended to measure, it must also measure consistently over time. This concept is commonly referred to as reliability. Linda Bourque and Virginia Clark (1992) stated with regard to reliability and validity that, “generally, reliability is more easily assessed, is more frequently assessed, and is assessed prior to assessing validity” (p.72). They also stressed that it is important to remember that demonstration that a measure is reliable does not ensure that it is valid (Bourque and Clark, 1992, p.72).
Reliability is the degree to which the results are consistent across time, data collectors, and items of the scale. Reliability is defined as the ratio of the variance of the true score to the variance of the actual measured score. According to Steiber and Krowinski (1990), the most important question to ask regarding the reliability of a measure is to what extent do all items in a particular scale measure the same construct (p.133). When items do measure the same thing they are said to be internally consistent, and the most common assessment of internal consistency is Cronbach's coefficient alpha (p.133).

The Cronbach alpha coefficient reflects the degree to which scale items measure the same attribute and is the preferred method for evaluating homogeneity of scales (Ferketich, as cited in Reed, 1995). Cronbach's alpha can be calculated by using either the covariance or correlation matrices. When the original item values are used to calculate alpha the variance-covariance matrix is used. When the item values are standardized, with the scores having a mean of zero and a variance of one, alpha is calculated by using the correlation matrix (Bourque and Clark, 1992).

Regardless of which matrix is used, the formula for alpha is:

\[ \alpha = \frac{P}{P-1} \times \left(1 - \frac{\Sigma(\text{diagonal})}{\Sigma(\text{all entries})}\right) \]

Where "P" equals the number of variables; "\( \Sigma(\text{diagonal}) \)" denotes the sum of all of the diagonal elements of the matrix which is the sum of the item variance; and "\( \Sigma(\text{all entries}) \)" denotes the sum of all of the elements of the matrix including the diagonal which is the variance of the total composite (Bourque and Clark, 1992, p.74, Zeller and Carmines, 1980, p.56)
The Cronbach’s alpha coefficient lies between zero and one. Zeller and Carmines (1980) recommend that scales ideally should have a reliability of at least 0.80; however, many widely used scales have reliabilities in the 0.65 to 0.80 range. Ferketich (as cited in Reed, 1995) further stated that an alpha of 0.60 is generally considered unacceptable, 0.70 is adequate for a new instrument, and 0.80 is necessary for a more established instrument.

Often, the alpha coefficient for a particular scale may be improved by removing certain variables with low reliability from the overall calculation. Borchgrevink (1997) stated that correcting the alpha coefficient often tricks others into believing that a better correlation was obtained than was actually found in the data. He suggested that it was reasonable to report correlation coefficients from both before and after any corrections that were made. All alpha coefficients, and any corrections that were deemed necessary, are fully addressed in the reliability discussion in Chapter 4.

In general, as the number of instrument items increases and as the average correlation among the items increases, alpha also increases (Zeller and Carmines, 1980). To limit the inflation of alpha simply due to an increase in items, alphas were calculated for each of the individual instrument scales used in this research.

The Cronbach’s alpha coefficients for each scale as measured by Reed (1995, p.117) during the creation of the original Leadership-Culture Dimensional Screening Scale (LCDSS) are displayed in Table 13. The transactional and transformational scales were used to examine the first research question, while the work-roles scales were used to examine the third question.
Table 13
Cronbach’s Alpha for Original LCDSS Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transactional</td>
<td>0.76</td>
</tr>
<tr>
<td>Transformational</td>
<td>0.84</td>
</tr>
<tr>
<td>Administrator</td>
<td>0.81</td>
</tr>
<tr>
<td>Manager</td>
<td>0.77</td>
</tr>
<tr>
<td>Supervisor</td>
<td>0.76</td>
</tr>
<tr>
<td>Leader</td>
<td>0.81</td>
</tr>
<tr>
<td>Overall for all 6 scales</td>
<td>0.90</td>
</tr>
</tbody>
</table>

The alpha coefficients for the second research question regarding the program’s culture were calculated for the Corporate Culture Survey. Alphas for each of the 4 dimensions measured with 5 questions each were calculated. In addition, an overall alpha for the combined 20-item scale was calculated. Cronbach’s alpha figures for the original Corporate Culture Survey were not calculated by Organization Design and Development, Inc.

All of the scales mentioned above will be used to explore the fourth research question regarding the relationship among the scales. Alpha coefficient for these scales were calculated for this research and are presented in the ensuing chapter.
Correlations

Correlation characterizes the existence of a relationship between variables. It indicates that two or more variables vary together, but indicates nothing about the reasons for the relationship. Correlation is often expressed in terms of the correlation coefficient. Specifically, the product-moment correlation coefficient is used to specify the degree of relationship between two variables expressed in the form of standard scores (Nunnally, 1978, p.123).

Correlation coefficient values range from +1.0 (perfect positive correlation) through 0.0 (no correlation) to -1.0 (perfect negative correlation). The correlation coefficient is represented by the symbol \( r \), and it is used so much more frequently than any other index that the word correlation is usually assumed to mean product-moment correlation (Nunnally, 1978, p.125). Simply stated, the \( r \) formula is a ratio between how much score deviation two distributions actually have in common, and the maximum amount of score deviation they could have in common (Williams, 1992, p.135).

While the magnitude (from zero to one) and the direction (positive or negative) of \( r \) are important, it is often more important to determine if \( r \) is significant. Under the assumption that \( r = 0 \), what is the probability of obtaining the value of \( r \) which was calculated? If the probability is below a predetermined level set for rejection (usually either 0.05 or 0.01), then the assumption that \( r = 0 \) would be rejected in favor of the assumption that the two variables are indeed correlated (Williams, 1992, p.136).

While statistical tests can be run for level of significance, what constitutes an acceptable magnitude of a correlation is often debated. S. Ferketich (as cited in Reed,
1995) stated that items with correlations below 0.30 are not sufficiently related to each other and therefore do not adequately measure the appropriate attribute. On the other hand, correlations above 0.70 may indicate item redundancy. An optimum level of item homogeneity occurs when the mean inter-item correlation is from 0.20 to 0.40 (Reed, 1995, p.46). Nunnally (1978) stated that on most test items the average correlation among items is less than 0.20. While a typical finding would be that two-thirds of the correlations were between 0.10 and 0.30 (p.275). J.P. Guilford (as cited in Williams, 1992, p.137), on the other hand, suggested the following correlation coefficient figures as a rough guide:

- < 0.20 slight; almost negligible relationship
- 0.20 - 0.40 low correlation; definite but small relationship
- 0.40 - 0.70 moderate correlation; substantial relationship
- 0.70 - 0.90 high correlation; marked relationship
- > 0.90 very high correlation; very dependable relationship

These differing measures of correlation magnitude were intended to show that there is not a great deal of consistency in research literature regarding acceptable correlation coefficient figures (Williams, 1992). However, the guides seem to suggest that correlations between 0.20 and 0.70 are frequently acceptable.

Pearson’s correlation coefficient was calculated for each instrument scale. Pearson’s correlation is used on quantitative, normally distributed variables, and it describes the strength of the linear association between variables measured at the interval level (Norusis, 1986, p.436). An example of a correlation matrix and Pearson correlation...
coefficients are presented in Table 14. In the table, correlation coefficients that are significant at the 0.05 level are identified with a single asterisk, and those significant at the 0.01 level are identified with two asterisks.

### Table 14

**Example Correlation Matrix**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.000</td>
<td>.359**</td>
<td>.351**</td>
<td>.147*</td>
</tr>
<tr>
<td>B</td>
<td>.359**</td>
<td>1.000</td>
<td>.256**</td>
<td>.313**</td>
</tr>
<tr>
<td>C</td>
<td>.351**</td>
<td>.256**</td>
<td>1.000</td>
<td>.219**</td>
</tr>
<tr>
<td>D</td>
<td>.147*</td>
<td>.313**</td>
<td>.219**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

A final word, and warning, regarding correlation coefficients. By no means does a large correlation coefficient indicate that one variable causes another (Norusis, 1986). It also does not imply that a correlation of 0.40 has twice the relationship of a one of 0.20. The correlation coefficient itself is simply a convenient index, it is not an actual measurement scale (Williams, 1992, p. 138).

Another useful table regarding correlations and reliability is presented in Table 15. The table displays what the scale mean and variance would be if the particular item indicated was deleted from the reliability analysis. The table also displays the corrected item-total correlation for each item. This correlation should be obtained when there is a small number of items in an instrument because the item to instrument relationship may be inflated when the number of items is small. The corrected item-total correlation adjusts
for this inflation. The higher the corrected item-total correlation between the item and the total scale, the better the item (Reed, 1995, p.46). Ferketich (as cited in Reed, 1995) reported that a correlation of 0.30 or higher represents an acceptable relationship.

Table 15

Example Reliability Analysis Table

<table>
<thead>
<tr>
<th>Scale</th>
<th>Corrected Mean if Item Deleted</th>
<th>Corrected Variance if Item Deleted</th>
<th>Item-Total Correlation</th>
<th>Alpha If Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>43.6456</td>
<td>172.4153</td>
<td>.8052</td>
<td>.9112</td>
</tr>
<tr>
<td>B</td>
<td>45.1068</td>
<td>161.0227</td>
<td>.8242</td>
<td>.9035</td>
</tr>
<tr>
<td>C</td>
<td>46.2087</td>
<td>157.4050</td>
<td>.8369</td>
<td>.8992</td>
</tr>
<tr>
<td>D</td>
<td>45.4029</td>
<td>150.6125</td>
<td>.8478</td>
<td>.8964</td>
</tr>
</tbody>
</table>

Alpha = .9253

Table 15 also displays an overall alpha of .9253 for the four items analyzed, as well as the alpha if a particular item were deleted. Even though the alpha may be improved by the removal of an item, the decision to do so should be done in light of theory and all other information regarding the item (Reed, 1995). While statistics such as those displayed in Table 15 were calculated for each of the instrument scales, the alphas for each scale were presented in summated tables in the data analysis discussion.
Analysis of Variance

Analysis of variance is a collection of statistical methods and models that deal with differences in the means of a variable across groups of observations (Iversen and Norpoth, 1987, p.7). Analysis of variance, often abbreviated as ANOVA, is a method to test whether several independent population means are equal (Norusis, 1986, p.279). Analysis of variance was used in this research to determine if the respondent's demographic characteristics differed along certain, research question-related criteria.

Assumptions

In order to perform an analysis of variance, the following assumptions are required: (a) independent random samples have been taken from each population, (b) the populations are normally distributed, and (c) the population variances are all equal (Norusis, 1986, p.283). Independent samples were obtained in this research because there is no relationship between the observations in the different groups and between the observations in the same groups (p.283). The samples for this research were obtained from the CHRIE Directory and the inclusion of one individual was not dependent on any other. In addition, the conditions under which the survey was completed were the same for all respondents.

In practice, analysis of variance is not heavily dependent on the assumption of normality. Normality should not be a concern unless the data are extremely non-normal (Norusis, 1986, p.283). However, with smaller sample sizes the impact of unusual observations should be taken into consideration (p.283). As previously mentioned,
histograms and boxplots were run on each of the samples in order to identify outlying observations and ensure relative normality.

The final assumption regarding analysis of variance pertains to the equality of the population variances. In practice, if the number of cases in each of the groups is similar, the equality of variance assumption is not too important (Norusis, 1986, p.283). Since each of the analysis of variances will be conducted using the listwise deletion method, equality of variance should not be a problem. Listwise deletion uses only the cases that have valid data for all specified test variables. This ensures that all of the tests are performed using the same cases (Norusis, 1986, p.233). Although this is generally the case, the Levene test, which is used to examine whether two samples come from populations with the same variance, was conducted prior to the analysis of variance.

Analysis of Variance Hypotheses

When examining data using the analysis of variance method, two hypothesis are generally stated. The first is the null hypothesis that is assumed to correctly describe the state of affairs. The second is the alternative hypothesis that describes the situation when the null hypothesis is false (Norusis, 1986,p.229). Most of the time when research is conducted, the null hypothesis claims the opposite of what you would like to be true (Norusis, 1986, p.229).

For each of the four research questions, the null hypothesis stated that the population means were equal. The hypothesis is then tested by calculating the F-ratio (Iversen and Norpoth, 1987, p.30). The F-ratio equation contains a numerator which
measures how much the group means differ from the overall mean, and a denominator
which measures how much the observations are spread out around the group means
(p.18). The numerator in the F-ratio equation is often refered to as the between-groups
estimate of variability and the denominator is refered to as the within-groups estimate of

The decision on whether to reject or fail to reject the null hypothesis is based on
comparing the between-groups and the within-groups estimates of variability. If the
between-groups estimate is sufficiently larger than the within-groups estimate, the null
hypothesis that all of the means are equal in the population will be rejected (Norusis, 1986,
p.286). Another way of stating this is that when the F-ratio is approximately equal to
1.00 it indicates that there is no difference between the population means and the
differences between the sample means is due only to random fluctuations (Iversen and
Norpoth, 1987, p.18). However, when the F-ratio is a good deal larger than 1.00, it
indicates that the variation in the group means is more than what could have been
expected by chance alone, and the population means are therefore different (Iversen and
Norpoth, 1987, p.31).

An example of the statistics obtained from an analysis of variance is displayed in
Table 16 on page 100. Whether or not the F-ratio is large enough to reject the null
hypothesis can be determined by analyzing the observed significance level ("Sig." in Table
16). The observed significance level indicates the probability of observing an F-ratio as
large, or larger, than the one calculated under the assumption that the population means
are equal (Iversen and Norpoth, 1987, p.20). In Table 16, the probability of obtaining an
F-ratio of 19.049 or larger when the null hypothesis is true is 0.000. If a 5% significance level were used in this analysis, the conclusion would be that the assumption of equal population means is incorrect. The difference between the sample means in Table 16 is significant, and the population means are therefore different (Iversen and Norpoth, 1987, p.20). Although analysis of variance tables were calculated for each of the demographic variables examined, only the results of these tests are discussed in Chapter 4.

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4482.89</td>
<td>62</td>
<td>72.305</td>
<td>19.049</td>
</tr>
<tr>
<td>Within-Groups</td>
<td>542.779</td>
<td>143</td>
<td>3.796</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5025.67</td>
<td>205</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rejection of the null hypothesis, however, simply indicates that the population means are not all equal. It does not indicate whether the difference is large or small (Iversen and Norpoth, 1987, p.20) or which means are different from the others (Dielman, 1996, p.460). Multiple comparison procedures can be used to pinpoint exactly where the differences in the means are located (Norusis, 1986, p.291).

Two commonly used multiple comparison procedures are the Bonferroni procedure and Tukey’s honestly significant difference test. When testing a large number of pairs of means, Tukey’s honestly significant difference test is more powerful than Bonferroni. For a small number of pairs, Bonferroni is more powerful (SPSS, 1995).
Since the analysis of variances performed in this research will compare a small number of pairs of means, Bonferroni's procedure was used. Bonferroni's procedure adjusts the observed significance level by multiplying it by the number of comparisons being made (Norusis, 1986, p. 292).

One-way analysis of variances were run for each of the first 3 research questions. The One-way ANOVA procedure produces an analysis of variance for a quantitative dependent variable by a single factor or independent variable (SPSS, 1995). The demographic variables of age, gender, race, highest level of education (degree), position title (title), years of hospitality industry experience (indexp), years in hospitality education (edu), years at current institution (inst), and years as program head at current institution (head), where used as the independent factors. The dependent variables differed for each of the three questions.

Research Questions

Analysis of variance was calculated for the first research question regarding what leadership styles were displayed by heads of four-year hospitality management programs. The aforementioned factors were analyzed against the two dependent variables of transactional and transformational leadership styles. As previously mentioned, these two variables were calculated from the summation of the program head's responses to the first 17 instrument questions.

The second research question regarding the strength of a program's culture measured by the four elements of: values, heroes and heroines, rites and rituals, and
cultural network was also examined with analysis of variance. As before, the demographic variables were used as factors measured against the dependent variables of values, heroes, rites, cultural network (culnet), and total cultural strength (totcul). Again, these variables were calculated from the summation of the faculty responses to the 20-question corporate culture instrument.

Finally, the third research question regarding how the work-roles of program heads were differentiated along the classifications of: supervisor, manager, administrator, and leader were examined through the use of analysis of variance. Once again, the demographic variables were used as factors measured against the dependent variables of supervisor (super), manager (mgr), administrator (admin), and leader (lead). As discussed, these variables were calculated from the summation of the program head’s responses to the 40 work-role questions.

**Summary of Analysis of Variance**

Although analysis of variance was used to examine these research questions, factor analysis could have also been used. Factor analysis is often used to identify underlying factors that explain the correlations among a set of variables. Its objective is to represent a set of variables in terms of a smaller number of hypothetical factors (Kim and Mueller, 1978).

Factor analysis was not utilized in this research for two reasons. Firstly, the four work-role and four cultural dimensions were identified a priori based upon leadership and corporate culture theory. Kim and Mueller (1978) stated that given the complexity as well
as the uncertainty inherent in factor analysis methods, the final judgement as to how factors are interpreted rests upon the basis of current standards of scholarship in one's own field (p.45). Korth (as cited in Reed, 1995) also agreed that the decision regarding the number of factors rests on those highly personal constructions known as theories (p.73).

Secondly, the size of both samples, particularly the program head sample, were deemed too small for adequate factor analysis. Comrey and Lee (as cited in Tabachnick and Fidell, 1996) provided a guide of sample sizes of 50 as very poor, 100 as poor, 200 as fair, 300 as good, 500 as very good, and 1000 as excellent. “As a general rule of thumb, it is comforting to have at least 300 cases for factor analysis” (p.640). Since the sample of faculty would have only been fair, and the entire population of program heads of four-year hospitality management programs in the United States is only 153, factor analysis was not conducted on either sample.

**Discriminate Analysis**

While analysis of variance was used to examine the first 3 research questions, discriminate function analysis was used to explore the fourth research question regarding the relationship between the leadership styles and work-roles of program heads and the cultural strength of four-year hospitality management programs.

Discriminate function analysis is a statistical technique used to simultaneously analyze the differences between two or more groups with respect to several variables (Klecka, 1980). An objective of discriminate function analysis is to find the functions or
composites of the variables that maximally discriminate among the groups being analyzed (Thorndike, 1978, p.203).

Assumptions

The basic prerequisites for discriminate analyses are that two or more groups exist which are presumed to vary along several variables (Klecka, 1980). It is also assumed that each group is selected from a population that has a multivariate normal distribution (p.10).

In order to meet the assumption of multivariate normality, probability plots were run for each variable against all of the other variables used in the analysis. In a normal probability, or Q-Q plot, as shown in Figure 3, the points should cluster around a straight line if the data are from a normal distribution (Norusis, 1986, p.246). However, if this assumption is violated, the computed probabilities of group membership are not exact, but they may still be useful if interpreted with caution (Klecka, 1980, p.10).

Figure 3

Example Q-Q Plot
Another assumption states that no variable can be a linear combination of other discriminating variables (Klecka, 1980). In other words, the observations must be independent. Another assumption states that the variances among the groups must be (approximately) equal or homogeneous (Reed, 1995). The Box's M test was used to determine the equality of the group covariance matrices. The null hypothesis for the test states that there is no difference in the variance among the variables used (Reed, 1995). Therefore, if the test statistic is not significant it indicates that the groups appear to have the required equal group covariance matrixes.

A final assumption regarding discriminate analysis is that the sample size be large with relation to the number of variables. Stevens (as cited in Reed, 1995) stated that the sample size to variable ratio must be 20:1 if the results are to be stable.

**Interpretation of Statistics**

The discriminate analysis method creates a canonical discriminate function which is a linear combination of the discriminating variables (Klecka, 1980). The process attempts to obtain weights for each observation so as to maximize the ratio of between-means variance to within-groups variance (Nunnally, 1978, p.456). These terms are similar to the between and within variance previously discussed regarding analysis of variance.

When more than two groups are analyzed, the first discriminate function represents a linear combination of variables which maximizes the ratio of the between-means variance to the within-groups variance (Nunnally, 1978). Then a second function is created which maximizes whatever is not included in the first function (Williams, 1992). In discriminate
analysis it is possible to derive as many functions as variables, or one less than the number of groups, whichever is less (Nunnally, 1978, p.458).

As displayed in Table 17, numerous statistics are generated when a discriminate analysis is performed. In this example, three discriminate functions have been calculated,

<table>
<thead>
<tr>
<th>Function</th>
<th>Eigenvalue</th>
<th>Percent of Variance</th>
<th>Canonical Corr.</th>
<th>Wilks’ Lambda</th>
<th>Chi-square</th>
<th>df</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14.092</td>
<td>63.46</td>
<td>.9663</td>
<td>.003</td>
<td>142.81</td>
<td>108</td>
<td>.014</td>
</tr>
<tr>
<td>2</td>
<td>6.409</td>
<td>28.86</td>
<td>.9301</td>
<td>.049</td>
<td>74.95</td>
<td>70</td>
<td>.320</td>
</tr>
<tr>
<td>3</td>
<td>1.70</td>
<td>7.68</td>
<td>100</td>
<td>.7940</td>
<td>24.88</td>
<td>34</td>
<td>.873</td>
</tr>
</tbody>
</table>

with the first having the largest eigenvalue (14.092) and thereby the most discriminatory power (Klecka, 1980). For ease of comparison, the eigenvalue are converted into relative percents of variance. Once again, the first function is the largest, representing 63.46% of the total discriminating power in this system of equations.

The next statistic of note in Table 17 is the canonical correlation coefficient which is interpreted in a manner similar to the coefficient of correlation (Williams, 1992). The coefficient is a measure of associate between the groups and the discriminate function. A high coefficient, like the .9663 found in Table 17, indicates that a strong relationship exists between the groups and the first discriminate function (Klecka, 1980, p.37).

The final two statistics presented in Table 17 estimate the statistical significant of each discriminate function. The most common test for statistical significance is the Wilks’
lambda that is a multivariate measure of group differences over several variables (Klecka, 1980, p.38). Wilks' lambda is an inverse measure with values near zero indicating high discrimination and values near 1.0 indicating less discrimination (Klecka, 1980). The lambda in Table 17 of 0.03 indicates that the first discriminate function is extremely effective in differentiating among the groups.

The significance of the lambda can then be determined by testing the chi-square statistic (Klecka, 1980). With a chi-square of 142.81 with 108 degrees of freedom and a 0.014 significance level, the first function in Table 17 is statistically significant (p<0.05). It can be assumed that these results did come from a population which did have differences between the groups (Klecka, 1980). Only the first function is statistically significant in Table 17, which is often the case since generally, only the first few discriminate functions are statistically significant (Thorndike, 1978, p.220).

Discriminate function analysis also calculates standardized coefficients, which describe in standard score form the weighting of each of the discriminate variables on each of the functions (Williams, 1992, p.196). These coefficients are useful because they are used to determine which variables contribute the most to determining the scores on the function. The larger the magnitude, regardless of sign, the greater the variable's contribution (Klecka, 1980, p.30).

Finally, the group centroids are calculated for each of the discriminate functions. If the groups are discriminated well, the centroids will be far apart and the individual member points will be clustered around the centroid (Nunnally, 1978). In addition, for one-function cases, a dividing point between two groups can be calculated by taking one half
of the sum of the discriminate scores for the two group centroids (Klecka, 1980). Based upon this dividing point, SPSS software can generate the predicted group membership of each observation.

The discriminate score of each observation can also be calculated and saved by the SPSS computer software program. A discriminate score for any observation on a particular composite can be calculated by multiplying the observation's standard scores on the variables by the vector of weights for each of the possible composites (Thorndike, 1978, p.218). The discriminate scores and centroids can then be plotted along the discriminate function axes to create a territorial plot which provides a visual representation of the discrimination between groups.

Another objective of discriminate analysis is to use the information obtained from it to classify or predict the group to which an observation most likely belongs (Klecka, 1980). Often when the sample size is large enough, validation of the effectiveness of the classification is done by splitting the sample and using one subset to derive the function and the other to test the classification (Klecka, 1980). The observations that are held out can then be used to test if the functions can accurately place new individuals into groups when there membership is not known (Nunnally, 1978). This procedure was not followed in this research due to the extremely small sample size. Instead, a classification matrix was created in order to determine the proportion of observations correctly classified (Klecka, 1980, p.49).
Revised LCDSS Model

As mentioned earlier, discriminate analysis was used in this research to examine the relationship between the program head’s leadership style and work-role, and the corporate culture of the program. Specifically, this analysis was conducted in an effort to provide information regarding whether leadership styles and cultural strength could adequately discriminate among the four hypothesized work-roles. Figure 4 displays the hypothetical model used to examine this question which was developed based upon the work of Mitchell and Tucker (1992), Reed (1995), Deal and Kennedy (1982), and Glaser (1991).

Figure 4

Revised LCDSS Model

<table>
<thead>
<tr>
<th>Transactional Style</th>
<th>Transformational Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong Culture</td>
<td></td>
</tr>
<tr>
<td>Supervisor</td>
<td>Administrator</td>
</tr>
<tr>
<td>Weak Culture</td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td>Leader</td>
</tr>
</tbody>
</table>

Theoretical relationships can be created for each of the above quadrants. For example, a program head with a transactional leadership style who is currently residing in
a strong corporate culture should demonstrate the characteristics of the supervisor work-role. Since the variables used to measure these constructs were obtained from different sources using different instruments, it was necessary to examine the data on the program level. For programs where multiple faculty responded to the cultural instrument, an average was calculated to obtain an overall culture score for each individual program. This composite culture score was then used in the discriminate analysis.

An additional data conversion was necessary before the discriminate analysis could be performed. As Reed (1995) did in her original study, the cultural and leadership style scales were converted into dichotomous categorical variables (p.115). A program with a strong culture was coded as “1”, while a weak culture was coded as “0”. Likewise, transformational leaders were coded as “1”, while transactional were coded as “0”. These values were then used as the independent variables against the work-role group variables in the ensuing discriminate analysis.

A unique feature of discriminate function analysis is that it provides two sources of interpretation of the data. Meaningful information on group membership can be ascertained as well as information regarding the relationship between the variables and the composites (Thorndike, 1978) In a sense, each source of information provides a cross-check on the interpretation derived from the other. One should be wary of an interpretation from one source of information that is not confirmed by the interpretation from the other (p.216).

Finally, although Nunnally (1978) stated that discriminate function analysis is not used nearly as much as it should be (p.467), he also warned that the results are often
difficult to interpret. He stated that unless there are significant differences on a majority of the variables, it is difficult to interpret the overall significance of differences between groups (p.454). However, he concluded that discriminate function analysis has proved more useful in understanding differences among central tendency (i.e., the centroid) of various groups, than it has in placing members into particular groups (p.466).

**Summary**

The intent of this chapter was to explain what methodology would be administered in the exploration of the four research questions. The research process concerned with the determination of the sample size, sampling procedures, and data collection was addressed. The methods of instrument construction and means of conducting an in-depth analysis of each instrument item were discussed. These instruments were then tested on a pilot study and the procedures followed for that study were outlined.

The methods for conducting statistical analyses on the data obtained from these instruments were then addressed. The procedures for testing data for normality and unusual outlying values were reviewed. In addition, the methods of calculating means, standard deviations, and validity and reliability statistics for each of the scales were furnished. Finally, the processes used to examine data with analyses of variance and discriminate function analyses were presented. All of these statistical procedures were performed in order to provide information used to explore and clarify the four research questions. The results of these procedures are discussed in the succeeding chapter.
CHAPTER 4

DATA ANALYSIS

This chapter reports the statistical analyses performed on the data collected from the two survey instruments. The information obtained from these procedures was used to examine each of the four research questions. This chapter progresses in a similar manner to the preceding chapter, and concludes with a general summary of the methodology utilized in this research.

The Research Process

Sample size

A sample size for the 57-item revised Leadership-Culture Dimensional Screening Scale administered to program heads of between 285 and 570 subjects was not attainable for this research. As previously mentioned, the entire population for four-year hospitality management program heads in the United States is only 153 subjects. The final usable responses from the program heads in this research were 62, which represented a 41.33% response rate and only 1.09 subjects per instrument item. Since these responses violate the 5 to 10 subjects per item guidelines set by DeVellis and Nunnally, caution should be
used in the interpretation of the results obtained from this instrument. However, this rate does not appear to have fatally flawed the results of this research.

With regard to the 20-item Corporate Culture Survey administered to faculty members an adequate sample size would have been somewhere between 100 and 200 subjects. The faculty sample for this research was actually above the established guidelines since the final usable responses from faculty members were 231, representing a 41.40% response rate and 11.50 subjects per instrument item.

**Response rate**

Table 18 on page 114 displays a comparison of the demographic characteristics of the program heads (Heads) who participated in this research with those obtained from research conducted by Laudadio (1987) and Partlow & Gregoire (1993). The demographic data for the studies conducted by both Laudadio and Partlow and Gregoire were presented as response ranges. Laudadio (1987) presented the means for each category in his research, while Partlow and Gregoire (1993) simply reported frequencies. In order to calculate the means in the above table, certain assumptions regarding the ranges reported by Partlow and Gregoire were made. An enlightened guess as to a reasonable value for the midpoints of the last, open-ended ranges was necessary (Blalock, 1979).

As Table 18 shows, there is a great deal of similarity between the demographic characteristics of the three samples. There are three noteworthy discrepancies. First, Partlow and Gregoire reported a much higher percentage of males. Second, the program
heads in this research are slightly older than those reported in the two previous studies.

Third, the program heads in this research have more years of industry experience and a
different dispersion of administrative ranks than the program heads in Partlow and
Gregoire’s study. Overall, however, these figures appear to support the contention that
the present sample is fairly representative of the population of heads of four-year
hospitality management programs.

Table 18

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Laudadio</th>
<th>Partlow &amp; Gregoire</th>
<th>Heads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender: Male</td>
<td>64.4%</td>
<td>80%</td>
<td>66.7%</td>
</tr>
<tr>
<td>Average Age (years)</td>
<td>47</td>
<td>47</td>
<td>50.6</td>
</tr>
<tr>
<td>Degree:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctorate</td>
<td>59.7%</td>
<td>65%</td>
<td>67.3%</td>
</tr>
<tr>
<td>Masters</td>
<td>37.5%</td>
<td>35%</td>
<td>32.7%</td>
</tr>
<tr>
<td>Years of industry experience</td>
<td>na</td>
<td>8</td>
<td>15.6</td>
</tr>
<tr>
<td>Years in hospitality education</td>
<td>12</td>
<td>13</td>
<td>12.7</td>
</tr>
<tr>
<td>Years at current institution</td>
<td>na</td>
<td>na</td>
<td>12.7</td>
</tr>
<tr>
<td>Years as program head</td>
<td>7</td>
<td>7</td>
<td>6.8</td>
</tr>
<tr>
<td>Administrative rank:</td>
<td>na</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dean</td>
<td>10%</td>
<td></td>
<td>17.3%</td>
</tr>
<tr>
<td>Department Head</td>
<td>20%</td>
<td></td>
<td>21.2%</td>
</tr>
<tr>
<td>Chairperson</td>
<td>16%</td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td>Director</td>
<td>44%</td>
<td></td>
<td>23.1%</td>
</tr>
<tr>
<td>Coordinator</td>
<td>6%</td>
<td></td>
<td>9.6%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td></td>
<td>3.8%</td>
</tr>
</tbody>
</table>
Table 19 displays the comparison of the demographic characteristics of the faculty respondents in this research with those obtained by Pizam and Milman (1987) and Barrows (1990). Once again the results of these studies were presented as response ranges and it was necessary to make certain assumptions in order to calculate the means.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Pizam and Milman</th>
<th>Barrows</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender: Male</td>
<td>65%</td>
<td>na</td>
<td>64%</td>
</tr>
<tr>
<td>Average Age (years)</td>
<td>42</td>
<td>44</td>
<td>47.4</td>
</tr>
<tr>
<td>Degree:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctorate</td>
<td>41.8%</td>
<td>48.1%</td>
<td>62%</td>
</tr>
<tr>
<td>Masters</td>
<td>51.5%</td>
<td>44.5%</td>
<td>30.5%</td>
</tr>
<tr>
<td>Other</td>
<td>6.7%</td>
<td>7.4%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Years of industry experience</td>
<td>na</td>
<td>7.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Years in hospitality education</td>
<td>11</td>
<td>10.3</td>
<td>12.7</td>
</tr>
<tr>
<td>Years at current institution</td>
<td>7.5</td>
<td>7</td>
<td>10.5</td>
</tr>
<tr>
<td>Academic rank:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td>25.9%</td>
<td>19.4%</td>
<td>15.7%</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>34.2%</td>
<td>40.6%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>24.1%</td>
<td>25.3%</td>
<td>27.6%</td>
</tr>
<tr>
<td>Professor</td>
<td>15.8%</td>
<td>12.4%</td>
<td>18.4%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>2.3%</td>
<td>9.7%</td>
</tr>
</tbody>
</table>
There also appears to be a great deal of similarity between the demographic characteristics of the faculty samples displayed in Table 19. Some differences of note between this research and the others are the larger percentage of faculty with doctorates; the greater number of years of experience in both industry and education; and the longer tenure at their current institution. The variance in years along these characteristics may be due to the fact that the other two studies were conducted a few years ago, hence the respondents have matured and accumulated more experience over the years. Even with these differences considered, the demographic figures appear to support the contention that the present sample is fairly representative of the population of faculty of four-year hospitality management programs.

A sample of 231 faculty members was obtained from one mailing. Further mailings were not deemed necessary since, using Dillman's equation from Chapter 3, this resulted in a 41.4% response rate. Of the total of 578 mailings, 9 individuals were classified as noneligible. Two respondents indicated that they were no longer faculty members; five respondents indicated that they were no longer educators in hospitality management; and two respondents indicated that their schools no longer had hospitality management programs. An additional 11 individuals were classified as nonreachable. Three instruments were marked return to sender with no forwarding address. While eight instruments were returned indicating that the addressee was no longer a faculty member at that particular institution. Twelve additional instruments were marked return to sender, but did have forwarding addresses. These instruments were re-addressed and mailed.
It was necessary to contact additional program heads by phone and fax in order to supplement the responses obtained from the first mailing. A second cover letter along with an additional copy of the survey instrument was faxed to non-respondents (Appendix K). This resulted in the collection of 62 total responses which equated to a 41.33% response rate. This figure was based upon Dillman's equation with 3 noneligible and zero nonreachable program heads.

Results of Pilot Study

Although the pilot study was conducted on a small sample, its participants provided useful suggestions. These suggestions have already been addressed. Even with the small sample, some of the basic statistics calculated on the data proved interesting. These figures were then used to examine each of the four research questions.

With respect to the first question, three of the four program heads rated higher on the transformational leadership style than on the transactional style. In response to the second question, the faculty respondents rated the culture of the pilot program weak along all four of the dimensions, which naturally resulted in a weak total culture score.

Regarding the third question, three program heads were rated highly along the leader work-role while one was rated highly along the administrator work-role. Theoretically this makes sense since individuals who rank highly on transformational style should rank highly along the leader and administrator work-roles. However, the one respondent who was rated as transactional was also rated as an administrator, which is contrary to the model.
Finally, although discriminate analysis was not conducted on the pilot study due to the small sample size, the means of the summated scales were compared. Since the culture of the pilot program was weak, the model used to examine the fourth research question would theorize that program heads that displayed transactional styles would rate highly on the manager work-role. Subsequently, program heads that displayed transformational styles would rate highly on the leader work-role. The latter was found to be the case, as three program heads were classified as transformational leaders in this weak culture. The exception was the one individual who was transactional but rated highly on the administrator work-role. Although these results were only based upon 15 respondents, they did provide enough support of the theorized relationships between the constructs to justify proceeding with the research.

Statistical Analysis

Normality

As mentioned in Chapter 3, many statistical analyses assume that the data is normally distributed. To that end, histograms and boxplots were generated and analyzed for each of the instrument scales. None of the histograms or boxplots run on the corporate culture scales were decidedly non-normal. The values scale was slightly skewed toward higher figures while the rites scale was slightly skewed toward lower figures. Skewness is a measure of the asymmetry of a distribution. The normal distribution is symmetric, and has a skewness value of zero. A distribution with a significant positive
skewness has a long right tail. A distribution with a significant negative skewness has a long left tail (SPSS, 1995). The heroes, cultural network, and most importantly for further analyses, the total cultural scale were all normally distributed around their respective means.

The scales on the revised LCDSS administered to the program heads were also tested for normality. The transactional style scale was normally distributed, as was the transformational scale, although it was slightly skewed toward higher values. The histograms and boxplots showed that the manager work-role variables were normally distributed. The work-role scales of leader and administrator, on the other hand, were decidedly skewed toward larger values, while the supervisor work-role was skewed toward lower values.

**Missing Values and Outliers**

Frequencies obtained for all variables indicated a few coding errors. These coding errors were corrected immediately. Boxplots of all variables and summated scales were also analyzed for outliers. Although some of the boxplots of the program head instrument scales showed the presence of outliers, the outlier values were not so extreme as to warrant exclusion from the data set. With such a small sample, the potential effect of outliers on the analyses is greater. As a test of the effect of the outliers, some of them were removed and certain analyses were conducted with little variation in results. Therefore, these observations were not excluded from the final data set.
Finally, the data for all respondents was visually analyzed for any unreasonable demographic values regarding age, years of hospitality industry and educational experience, and years at current institution. The only extreme value of note was a response from a 45-year-old faculty member who claimed to have 45 years of industry experience. This was deemed unrealistic and this observation was deleted from the calculation of average years of industry experience. No other extreme values were reported.

Means & Standard Deviations

The means and standard deviations for all of the variables used in this research are displayed in the tables that follow. The 17 variables used to explore the first research question regarding the program head’s leadership style will be discussed followed by a discussion of the 20 variable faculty instrument used to examine the second research question regarding corporate culture. Finally, the 40 questions used to address the third research question regarding the program head’s work-role will be discussed. As mentioned earlier, all of these variables are used to examine the fourth research question regarding the relationship between all of these constructs.

Since all of the responses for all of the variables were rated on a scale from 0 to 5, the midpoint for each variable was 2.5. Therefore, most responses should fall in the 2 to 3 range (Reed, 1995). Furthermore, as indicated in Chapter 3, the standard deviations for a 5-point scale should fall between 1.09 and 1.4. These same guidelines are used to evaluate the means and standard deviations for each instrument variable.
First Research Question

The means and standard deviations for the 17 variables used to answer the first research question are displayed in Tables 20 and 21. Some of the means for the transactional style variables (TA16, TA6) fall below the means guideline and one variable (TA3) is above the guideline. However, each of these variables fell well within the range of acceptable standard deviations, and the magnitude of their means is not alarming. Three additional variables (TA1, TA10, and TA12) do not fall within the acceptable standard deviation range. A wide dispersion of responses may indicate that...
these item do not adequately differentiate along the transactional leadership construct.

This point was further analyzed when correlations and Cronbach’s alpha coefficients were generated for each scale.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF11</td>
<td>60</td>
<td>2.25</td>
<td>1.26</td>
</tr>
<tr>
<td>TF13</td>
<td>61</td>
<td>3.67</td>
<td>1.17</td>
</tr>
<tr>
<td>TF15</td>
<td>61</td>
<td>3.95</td>
<td>1.19</td>
</tr>
<tr>
<td>TF17</td>
<td>61</td>
<td>3.93</td>
<td>1.12</td>
</tr>
<tr>
<td>TF2</td>
<td>61</td>
<td>4.26</td>
<td>1.09</td>
</tr>
<tr>
<td>TF4</td>
<td>61</td>
<td>4.02</td>
<td>1.19</td>
</tr>
<tr>
<td>TF5</td>
<td>60</td>
<td>4.07</td>
<td>1.13</td>
</tr>
<tr>
<td>TF7</td>
<td>61</td>
<td>3.66</td>
<td>1.13</td>
</tr>
<tr>
<td>Valid N</td>
<td>59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Most of the means for the transformational leadership style variables are fairly high with three (TF2, TF4, and TF5) exceeding the upper mean limit. Additionally, most of the standard deviations are within the range limits. These statistics would appear to indicate that most of the program heads tend to agree that the transformational style is “mostly characteristic” of their leadership style.
Finally with regard to these leadership style variables, Table 22 displays the means, standard deviations, and minimum and maximum scores for each of the summated scales. The nine item transactional scale should have a midpoint of 22.5, while the eight item transformational scale should have a midpoint of 20.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSACT</td>
<td>60</td>
<td>6</td>
<td>38</td>
<td>23.55</td>
<td>5.96</td>
</tr>
<tr>
<td>TRANSFOR</td>
<td>58</td>
<td>19</td>
<td>37</td>
<td>30.69</td>
<td>3.98</td>
</tr>
</tbody>
</table>

Table 22 shows that only the mean of the transactional scale falls within the prescribed ranges. The mean of the transformational scale is quite high and the standard deviations for both scales are rather low. This is another indication that the program heads rated much higher on the transformational scale and that the dispersion of responses is rather small.

Second Research Question

Information pertaining to the second research question regarding the cultural strength of hospitality management programs was obtained from the 20 item Corporate Culture Survey. The means and standard deviations for the values, heroes and heroines, rites and rituals, and cultural network variables are displayed in Tables 23, 24, 25, and 26,
respectively. All variable means and standard deviations for each scale fall within the
specified ranges.

Table 23

Means and Standard Deviations for Values Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>228</td>
<td>2.85</td>
<td>1.26</td>
</tr>
<tr>
<td>V13</td>
<td>228</td>
<td>3.37</td>
<td>1.25</td>
</tr>
<tr>
<td>V17</td>
<td>230</td>
<td>3.86</td>
<td>1.20</td>
</tr>
<tr>
<td>V5</td>
<td>230</td>
<td>3.15</td>
<td>1.32</td>
</tr>
<tr>
<td>V9</td>
<td>231</td>
<td>3.07</td>
<td>1.21</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td></td>
<td>224</td>
<td></td>
</tr>
</tbody>
</table>

Table 24

Means and Standard Deviations for Heroes & Heroines Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H10</td>
<td>230</td>
<td>2.93</td>
<td>1.23</td>
</tr>
<tr>
<td>H14</td>
<td>230</td>
<td>3.63</td>
<td>1.20</td>
</tr>
<tr>
<td>H18</td>
<td>229</td>
<td>2.83</td>
<td>1.33</td>
</tr>
<tr>
<td>H2</td>
<td>229</td>
<td>3.14</td>
<td>1.14</td>
</tr>
<tr>
<td>H6</td>
<td>229</td>
<td>2.41</td>
<td>1.33</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td></td>
<td>226</td>
<td></td>
</tr>
</tbody>
</table>
Table 25

Means and Standard Deviations for Rites & Rituals Variables

<table>
<thead>
<tr>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>R11</td>
</tr>
<tr>
<td>R15</td>
</tr>
<tr>
<td>R19</td>
</tr>
<tr>
<td>R3</td>
</tr>
<tr>
<td>R7</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>230</td>
<td>3.53</td>
<td>1.10</td>
</tr>
<tr>
<td>230</td>
<td>2.50</td>
<td>1.31</td>
</tr>
<tr>
<td>229</td>
<td>2.70</td>
<td>1.27</td>
</tr>
<tr>
<td>231</td>
<td>2.99</td>
<td>1.38</td>
</tr>
<tr>
<td>231</td>
<td>2.16</td>
<td>1.26</td>
</tr>
<tr>
<td>229</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 26

Means and Standard Deviations for Cultural Network Variables

<table>
<thead>
<tr>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12</td>
</tr>
<tr>
<td>C16</td>
</tr>
<tr>
<td>C20</td>
</tr>
<tr>
<td>C4</td>
</tr>
<tr>
<td>C8</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>229</td>
<td>3.26</td>
<td>1.30</td>
</tr>
<tr>
<td>228</td>
<td>2.64</td>
<td>1.38</td>
</tr>
<tr>
<td>229</td>
<td>3.17</td>
<td>1.23</td>
</tr>
<tr>
<td>231</td>
<td>2.77</td>
<td>1.25</td>
</tr>
<tr>
<td>230</td>
<td>2.76</td>
<td>1.24</td>
</tr>
<tr>
<td>225</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Table 27

Means and Standard Deviations for Summated Cultural Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALUES</td>
<td>224</td>
<td>5</td>
<td>25</td>
<td>16.32</td>
<td>4.21</td>
</tr>
<tr>
<td>HEROES</td>
<td>226</td>
<td>3</td>
<td>24</td>
<td>14.98</td>
<td>4.55</td>
</tr>
<tr>
<td>RITES</td>
<td>229</td>
<td>5</td>
<td>25</td>
<td>13.86</td>
<td>4.55</td>
</tr>
<tr>
<td>CULNET</td>
<td>225</td>
<td>3</td>
<td>25</td>
<td>14.60</td>
<td>4.87</td>
</tr>
<tr>
<td>TOTCUL</td>
<td>218</td>
<td>24</td>
<td>94</td>
<td>59.68</td>
<td>16.53</td>
</tr>
</tbody>
</table>

Valid N (listwise) 218

Finally with regard to the faculty instrument, the means and standard deviations for each of the four summated scales were calculated. These values had a potential range of 0 to 25 and a midpoint of 12.5. In addition, these four scales were summed to create the total culture score. This score had a potential range of 0 to 100 and a midpoint of 50. Table 27 displays the minimum and maximum scores for each of the scales. The means for all of these scales were slightly higher than expected and the standard deviations were lower. This would indicate that as a whole, the faculty tended to agree that these items were true of their respective programs resulting in higher cultural strength scores.

Third Research Question

Means and standard deviations were also computed for the 40 questions which were used to examine the third research question regarding the program head’s work-
roles. As stated earlier, the variables were rated on a 0 to 5 scale with a midpoint of 2.5 and a standard deviation range of 1.09 to 1.4. Tables 28 through 31 display these statistics for the 10 questions designed to measure the 4 work-roles of supervisor, manager, administrator, and leader. Table 32 displays the means, standard deviations, and minimum and maximum scores for each of the summated work-role scales.

Most of the supervisor work-role variables shown in Table 28 have means that are within the specified range. However, variables SU19, SU37, and SU56 have means

Table 28

Means and Standard Deviations for Supervisor Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SU19</td>
<td>61</td>
<td>1.64</td>
<td>.86</td>
</tr>
<tr>
<td>SU21</td>
<td>61</td>
<td>3.61</td>
<td>.84</td>
</tr>
<tr>
<td>SU26</td>
<td>61</td>
<td>2.28</td>
<td>.97</td>
</tr>
<tr>
<td>SU32</td>
<td>61</td>
<td>2.00</td>
<td>1.00</td>
</tr>
<tr>
<td>SU35</td>
<td>60</td>
<td>2.60</td>
<td>1.06</td>
</tr>
<tr>
<td>SU37</td>
<td>61</td>
<td>1.90</td>
<td>.81</td>
</tr>
<tr>
<td>SU44</td>
<td>61</td>
<td>2.21</td>
<td>1.05</td>
</tr>
<tr>
<td>SU47</td>
<td>61</td>
<td>2.36</td>
<td>1.00</td>
</tr>
<tr>
<td>SU53</td>
<td>60</td>
<td>2.07</td>
<td>1.15</td>
</tr>
<tr>
<td>SU56</td>
<td>61</td>
<td>1.93</td>
<td>1.03</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
below the expected value and they also have low standard deviations. This may indicate that these particular variables do not adequately differentiate the extent to which a program head displays the characteristics of a supervisor.

Table 29 shows that the means for most of the manager variables are well within the expected range (although MG43 is not). Likewise most of the standard deviations are as expected, although a few (MG28, MG30, MG38, and MG43) are below the 1.09 lower range value.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG23</td>
<td>60</td>
<td>2.87</td>
<td>1.02</td>
</tr>
<tr>
<td>MG28</td>
<td>61</td>
<td>3.98</td>
<td>.81</td>
</tr>
<tr>
<td>MG30</td>
<td>59</td>
<td>2.90</td>
<td>.92</td>
</tr>
<tr>
<td>MG33</td>
<td>60</td>
<td>3.72</td>
<td>1.18</td>
</tr>
<tr>
<td>MG36</td>
<td>61</td>
<td>2.92</td>
<td>1.16</td>
</tr>
<tr>
<td>MG38</td>
<td>60</td>
<td>3.92</td>
<td>.79</td>
</tr>
<tr>
<td>MG40</td>
<td>61</td>
<td>2.82</td>
<td>1.06</td>
</tr>
<tr>
<td>MG43</td>
<td>61</td>
<td>4.36</td>
<td>.68</td>
</tr>
<tr>
<td>MG46</td>
<td>61</td>
<td>2.52</td>
<td>1.04</td>
</tr>
<tr>
<td>MG51</td>
<td>61</td>
<td>2.66</td>
<td>1.05</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The majority of the means for the administrator and leader variables shown in Tables 30 and 31, respectively, are above the expected range. Additionally, the standard deviations for many of these variables are quite low. This would indicate that the program heads tend to agree with many of the items in both of these scales. The high means and low standard deviations may indicate that these variables do not adequately differentiate the extent to which a program head displays the administrator or leader characteristics. These concerns will be addressed further when the Cronbach’s alpha is measured for each scale.

Table 30

Means and Standard Deviations for Administrator Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD18</td>
<td>61</td>
<td>3.34</td>
<td>1.20</td>
</tr>
<tr>
<td>AD20</td>
<td>61</td>
<td>4.70</td>
<td>.61</td>
</tr>
<tr>
<td>AD24</td>
<td>61</td>
<td>4.26</td>
<td>.75</td>
</tr>
<tr>
<td>AD25</td>
<td>61</td>
<td>4.18</td>
<td>.83</td>
</tr>
<tr>
<td>AD29</td>
<td>61</td>
<td>4.34</td>
<td>.73</td>
</tr>
<tr>
<td>AD39</td>
<td>61</td>
<td>3.31</td>
<td>.96</td>
</tr>
<tr>
<td>AD45</td>
<td>61</td>
<td>3.72</td>
<td>.97</td>
</tr>
<tr>
<td>AD48</td>
<td>61</td>
<td>4.48</td>
<td>.67</td>
</tr>
<tr>
<td>AD50</td>
<td>61</td>
<td>3.72</td>
<td>1.08</td>
</tr>
<tr>
<td>AD53</td>
<td>60</td>
<td>3.17</td>
<td>1.32</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Finally with regard to the work-role variables, Table 32 displays the statistics for each of the summated scales. With 10 questions ranging from 0 to 5, the midpoint for each scale should be 25. The results displayed in Table 32 are not surprising based upon the above discussion of each of the individual scales. The supervisor mean is below the 25 midpoint and its minimum and maximum values are much lower than any of the other scales. All three of the other scales have means that are much higher than would normally be expected, while all four scales have standard deviations that are lower than expected.

Table 31
Means and Standard Deviations for Leader Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD22</td>
<td>60</td>
<td>3.97</td>
<td>1.13</td>
</tr>
<tr>
<td>LD27</td>
<td>61</td>
<td>4.54</td>
<td>.65</td>
</tr>
<tr>
<td>LD31</td>
<td>61</td>
<td>4.30</td>
<td>.72</td>
</tr>
<tr>
<td>LD34</td>
<td>61</td>
<td>4.41</td>
<td>.64</td>
</tr>
<tr>
<td>LD41</td>
<td>60</td>
<td>4.05</td>
<td>.75</td>
</tr>
<tr>
<td>LD42</td>
<td>61</td>
<td>4.23</td>
<td>.69</td>
</tr>
<tr>
<td>LD49</td>
<td>60</td>
<td>3.32</td>
<td>1.17</td>
</tr>
<tr>
<td>LD52</td>
<td>60</td>
<td>4.22</td>
<td>.94</td>
</tr>
<tr>
<td>LD55</td>
<td>61</td>
<td>4.49</td>
<td>.50</td>
</tr>
<tr>
<td>LD57</td>
<td>61</td>
<td>4.46</td>
<td>.70</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 32

Means and Standard Deviations for Summated Work-Role Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPER</td>
<td>59</td>
<td>10</td>
<td>39</td>
<td>22.76</td>
<td>5.53</td>
</tr>
<tr>
<td>MGR</td>
<td>56</td>
<td>17</td>
<td>43</td>
<td>32.59</td>
<td>4.96</td>
</tr>
<tr>
<td>ADMIN</td>
<td>60</td>
<td>28</td>
<td>46</td>
<td>39.22</td>
<td>3.93</td>
</tr>
<tr>
<td>LEAD</td>
<td>57</td>
<td>27</td>
<td>50</td>
<td>41.96</td>
<td>4.49</td>
</tr>
</tbody>
</table>

Valid N (listwise) 56

### Fourth Research Question

Some statistics related to the fourth research question regarding the relationship between leadership styles, corporate culture, and work-roles are displayed in Table 33. This table combines the information obtained from Table 22 on page 123 regarding leadership styles with information from Table 32 regarding work-roles. The relationship between these two constructs and corporate culture is explored in greater detail in the discriminate analysis section. However, an interesting relationship appears in Table 33 regarding the means and standard deviations of the styles and work-roles.

As Table 33 shows, the transformational scale had the greatest mean between the leadership styles, while the administrator and leader scales had the largest means among the work-role scales. Likewise the transactional scale had the lowest leadership style mean, while the manager and supervisor scales had the lowest work-role scale means. These findings support the LCDSS model in that the LDSS model proposes that...
administrator or a leader, while individuals who display a transactional style will be characterized as a supervisor or manager. Granted, although any correlation between these scales is not proven by this relationship between their mean scores, these results provide a promising foundation for further statistical analysis of these theoretical relationships.

Table 33

Means and Standard Deviations Program Head Summated Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMIN</td>
<td>60</td>
<td>39.22</td>
<td>3.93</td>
</tr>
<tr>
<td>LEAD</td>
<td>57</td>
<td>41.96</td>
<td>4.49</td>
</tr>
<tr>
<td>TRANSFOR</td>
<td>58</td>
<td>30.69</td>
<td>3.98</td>
</tr>
<tr>
<td>SUPER</td>
<td>59</td>
<td>22.76</td>
<td>5.53</td>
</tr>
<tr>
<td>MGR</td>
<td>56</td>
<td>32.59</td>
<td>4.96</td>
</tr>
<tr>
<td>TRANSACT</td>
<td>60</td>
<td>23.55</td>
<td>5.96</td>
</tr>
</tbody>
</table>

Validity

Validity is concerned with whether a variable measures what it is suppose to measure (Bollen, 1989, p.184). This research used construct validity procedures to determine if the instrument items of each scale measured what they were originally intended to measure. When construct validity is performed, correlations in the range of 0.20 to 0.40 are expected between theoretically related constructs (Steiber and Krowinski, 1990).
In all of the correlation matrices displayed below, two-tailed probabilities have been selected. Normally if the direction of association is known in advance, a one-tailed probability is chosen (SPSS, 1995). Although it is proposed that all of the variables will positively associate with other variables, two-tailed test were calculated in the unlikely event that variables were negatively associated. Significant correlations at the 0.05 level are identified with a single asterisk, while those at the 0.01 level are identified with two asterisks. For the purposes of this research, significance at the 0.05 level was sufficient proof of validation. Finally, listwise deletion of missing values was used to calculate the correlations on each of the variables intended to examine the four research questions.

First Research Question

Table 34 and 35 display the correlation matrices for the leadership style constructs used to address the first research question. Table 34 on page 134, which displays the correlations for the transactional variables (TA), demonstrates some inconsistencies among the variables. As the table indicates, no variables significantly correlate with variables TA10 and TA8, and only one variable correlate with TA1. Also of some concern are the apparent negative correlations that exist between these three variables and other transactional variables. Apparently not only do these variables not measure the same construct as the other variables, the small amount of correlation that they do have with these variables is not in the predicted direction. Further evidence that these variables do not behave as theoretically expected will be presented in the discussion on reliability.
Table 34

Transactional Style Correlation Matrix

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>TA1</th>
<th>TA10</th>
<th>TA12</th>
<th>TA14</th>
<th>TA16</th>
<th>TA3</th>
<th>TA6</th>
<th>TA8</th>
<th>TA9</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA1</td>
<td>1.00</td>
<td>-0.034</td>
<td>0.097</td>
<td>-0.010</td>
<td>-0.059</td>
<td>0.375**</td>
<td>0.123</td>
<td>0.038</td>
<td>0.004</td>
</tr>
<tr>
<td>TA10</td>
<td>-0.034</td>
<td>1.000</td>
<td>0.156</td>
<td>0.132</td>
<td>0.010</td>
<td>0.204</td>
<td>0.114</td>
<td>-0.072</td>
<td>0.126</td>
</tr>
<tr>
<td>TA12</td>
<td>0.097</td>
<td>0.156</td>
<td>1.000</td>
<td>0.333*</td>
<td>0.340**</td>
<td>0.208</td>
<td>0.097</td>
<td>-0.070</td>
<td>0.106</td>
</tr>
<tr>
<td>TA14</td>
<td>-0.010</td>
<td>0.132</td>
<td>0.333*</td>
<td>1.000</td>
<td>0.229</td>
<td>0.345**</td>
<td>0.024</td>
<td>0.183</td>
<td>0.322*</td>
</tr>
<tr>
<td>TA16</td>
<td>-0.059</td>
<td>0.010</td>
<td>0.340**</td>
<td>0.229</td>
<td>1.000</td>
<td>0.178</td>
<td>0.163</td>
<td>-0.167</td>
<td>0.219</td>
</tr>
<tr>
<td>TA3</td>
<td>0.375**</td>
<td>0.204</td>
<td>0.208</td>
<td>0.345**</td>
<td>0.178</td>
<td>1.000</td>
<td>0.139</td>
<td>0.113</td>
<td>0.417**</td>
</tr>
<tr>
<td>TA6</td>
<td>0.123</td>
<td>0.114</td>
<td>0.097</td>
<td>0.024</td>
<td>0.163</td>
<td>0.139</td>
<td>1.000</td>
<td>0.136</td>
<td>0.382**</td>
</tr>
<tr>
<td>TA8</td>
<td>0.038</td>
<td>-0.072</td>
<td>-0.70</td>
<td>0.183</td>
<td>-0.167</td>
<td>0.113</td>
<td>0.136</td>
<td>1.000</td>
<td>0.056</td>
</tr>
<tr>
<td>TA9</td>
<td>0.004</td>
<td>0.126</td>
<td>0.106</td>
<td>0.322*</td>
<td>0.219</td>
<td>0.417**</td>
<td>0.382**</td>
<td>0.056</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Note. **. Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).

The correlation matrix for the transformational leadership style variables (TF) is shown in Table 35. These variables appear to measure the construct well with most correlations significant at the 0.01 level (only TF7 and TF13 did not correlate at the 0.05 level). However, variable TF11 does not correlate with any of the other variables. Once again, the consequence of this will be presented in the discussion on reliability. Even though TF11 did not significantly correlate with other variables, at least it did not have any negative correlations.
Table 35

Transformational Style Correlation Matrix

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>TF11</th>
<th>TF13</th>
<th>TF15</th>
<th>TF17</th>
<th>TF2</th>
<th>TF4</th>
<th>TF5</th>
<th>TF7</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF11</td>
<td>1.000</td>
<td>.221</td>
<td>.048</td>
<td>.124</td>
<td>.088</td>
<td>.252</td>
<td>.118</td>
<td>.176</td>
</tr>
<tr>
<td>TF13</td>
<td></td>
<td>1.000</td>
<td>.419**</td>
<td>.381**</td>
<td>.295**</td>
<td>.318*</td>
<td>.362**</td>
<td>.143</td>
</tr>
<tr>
<td>TF15</td>
<td></td>
<td></td>
<td>1.000</td>
<td>.280*</td>
<td>.363**</td>
<td>.508**</td>
<td>.458**</td>
<td>.361**</td>
</tr>
<tr>
<td>TF17</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.522**</td>
<td>.405**</td>
<td>.284*</td>
<td>.415**</td>
</tr>
<tr>
<td>TA2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.609**</td>
<td>.520**</td>
<td>.575**</td>
</tr>
<tr>
<td>TA4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.651**</td>
<td>.564**</td>
</tr>
<tr>
<td>TA5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.478**</td>
</tr>
<tr>
<td>TF7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
</tr>
</tbody>
</table>

Note. **. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Second Research Question

The correlation matrices for the cultural dimension variables used to examine the second research question regarding the strength of the program's culture are shown in Tables 36 through 39. Table 36 displays the correlations between all five of the values construct items. As the table indicates, all but two of the correlations between variables are significant at the 0.01 level.

Tables 37, 38, and 39 show the correlations for the heroes and heroines, rites and rituals, and cultural network variables, respectively. All of these variables are significant.
with other variables within the construct at the 0.01 level. Since these variables show high correlations with one another, it can be concluded that they all measure much the same thing.

Table 36

**Values Correlation Matrix**

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>V1</th>
<th>V13</th>
<th>V17</th>
<th>V5</th>
<th>V9</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>1.000</td>
<td>.359**</td>
<td>.351**</td>
<td>.147*</td>
<td>.386**</td>
</tr>
<tr>
<td>V13</td>
<td>.359**</td>
<td>1.000</td>
<td>.256**</td>
<td>.313**</td>
<td>.542**</td>
</tr>
<tr>
<td>V17</td>
<td>.351**</td>
<td>.256**</td>
<td>1.000</td>
<td>.219**</td>
<td>.302**</td>
</tr>
<tr>
<td>V5</td>
<td>.147*</td>
<td>.313**</td>
<td>.219**</td>
<td>1.000</td>
<td>.306**</td>
</tr>
<tr>
<td>V9</td>
<td>.386**</td>
<td>.542**</td>
<td>.302**</td>
<td>.306**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**Note.** **. Correlation is significant at the 0.01 level (2-tailed). 
* Correlation is significant at the 0.05 level (2-tailed).

Table 37

**Heroes and Heroines Correlation Matrix**

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>H10</th>
<th>H14</th>
<th>H18</th>
<th>H2</th>
<th>H6</th>
</tr>
</thead>
<tbody>
<tr>
<td>H10</td>
<td>1.000</td>
<td>.465**</td>
<td>.438**</td>
<td>.637**</td>
<td>.378**</td>
</tr>
<tr>
<td>H14</td>
<td>.465**</td>
<td>1.000</td>
<td>.325**</td>
<td>.425**</td>
<td>.436**</td>
</tr>
<tr>
<td>H18</td>
<td>.438**</td>
<td>.325**</td>
<td>1.000</td>
<td>.442**</td>
<td>.308**</td>
</tr>
<tr>
<td>H2</td>
<td>.637**</td>
<td>.425**</td>
<td>.442**</td>
<td>1.000</td>
<td>.355**</td>
</tr>
<tr>
<td>H6</td>
<td>.378**</td>
<td>.436**</td>
<td>.308**</td>
<td>.355**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**Note.** **. Correlation is significant at the 0.01 level (2-tailed).
**Table 38**

**Rites and Rituals Correlation Matrix**

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>R11</th>
<th>R15</th>
<th>R19</th>
<th>R3</th>
<th>R7</th>
</tr>
</thead>
<tbody>
<tr>
<td>R11</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R15</td>
<td>.222**</td>
<td>1.000</td>
<td>.453**</td>
<td>.335**</td>
<td>.490**</td>
</tr>
<tr>
<td>R19</td>
<td>.351**</td>
<td>.453**</td>
<td>1.000</td>
<td>.454**</td>
<td>.451**</td>
</tr>
<tr>
<td>R3</td>
<td>.365**</td>
<td>.335**</td>
<td>.454**</td>
<td>1.000</td>
<td>.528**</td>
</tr>
<tr>
<td>R7</td>
<td>.224**</td>
<td>.490**</td>
<td>.451**</td>
<td>.528**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**Note.** **. Correlation is significant at the 0.01 level (2-tailed).**

**Table 39**

**Cultural Network Correlation Matrix**

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>C12</th>
<th>C16</th>
<th>C20</th>
<th>C4</th>
<th>C8</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12</td>
<td>1.000</td>
<td></td>
<td>.404**</td>
<td>.441**</td>
<td>.474**</td>
</tr>
<tr>
<td>C16</td>
<td>.431**</td>
<td>1.000</td>
<td>.346**</td>
<td>.555**</td>
<td>.621**</td>
</tr>
<tr>
<td>C20</td>
<td>.404**</td>
<td>.346**</td>
<td>1.000</td>
<td>.391**</td>
<td>.412**</td>
</tr>
<tr>
<td>C4</td>
<td>.441**</td>
<td>.555**</td>
<td>.391**</td>
<td>1.000</td>
<td>.617**</td>
</tr>
<tr>
<td>C8</td>
<td>.474**</td>
<td>.621**</td>
<td>.412**</td>
<td>.617**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**Note.** **. Correlation is significant at the 0.01 level (2-tailed).**

**Third Research Question**

Tables 40 through 43 presented on pages 139 through 142, display the correlation matrices for each of the four work-role constructs used to examine the third research.
question. The supervisor variables shown in Table 40 correlate fairly well with one another, although variable SU21 does not significantly correlate with any of the other variables in the construct. Although each variable in Table 41 correlates significantly with at least one other variable, a number of the variables correlate negatively with variables MG36, MG43, and MG23. Variables AD18 and AD39 do not correlate significantly with any of the other variables in Table 42. In addition, there are a number of variables that correlate negatively with other variables. Finally, the leader work-role variables in Table 43 appear to correlate fairly well with one another.

In summary of Tables 40 through 43, it appears that the supervisor and leader variables measure their respective constructs fairly well. However, the manager and administrator variables have poor, and often negative correlations between variables. The conclusions regarding the validity of these constructs will also be supported by the reliability statistics to be discussed shortly.

Fourth Research Question

The final step in the validation process was to determine if the constructs displayed convergent validity. Convergent validity is demonstrated when scores on a scale are found to correlate as predicted with other related constructs (Steiber and Krowinski, 1990, p.138). Convergent validity was tested among the theoretical relationships believed to exist between leadership style, culture, and work-roles. The transactional style construct was theorized to correlate with the manager and supervisor constructs while the transformational style construct was theorized to correlate with the administrator and
leader constructs. Likewise, weak cultures were theorized to correlate with manager and leader work-roles, while strong cultures were theorized to correlate with supervisor and administrator work-roles.

Table 40

Supervisor Work-Role Correlation Matrix

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>SU19</th>
<th>SU21</th>
<th>SU26</th>
<th>SU32</th>
<th>SU35</th>
<th>SU37</th>
<th>SU44</th>
<th>SU47</th>
<th>SU53</th>
<th>SU56</th>
</tr>
</thead>
<tbody>
<tr>
<td>SU19</td>
<td>1.000</td>
<td>.098</td>
<td>.183</td>
<td>.393**</td>
<td>.351**</td>
<td>.167</td>
<td>.264*</td>
<td>.103</td>
<td>.481**</td>
<td>.543**</td>
</tr>
<tr>
<td>SU21</td>
<td>.098</td>
<td>1.000</td>
<td>.109</td>
<td>.142</td>
<td>.024</td>
<td>.245</td>
<td>.155</td>
<td>-.026</td>
<td>.164</td>
<td>.223</td>
</tr>
<tr>
<td>SU26</td>
<td>.183</td>
<td>.109</td>
<td>1.000</td>
<td>.241</td>
<td>.125</td>
<td>.490**</td>
<td>.077</td>
<td>.227</td>
<td>.179</td>
<td>.332*</td>
</tr>
<tr>
<td>SU32</td>
<td>.393**</td>
<td>.142</td>
<td>.241</td>
<td>1.000</td>
<td>.061</td>
<td>.355**</td>
<td>.172</td>
<td>.038</td>
<td>.253</td>
<td>.496**</td>
</tr>
<tr>
<td>SU35</td>
<td>.351**</td>
<td>.024</td>
<td>.125</td>
<td>.061</td>
<td>1.000</td>
<td>.091</td>
<td>.374**</td>
<td>.064</td>
<td>.337**</td>
<td>.269*</td>
</tr>
<tr>
<td>SU37</td>
<td>.167</td>
<td>.245</td>
<td>.490**</td>
<td>.355**</td>
<td>.091</td>
<td>1.000</td>
<td>.290*</td>
<td>.276*</td>
<td>.255</td>
<td>.225</td>
</tr>
<tr>
<td>SU44</td>
<td>.264*</td>
<td>.155</td>
<td>.077</td>
<td>.172</td>
<td>.374**</td>
<td>.290*</td>
<td>1.000</td>
<td>.401**</td>
<td>.296*</td>
<td>.295*</td>
</tr>
<tr>
<td>SU47</td>
<td>.103</td>
<td>-.026</td>
<td>.227</td>
<td>.038</td>
<td>.064</td>
<td>.276*</td>
<td>.401**</td>
<td>1.000</td>
<td>.301*</td>
<td>.190</td>
</tr>
<tr>
<td>SU53</td>
<td>.481**</td>
<td>.164</td>
<td>.179</td>
<td>.253</td>
<td>.337**</td>
<td>.255</td>
<td>.296*</td>
<td>.301*</td>
<td>1.000</td>
<td>.477**</td>
</tr>
<tr>
<td>SU56</td>
<td>.543**</td>
<td>.223</td>
<td>.332*</td>
<td>.496**</td>
<td>.269*</td>
<td>.225</td>
<td>.295*</td>
<td>.190</td>
<td>.477**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).
Table 4.1

Manager Work-Role Correlation Matrix

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>MG 23</th>
<th>MG 28</th>
<th>MG 30</th>
<th>MG 33</th>
<th>MG 36</th>
<th>MG 38</th>
<th>MG 40</th>
<th>MG 43</th>
<th>MG 46</th>
<th>MG 51</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG23</td>
<td>1.000</td>
<td>0.063</td>
<td>0.137</td>
<td>-0.097</td>
<td>0.068</td>
<td>-0.107</td>
<td>0.574**</td>
<td>-0.020</td>
<td>0.318*</td>
<td>0.199</td>
</tr>
<tr>
<td>MG28</td>
<td>0.063</td>
<td>1.000</td>
<td>0.260</td>
<td>0.347**</td>
<td>-0.166</td>
<td>0.596**</td>
<td>0.058</td>
<td>0.424**</td>
<td>-0.198</td>
<td>0.283*</td>
</tr>
<tr>
<td>MG30</td>
<td>0.137</td>
<td>0.260</td>
<td>1.000</td>
<td>0.105</td>
<td>0.128</td>
<td>0.011</td>
<td>0.232</td>
<td>0.397**</td>
<td>-0.408**</td>
<td>0.382**</td>
</tr>
<tr>
<td>MG33</td>
<td>-0.097</td>
<td>0.347**</td>
<td>0.105</td>
<td>1.000</td>
<td>0.445**</td>
<td>0.254</td>
<td>0.110</td>
<td>0.160</td>
<td>0.025</td>
<td>0.023</td>
</tr>
<tr>
<td>MG36</td>
<td>-0.107</td>
<td>0.596**</td>
<td>0.011</td>
<td>0.254</td>
<td>1.000</td>
<td>-0.045</td>
<td>0.324*</td>
<td>-0.148</td>
<td>0.238</td>
<td>0.185</td>
</tr>
<tr>
<td>MG38</td>
<td>0.574**</td>
<td>0.058</td>
<td>0.232</td>
<td>0.110</td>
<td>0.324*</td>
<td>-0.064</td>
<td>1.000</td>
<td>-0.090</td>
<td>0.370**</td>
<td>0.423**</td>
</tr>
<tr>
<td>MG40</td>
<td>-0.020</td>
<td>0.424**</td>
<td>0.397**</td>
<td>0.160</td>
<td>-0.148</td>
<td>0.248</td>
<td>-0.090</td>
<td>1.000</td>
<td>0.016</td>
<td>0.150</td>
</tr>
<tr>
<td>MG43</td>
<td>0.318*</td>
<td>-0.198</td>
<td>0.408**</td>
<td>0.025</td>
<td>0.238</td>
<td>-0.177</td>
<td>0.370**</td>
<td>0.016</td>
<td>1.000</td>
<td>0.390**</td>
</tr>
<tr>
<td>MG46</td>
<td>0.199</td>
<td>0.283*</td>
<td>0.382**</td>
<td>0.023</td>
<td>0.185</td>
<td>0.151</td>
<td>0.423**</td>
<td>0.150</td>
<td>0.390**</td>
<td>1.000</td>
</tr>
<tr>
<td>MG51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. **. Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Table 42

Administrator Work-Role Correlation Matrix

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>AD18</th>
<th>AD20</th>
<th>AD24</th>
<th>AD25</th>
<th>AD29</th>
<th>AD39</th>
<th>AD45</th>
<th>AD48</th>
<th>AD50</th>
<th>AD54</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD18</td>
<td>1.00</td>
<td>0.09</td>
<td>-0.34</td>
<td>-0.62</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.04</td>
<td>-0.76</td>
<td>0.09</td>
<td>-0.78</td>
</tr>
<tr>
<td>AD20</td>
<td></td>
<td>1.00</td>
<td>0.07</td>
<td>-0.54</td>
<td>0.08</td>
<td>0.04</td>
<td>0.10</td>
<td>0.27</td>
<td>0.04</td>
<td>-0.25</td>
</tr>
<tr>
<td>AD24</td>
<td></td>
<td></td>
<td>1.00</td>
<td>0.27</td>
<td>0.41</td>
<td>0.05</td>
<td>0.03</td>
<td>0.24</td>
<td>0.07</td>
<td>0.16</td>
</tr>
<tr>
<td>AD25</td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td>0.42</td>
<td>0.16</td>
<td>0.00</td>
<td>0.08</td>
<td>0.23</td>
<td>0.15</td>
</tr>
<tr>
<td>AD29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td>0.16</td>
<td>0.08</td>
<td>0.04</td>
<td>0.06</td>
<td>0.05</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td>0.38</td>
<td>0.10</td>
<td>0.26</td>
<td>0.11</td>
</tr>
<tr>
<td>AD45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td>0.26</td>
<td>0.43</td>
<td>0.11</td>
</tr>
<tr>
<td>AD48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td>0.16</td>
<td>0.34</td>
</tr>
<tr>
<td>AD50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td>0.15</td>
</tr>
<tr>
<td>AD54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Note**: **. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
### Table 43

**Leader Work-Role Correlation Matrix**

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>LD22</th>
<th>LD27</th>
<th>LD31</th>
<th>LD34</th>
<th>LD41</th>
<th>LD42</th>
<th>LD49</th>
<th>LD52</th>
<th>LD55</th>
<th>LD57</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD22</td>
<td>1.000</td>
<td>0.243</td>
<td>0.152</td>
<td>0.093</td>
<td>0.117</td>
<td>0.085</td>
<td>0.289*</td>
<td>0.143</td>
<td>0.125</td>
<td>0.194</td>
</tr>
<tr>
<td>LD27</td>
<td>0.243</td>
<td>1.000</td>
<td>0.438**</td>
<td>0.476**</td>
<td>0.084</td>
<td>0.244</td>
<td>0.202</td>
<td>0.453**</td>
<td>0.417**</td>
<td>0.515**</td>
</tr>
<tr>
<td>LD31</td>
<td>0.152</td>
<td>0.438**</td>
<td>1.000</td>
<td>0.412**</td>
<td>0.267*</td>
<td>0.384**</td>
<td>0.192</td>
<td>0.133</td>
<td>0.461**</td>
<td>0.425**</td>
</tr>
<tr>
<td>LD34</td>
<td>0.093</td>
<td>0.476**</td>
<td>0.412**</td>
<td>1.000</td>
<td>-0.008</td>
<td>0.233</td>
<td>0.074</td>
<td>0.155</td>
<td>0.298*</td>
<td>0.385**</td>
</tr>
<tr>
<td>LD41</td>
<td>0.117</td>
<td>0.084</td>
<td>0.267*</td>
<td>-0.008</td>
<td>1.000</td>
<td>0.498**</td>
<td>0.134</td>
<td>0.211</td>
<td>0.270*</td>
<td>0.449**</td>
</tr>
<tr>
<td>LD42</td>
<td>0.085</td>
<td>0.244</td>
<td>0.384**</td>
<td>0.233</td>
<td>0.498**</td>
<td>1.000</td>
<td>0.281*</td>
<td>0.125</td>
<td>0.247</td>
<td>0.343**</td>
</tr>
<tr>
<td>LD49</td>
<td>0.289*</td>
<td>0.202</td>
<td>0.192</td>
<td>0.074</td>
<td>0.134</td>
<td>0.281*</td>
<td>1.000</td>
<td>0.180</td>
<td>0.173</td>
<td>0.080</td>
</tr>
<tr>
<td>LD52</td>
<td>0.143</td>
<td>0.453**</td>
<td>0.133</td>
<td>0.155</td>
<td>0.211</td>
<td>0.125</td>
<td>0.180</td>
<td>1.000</td>
<td>0.238</td>
<td>0.422**</td>
</tr>
<tr>
<td>LD55</td>
<td>0.125</td>
<td>0.417**</td>
<td>0.461**</td>
<td>0.298*</td>
<td>0.270*</td>
<td>0.247</td>
<td>0.173</td>
<td>0.238</td>
<td>1.000</td>
<td>0.388**</td>
</tr>
<tr>
<td>LD57</td>
<td>0.194</td>
<td>0.515**</td>
<td>0.425**</td>
<td>0.385**</td>
<td>0.449**</td>
<td>0.343**</td>
<td>0.080</td>
<td>0.422**</td>
<td>0.388**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**Note.** **. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).

The correlation matrix of the theoretical relationships between certain constructs is displayed in Table 44. The cultural constructs are not shown in the table because, although they were theorized to correlate with certain work-roles, they did not. This finding will be discussed further in the discriminate analysis section. However, as...
anticipated, the transactional scale was significantly correlated with the manager scale, although it is not correlated with the supervisor scale. This may be due to the number of transactional variables that do not correlate well with other variables. This scale may not adequately differentiate individuals along the transactional construct.

Table 44

Correlation Matrix of Program Head Summated Scales

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>TRANSACT</th>
<th>TRANSFOR</th>
<th>SUPER</th>
<th>MGR</th>
<th>ADMIN</th>
<th>LEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSACT</td>
<td>1.000</td>
<td>.453**</td>
<td>.192</td>
<td>.360**</td>
<td>.281*</td>
<td>.046</td>
</tr>
<tr>
<td>TRANSFOR</td>
<td>.453**</td>
<td>1.000</td>
<td>-.190</td>
<td>.174</td>
<td>.395**</td>
<td>.469**</td>
</tr>
<tr>
<td>SUPER</td>
<td>.192</td>
<td>-.190</td>
<td>1.000</td>
<td>.315*</td>
<td>-.025</td>
<td>-.172</td>
</tr>
<tr>
<td>MGR</td>
<td>.360**</td>
<td>.174</td>
<td>.315*</td>
<td>1.000</td>
<td>.290*</td>
<td>.342**</td>
</tr>
<tr>
<td>ADMIN</td>
<td>.281*</td>
<td>.395**</td>
<td>-.025</td>
<td>.290*</td>
<td>1.000</td>
<td>.460**</td>
</tr>
<tr>
<td>LEAD</td>
<td>.046</td>
<td>.469**</td>
<td>-.172</td>
<td>.342**</td>
<td>.460**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (1-tailed).
* Correlation is significant at the 0.05 level (1-tailed).

As expected the transformational scale is significantly correlated with both the administrator and leader scales. This may be due to the fact that this scale does seem to adequately differentiate individuals along the transformational construct. Two points of concern should be noted regarding additional significant correlations displayed in Table 44. The first is that the transactional and transformational scales are correlated to one another. Theoretically, this should not occur and it may be due to the low validity transactional scales. The second point is that many of the work-roles are correlated with
one another. Once again, this may be due to the poor validity of the manager and administrator scales.

**Reliability**

Once the scales were tested to determine if they measured what they were intended to measure, they were tested to determine if they measured consistently over time. The Cronbach alpha coefficient, which reflects the degree to which scale items measure the same attribute, was used to measure the reliability of the scale items.

**First Research Question**

Table 45 presents the Cronbach’s alpha coefficients for the transactional and transformational leadership style variables used to examine the first research question. In order to bring the Cronbach’s alpha coefficient up from 0.5849 to a somewhat adequate 0.6132, it was necessary to exclude variable TA1 from the transactional leadership scale. This question, which stated, “I give faculty material rewards for achieving program goals”,

<table>
<thead>
<tr>
<th>Scale</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational</td>
<td>0.8093</td>
</tr>
<tr>
<td>Transactional</td>
<td>0.6132</td>
</tr>
<tr>
<td>Overall Styles Scale (16 items)</td>
<td>0.7225</td>
</tr>
</tbody>
</table>
does not appear to sufficiently measure the transactional style. It should be recalled that TAI also showed low and negative correlations with other variables during construct validation. This was another reason for its removal from the transactional scale. The removal of TAI reduced the transactional scale down to eight items which better represented the nature of the construct. This also allowed for ease of comparison with the eight item transformational scale.

In addition, Table 45 displays the alpha coefficient for the overall leadership scale, which consisted of 16 items. By removing variable TAI from the calculation, the overall alpha was increased from 0.7077 to the reported 0.7225. Although this alpha is above the 0.70 acceptable range, it should be remembered that in general, as the number of instrument items increases the alpha also increases. That is why individual alphas were calculated for each scale.

Second Research Question

The Cronbach's alpha coefficients for all four of the cultural dimension scales used to examine the second research question were calculated and are displayed in Table 46. All of the scales' alphas are equal to or above the 0.70 value stipulated by Ferketich (as cited by Reed, 1995) as acceptable. This would suggest that all of the items in each particular scale are internally consistent and measure the same construct.
Table 46

Cronbach's Alpha for Cultural Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values</td>
<td>0.6972</td>
</tr>
<tr>
<td>Rites</td>
<td>0.7623</td>
</tr>
<tr>
<td>Heroes</td>
<td>0.7801</td>
</tr>
<tr>
<td>Cultural Network</td>
<td>0.8155</td>
</tr>
<tr>
<td>Overall (20 items)</td>
<td>0.9287</td>
</tr>
</tbody>
</table>

Third Research Question

Table 47 displays similar statistics for each of the four work-roles explored in the third research question. For some of these scales the more lenient alpha value of 0.65 suggested as adequate by Zeller and Carmines (1980) was used. The supervisor,

Table 47

Cronbach's Alpha for Work-Role Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>0.7604</td>
</tr>
<tr>
<td>Manager</td>
<td>0.6650</td>
</tr>
<tr>
<td>Administrator</td>
<td>0.5227</td>
</tr>
<tr>
<td>Leader</td>
<td>0.7383</td>
</tr>
<tr>
<td>Overall Work-Roles (40 items)</td>
<td>0.7715</td>
</tr>
</tbody>
</table>
manager, and leader work-role scales all scored above this value. However, even with this relaxed standard, the administrator scale was deemed inadequate. Even attempts to increase the alpha by removing some variables proved ineffective. By removing three variables the alpha was increased to a maximum value of 0.5818. However, it was determined that all 10 of the variables would be used in the analysis since the alpha was not sufficiently increased by these deletions.

This, along with the information gathered regarding the validity of the administrator items, indicates that this scale is quite poor at measuring the administrator work-role construct. Interestingly, in her research leading to the construction of the LCDSS, Reed had a great deal of difficulty with this scale as well. She eventually measured the construct with only 4 of the original variables (Reed, 1995). Further analysis regarding the administrator work-role must be viewed with caution due to the weak validity and reliability of this scale.

**Fourth Research Question**

The issue of reliability is not pertinent to the fourth question regarding the leadership styles, culture, and work-roles in hospitality programs. The reliability figures for all of the items used to measure these constructs have already been addressed in the discussions relating to the first three research questions.
Analysis of Variance

Analysis of variance was used in this research to determine if the respondents differed along certain criteria. The summated scale scores obtained from each instrument were used as the dependent variables measured against certain demographic factors. These calculations were performed in order to test whether the population means of the different groups were equal.

Before these calculations could be conducted, the three assumptions of analysis of variance had to be addressed. Firstly, the variables were obtained from independent samples. Secondly, as previously indicated, the data was, for the most part, normally distributed. Although some of the scales were skewed, normality is not a major concern in analysis of variance unless the data are extremely non-normal (Norusis, 1986, p.283). This was not the case for any of the variables. Thirdly, the results of the Levene test showed that only the values scale failed the test for equality of variance. However, the equality of variance assumption is not too important when the number of cases in each of the groups is similar (Norusis, 1986, p.283).

First Research Question

Analyses of variance were run for the first research question regarding what leadership styles were displayed by heads of four-year hospitality management programs. The demographic factors were analyzed against the two dependent variables of
transactional and transformational leadership styles. The summated transformational scale consisted of all eight variables while the transactional scale consisted of six variables.

The leadership style scales were not statistically significant along many of the demographic factors. The transformational scale was significant ($p = .05$) against the age factor and the education level (edu) factor ($p = .10$). Multiple comparison techniques were unable to be performed because the scale values were too diverse and at least one value had fewer than two cases. Although the statistics were not calculated, theory might suggest that as a person matures and obtains more knowledge, the individual may develop a more transformational leadership style. Furthermore, the transactional scale was not statistically significant with any of the demographic factors.

Second Research Question

Analyses of variance were also used to examine the second research question regarding the strength of a program's culture measured along the four cultural dimensions. The demographic variables were used as factors measured against the dependent summated scale variables of values, heroes, rites, cultural network (culnet), and total cultural strength (totcul). The first four scales consisted of the summated values of the five questions intended to measure each construct. The total cultural strength (totcul) scale was a cumulative total of the other four scales used to measure the programs overall cultural strength.

None of the cultural dimension scales were statistically significant with any of the demographic factors. Interestingly, when the scales were analyzed against the variable,
which identified the respective school of the respondents, all but one of the scales was statistically significant at the 0.05 level. The cultural network scale was significant with the school variable at the 0.10 level. These findings would suggest that faculty members from different schools differed in their responses regarding the cultural strengths and weaknesses of their respective schools. Multiple comparison procedures could not determine where the differences lay because there were too many groups to analyze.

Third Research Question

Finally, analysis of variance was used to examine the third research question regarding how the work-roles of program heads were differentiated along the four work-role classifications. The demographic variables were used as factors measured against the dependent variables of the summed scales of supervisor (super), manager (mgr), administrator (admin), and leader (lead). Each of these scales was calculated from the ten variables intended to measure the construct except for the administrator scale which used only seven variables.

Once again, not many of the scales were statistically significant with any of the demographic factors. The manager scale was significant (p = 0.05) with the "years as program head at your current institution" (head) variable. Although the average program head had spent 6.8 years in the position, 25% of the respondents had been in the position for 2 or less years. This being the case, newer program heads may take on a more managerial role when they deem that change is more important than the implementation of established programs.
The only other statistically significant (p = 0.05) relationships were the manager and supervisor scales with the race demographic factor. Multiple comparison procedures were not performed on these scales because, once again, the scale values were too diverse.

Fourth Research Question

Analysis of variance was not used to examine the fourth research question regarding the leadership styles, culture, and work-roles in hospitality programs. All of the items used to explore these relationships have already been considered in the previous analyses. The statistical methodology used to explore these relationships will be discussed in the discriminate analysis section.

Summary of Analysis of Variance

Overall the results of the analyses of variance for the three research questions did not reveal many statistically significant relationships. Theoretically driven explanations for each of the relationships were discussed. Analysis of variance was used to measure relationships between each of the scales and the demographic characteristics of respondents. The relationship between the scales themselves will be examined by using discriminate analysis.

Discriminate Analysis

Discriminate function analysis was used to explore the fourth research question regarding the relationship between the leadership styles and work-roles of program heads and the cultural strength of four-year hospitality management programs. The objective of
this analysis was to determine if the leadership style of the program head, combined with the cultural strength of the program, could accurately predict the theorized program head work-role.

Procedure

A discriminate function analysis was conducted using the 40 work-role variables to differentiate the program heads based upon their predicted work-roles. The predicted work-roles were based upon the leadership style and program culture scores. These predicted scores were then compared to the observed work-role scores. It was anticipated that the observed program head work-roles would match the predicted work-roles theorized by the revised LCDSS model.

The discriminate analysis procedure conducted for this research involved a number of steps. First, the data was evaluated to determine if the variables were multivariate normal. Second the assumption of equality of variance was tested, and third the assumption of independence was examined. Once the assumptions were tested, the 40 work-role variables were used as the independent variables to be analyzed along the work-role-grouping variable. The specifics of this procedure are discussed and the interpretation of the findings is presented.

Test of assumptions.

The first step in the discriminate analysis procedure was to determine if the data met the necessary assumptions. The first assumption that was tested was whether the data
had a multivariate normal distribution. This assumption was tested with the use of Q-Q plots as illustrated in chapter 3. As stated in the earlier section regarding normality of the data, the leader and administrator work-roles were decidedly skewed toward larger values. This finding was supported with the Q-Q plots since 3 of the administrator variables (AD20, AD48, and AD50) and 4 of the leader variables (LD27, LD34, LD52, and LD55) did not sufficiently cluster around a straight line.

Although the supervisor work-role was found to be slightly skewed toward lower values during the histogram analysis, all of the variables clustered sufficiently around a straight line in the Q-Q plots. The same was true for all of the manager work-role variables.

The discovery that certain variables are not multivariate normal may have implications on the interpretation of the final discriminate function. However, Klecka (1980) stated that discriminate analysis is not particularly sensitive to minor violations of the normality assumption. The consequence is some reduction in the efficiency and accuracy of the tests for significance and for group classification (p.61).

The second step was to test the data to determine if the variance among the group’s covariance matrixes was equal. The Box’s M test was used to test for this assumption. Unfortunately, this test could not be calculated because the sample size was too small and the covariance matrices for the scales had too few cases to be non-singular. An attempt was made to recalculate the test using the leave-one-out classification option. This procedure was undertaken in an attempt to calculate the Box’s M from an artificially
enlarged sample size. This procedure was not effective because 40 variables was still too many for this size sample, and once again, the Box's M could not be calculated.

The inability to calculate the Box's M test was a result of the individual group's covariance matrices being non-singular which prevented the calculation of the within-groups covariance matrix. Even if the assumption is made that the group covariance matrices are unequal, the discriminate analysis can still be performed. However, distortions may result in the canonical discriminate function and the classification equation. Consequently, the functions may not provide maximum separation among the groups, and the probability of group membership may be distorted (Klecka, 1980, p.61).

A final assumption dealt with the size of the sample. As mentioned in Chapter 3, the sample size to variable ratio must be 20:1 if the results are to be stable. Of the sample of 62 program heads, only 46 were eligible to be used in the discriminate analysis. Since this analysis was conducted with 40 variables, the ratio of sample size to variable for this research was then only 1.15:1. The results of the discriminate analysis conducted for this research must be interpreted with caution due to the violation of this assumption.

Although some of the assumptions for discriminate analysis were not met, Klecka (1980) stated that for research, which is interested in testing a predictive model, the best guide to use from the analysis is the percentage of correct classifications. He further-stated, that if this percentage is high, the violation of assumptions was not very harmful. However, if this percentage is low, it can not be known whether it is due to the violation of the assumptions, or to the use of weak discriminating variables (p.62). The percentage
of correct classifications in this research will be shown during the discussion of the
interpretation of the findings.

Analysis.

Once the data was tested for the above assumptions, the discriminate analysis was
conducted using the 40 work-role variables as the independent variables and a predicted
program head work-role variable (predrole) as the grouping variable. The predicted
work-role variable was calculated from the following theoretical equations, with the
variable code for each work-role in parentheses:

Supervisor (1) = Transactional Style + Strong Culture
Manager (2) = Transactional Style + Weak Culture
Administrator (3) = Transformational Style + Strong Culture
Leader (4) = Transformational Style + Weak Culture

Two dichotomous variables were created in order to predict the program’s work-
role. A program culture (progcul) variables was created based upon whether a culture
was strong (1) or weak (0) as determined from the scores obtained from the faculty survey
instrument. A dichotomous leadership style (style) variable was created based upon the
program head’s score on the transformational (1) and transactional (0) scores. These two
newly created variables were used to categorize the programs based upon the above
equations. For example, a program with a transformational leadership style (1) and a
weak culture (0) would be classified in the leader work-role and would be assigned a
predicted role (predrole) score of 4.
Of the 62 responses from program heads, 53 could be used in the discriminate analysis. In order to run the discriminate analyses, each program required an overall program culture score, a leadership style score, and program head work-role scores. Only programs that had responses from both faculty (culture score) and program heads (style and work-role scores) could be used to test the model.

Of the 53 programs that met these requirements, 7 had missing values on at least one variable. This reduced the total programs used in the discriminate analysis down to 46. It should be noted that of these 46 programs, 9 of the top 10 programs identified in Chapter 3 were included in the analysis. One program head was reluctant to respond because the individual had only been in the position for a few months.

The discriminate analysis was run with the 40 independent work-role variables against the predicted program head work-role grouped variable (predrole). The prior probabilities for this analysis were computed based upon the size of the groups. This option was selected instead of assuming that the size of the groups was equal, because preliminary tests indicated that the groups were indeed not equal.

The statistics generated from this analysis are displayed in Table 48. The statistics indicate that the first and second functions are statistically significant (p < .05). The first function represents 63.5% of the total discriminating power in this system of equations. The first and second functions combined represent 97.4% of the total discriminating power of the discriminate function analysis. These two functions were then used to differentiate between the work-roles predicted to be present in hospitality management programs.
Table 48

Work-Role Discriminate Function

<table>
<thead>
<tr>
<th>Function</th>
<th>Eigenvalue</th>
<th>Percent of Variance</th>
<th>Canonical Corr.</th>
<th>Wilks’ Lambda</th>
<th>Chi-square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>58.963</td>
<td>63.5</td>
<td>.992</td>
<td>.000</td>
<td>202.64</td>
<td>120</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>31.512</td>
<td>33.9</td>
<td>.985</td>
<td>.009</td>
<td>108.48</td>
<td>78</td>
<td>.013</td>
</tr>
<tr>
<td>3</td>
<td>2.439</td>
<td>2.6</td>
<td>.842</td>
<td>.291</td>
<td>28.40</td>
<td>38</td>
<td>.871</td>
</tr>
</tbody>
</table>

Another statistic that is generated during discriminate analysis is the centroid for each of the groups. The centroid is the average of all of the scores associated with each particular group. When the function discriminates well between the groups the centroids will be far from one another. The centroids for each work-role group are plotted as squares along the first and second discriminate functions in Figure 5. Each of the 46 program’s discriminate scores is also plotted in Figure 5. Plotting the centroids and scores in this manner creates a territorial plot of the entire work-role discriminate analysis.

As the territorial plot indicates, the centroids of the work-roles appear to discriminate well between the supervisor and manager roles. However, the leader and administrator centroids are rather close to one another indicating less discrimination between these roles. Table 49 displays the predicted work-role figures for each of the 46 programs based upon the discriminate score’s proximity to the centroids.
Figure 5

Work-Role Territorial Plot

Table 49

Frequencies of Predicted Work-Roles

<table>
<thead>
<tr>
<th>Work-Role</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>1</td>
<td>2.2%</td>
</tr>
<tr>
<td>Manager</td>
<td>5</td>
<td>10.9%</td>
</tr>
<tr>
<td>Administrator</td>
<td>17</td>
<td>37%</td>
</tr>
<tr>
<td>Leader</td>
<td>23</td>
<td>50%</td>
</tr>
</tbody>
</table>

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Interpretation of Findings

The classifications of the work-role groups obtained from the discriminate analysis were compared to the actual scores calculated from the four work-role summative scales. Since 40 of the 46 programs were rated as transformational, the majority of programs should have been classified as having leader or administrator work-roles. In addition, with 28 of the 46 programs classified as having weak cultures, the majority of programs should have further been classified into the leader work-role.

As Table 49 indicates, this was the case with 50% of the programs being classified in the leader category. Although the model seems to accurately classify the predicted work-role, the actual work-role scores obtained from the 40 work-role variables are displayed in the classification matrix shown in Table 50. This matrix was used to determine the proportion of cases that the discriminate analysis correctly classified. With 18 correct classifications the discriminate analysis resulted in a 39.13% accuracy rate. While this rate is not high, with four groups, it is better than the 25% accuracy that would be expected by chance. Unfortunately, it is much less than the 69.5% chance of simply placing all of the programs into the largest, leader work-role, and category.

The tau statistic which measures the proportional reduction in error and gives a standardized measure of improvement for the function (Klecka, 1980) was calculated on these findings. The maximum value for tau is 1.0 when there is no error in the prediction. A value of zero indicates no improvement of prediction (Klecka, 1980). With 18 correct classifications out of 46 possible correct classifications, the tau for this analysis was .1884.
This indicates that classification based on these discriminating variables made 18.84% fewer errors than would be expected by chance.

Table 50

Classification Matrix for Style and Culture

<table>
<thead>
<tr>
<th>Measured Group</th>
<th>Predicted Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Supervisor (1)</td>
<td>0</td>
</tr>
<tr>
<td>Manager (2)</td>
<td>0</td>
</tr>
<tr>
<td>Administrator (3)</td>
<td>0</td>
</tr>
<tr>
<td>Leader (4)</td>
<td>0</td>
</tr>
</tbody>
</table>

The main concern regarding the incorrect classifications is that the six individuals who had transactional styles were rated as either administrators or leaders. While the model suggests that one individual should have been classified as a supervisor and five should have been classified as managers. In addition only three of the administrators and eight of the leaders were correctly classified. Although the low percentage of correct classifications may be due to the violation of some of the assumptions, it may also indicate that both the discriminating variables and the model itself are rather weak.

Summary

The data analysis discussion began by examining the demographic characteristics of this research compared to other research on hospitality education faculty and program
heads. The characteristics among respondents were found to be similar which supports the premise that the current sample is representative of the population.

All of the statistical analyses addressed in the preceding chapter were generated and the results were provided in this chapter. Means, standard deviations, correlations, and alpha coefficients were calculated for all of the instrument scales. These scales, as well as demographic and dichotomous variables, were used in analysis of variance and discriminate function analysis. All of these statistical procedures were undertaken in an attempt to shed light on each of the four research questions.

The results of all of these tests are displayed in the tables, text, and figures above. The interpretation of these statistics and any conclusions drawn from them will be discussed in the final chapter. In addition, a summary of this research and recommendations for future research will be provided.
CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This exploratory research was conducted in order to examine a number of questions regarding leadership and its relationship with the culture of an organization. Schein's (1985) statement that the only thing of real importance that leaders do is to create and manage culture was the foundation for this research.

Summary

Specifically, this research was concerned with the relationship between the corporate culture of four-year hospitality management programs and the leadership styles of individuals responsible for "leading" these programs. In addition, a theoretical model was proposed to predict the work-role of the program's head. The model attempted to determine the work-role that was best suited for a particular situation based upon the leadership style of the program head and the program's corporate culture.

These theorized relationships were explored by examining four research questions. These questions acted as a guideline that could be followed throughout the text.

1. What leadership styles are displayed by heads of four-year hospitality management programs?
2. How strong is the program's culture as measured by the four elements of: values, heroes, rites & rituals, and cultural network?

3. How are the work-roles of program heads differentiated along the classifications of: supervisor, manager, administrator, and leader?

4. What relationship exists between the leadership styles and work-roles of program heads and the cultural strength of four-year hospitality management programs?

These research questions were examined by administering two separate survey instruments to two different samples. The leadership styles and work role orientations of program heads were ascertained by using a revised version of the Leadership-Culture Dimensional Screening Scale (LCDSS). The revised LCDSS utilized the same transactional versus transformational leadership distinctions as Mitchell and Tucker (1992) and Reed (1995), however the community culture variables were replaced with corporate culture variables. This research intended to determine the relationship that a leader's style had upon the culture of the organization itself, not on the culture of the community in which the organization existed.

These corporate culture variables were generated by administering The Corporate Culture Survey, designed by Glaser (1991), to the faculty of four-year hospitality management programs. This survey was also revised, however the changes were only minor in order to make the instrument more suitable for higher education.
The theoretical foundation for the use of these instruments to measure these constructs and provide insight into the research questions was based upon an extensive review of the literature. The review examined the many theories proposed regarding the concept of leadership itself. A distinction was made between transactional and transformational leadership which formed the basis for examining the first research question regarding the leadership styles displayed by heads of four-year hospitality management programs.

The review continued by identifying the dimensions used to examine the second research question regarding the strength of the program's culture. This construct was defined along the four cultural elements of: values, heroes and heroines, rites and rituals, and cultural network. These were the elements that the Corporate Culture Survey was designed to measure.

The third research question regarding how program heads were differentiated along work-role classifications was based upon a model proposed by Mitchell and Tucker (1992). This model differentiated the roles individuals play into the classifications of: supervisor, manager, administrator, and leader. Program heads were categorized along these work-roles based on their answers to the revised LCDSS.

Although research has been conducted regarding leadership in hospitality education, no research was found that addressed the leader's role in creating and maintaining the program's culture. This led to an examination of the fourth research question regarding the relationship between the leadership styles and work-roles of program heads and the cultural strength of four-year hospitality management programs.
These constructs were measured based on summative scales derived from both survey instruments.

**Methodology**

The final statistical analyses of this research were conducted on a sample of 231 faculty members and 62 program heads. This represented a response rate of a 41.4% from the faculty and 41.33% from the program heads. The size of these samples limited the use of some statistical procedures (namely factor analysis) and possibly affected the results of other procedures (namely discriminate analysis). This sample was obtained by mailing survey instruments to the 153 program heads listed in the 1997 *CHRIE Guide to College Programs in Hospitality and Tourism*, and to 578 faculty members obtained from a 1996 CHRIE database.

Both survey instruments were tested by administering a pilot study to the faculty and program heads of a large hospitality management program. The results of the study were promising, and no major changes were made to the instrument based upon participants' comments. As a result, the pilot study participants were included in the final analysis.

An extensive discussion regarding the instrument items and scales is contained in chapter 3. Each of the 4 cultural dimensions was measured by asking faculty members 5 questions that were intended to measure each construct. The leadership style of the program heads was measured by 17 questions and the work-role orientations by 10 questions for each of the 4 roles. All items were rated on a 5-point Likert scale.

The data obtained from these instruments was subjected to basic statistical analyses used to test for normality and equality of variance, as well as to identify missing values and
outliers. Histograms and boxplots were used as well in order to examine the distribution of the data. Means and standard deviations were calculated for every variable obtained from both instruments. These statistics provided another means of examining the data for unusual values or relationships.

More advanced statistical procedures were used to test the validity and reliability of the constructs. Correlation coefficients and Cronbach's alpha coefficients were calculated for each scale. When appropriate, these figures were compared to statistics from past research in an attempt to establish the validity and reliability of the instruments.

Finally, analysis of variance was used to determine if the respondents differed along certain criteria. The demographic characteristics of the respondents were measured against the leadership style, work-role, and cultural scales used to examine the first three research questions. The fourth research question and the revised LCDSS model were examined with the use of discriminate function analysis.

Conclusions

All research conclusions are based on theory and drawn from the statistical analyses conducted. The demographic characteristics of the samples used in this research were compared to samples from previous research. Based upon these comparisons, the samples used in this research appeared to be fairly representative of the overall population of hospitality education program heads and faculty. This being the case, conclusions made regarding these samples should be generalizeable to the larger population of hospitality educators.
Many of the statistical procedures conducted on these samples assume that the data is normally distributed. The values and rites scales were skewed to extremes, as were the transformational, administrator and leader scales. Although these non-normal distributions may have been present, transformation of the data was not deemed appropriate since the analyses, namely analysis of variance and discriminate analysis, are not extremely influenced by non-normal data.

The means, standard deviations, correlations, and alpha coefficients were calculated on all variables and scales. These statistics were used to determine the distribution of values and the validity and reliability of the scales items. Essentially, these statistics indicated that the four cultural constructs were valid and reliable measures of the cultural strength of an organization. Of the 231 faculty members who participated in this research, 125 indicated that their program's culture was weak and 93 stated that their culture was strong. The ability of the instrument to differentiate between strong and weak cultures supports the contention that the instrument was valid and reliable.

The aforementioned statistics did not support the program head instrument as well as the faculty instrument. Many of the transactional and transformation items did not fall within the specified mean and standard deviation ranges, which suggested that they did not discriminate well along these constructs. These initial findings were supported for the transactional scale by the lack of correlation between the items. These items also correlated highly with the transformational items, which in theory, should not occur.

The concerns with the transformational scale were of a different nature. The items did correlate well with one another and the alpha coefficient of 0.8093 suggests strong reliability of the items. However, the means were high and the standard deviations were
low for many of the variables. This information was consistent with the earlier findings regarding the skewness toward larger values.

The results of these preliminary findings were supported by the fact that of the 62 program heads, 53 were classified as transformational while only 9 were classified as transactional. These results indicate that 85% of the sampled program heads displayed transformational leadership styles. However, the ability to generalize these findings to the overall population of program heads is suspect due to the concerns previously raised regarding the leadership style scales.

Finally, the work-role scales were statistically analyzed for dispersion, validity and reliability. Generally, the means and standard deviations were extremely low on the supervisor scale and the means were high and the standard deviations were low on the administrator and leader scale. This may indicate that these items do not sufficiently differentiate the extent to which a program head displays these characteristics. However, since the majority of program heads were rated as transformational, the theoretical model would suggest that they would also rate highly on the administrator and leader work-roles.

The validity and reliability of some of the work-role scales are suspect as well. The supervisor and leader scales appear to be valid and reliable, however there are some concerns regarding the manager and administrator work-role scales. Both scales contained items which negatively correlated with other items, which theory states should not occur. In addition the reliability of these scales is suspect due to the low alpha coefficients. It was necessary to remove three variables (AD18, AD20, and AD39) from the administrator scale to raise the alpha to a level (0.5818), which even the most lenient guidelines would deem unacceptable.
The apparent inability of theses scales to effectively discriminate between the four work-role constructs was supported by the results that of the 62 program heads, 22 were categorized as administrators and 39 as leaders (1 respondent had numerous missing values along these scales). However, it has already been mentioned that theory would support these findings. If 85% of the program heads were transformational, 85% of them should also be administrators or leaders. Unfortunately, 100% of the program heads were classified in these categories, which makes the instrument’s ability to differentiate along the work-role classifications suspect.

Keeping in mind the concerns regarding these scale items, the last two statistical procedures conducted will be discussed. The analysis of variance tests did not demonstrate that the samples varied greatly along the aforementioned scales. A simple interpretation of these findings suggests that the faculty’s perception of culture and the program head’s leadership style and role are not influenced by the individual’s demographic characteristics. The few statistically significant findings were previously discussed, but overall, the analyses of variance indicated that demographics had very little to do with the culture and leadership style found in four-year hospitality management programs.

Finally, discriminate analysis was conducted on 46 programs that met the stipulated requirement of having a program head response and at least one faculty response. Artificially created, dichotomies variables were created to group the respondents in terms of the program’s leadership style, cultural strength, and work-roles exhibited.

The discriminate functions sufficiently differentiated between the transactional and transformational style as well as between strong and weak cultures. The differentiation
between styles must be viewed with caution regarding the previously mentioned concerns regarding the transactional scale. The cultural differentiation, on the other hand, appears to support the previous findings regarding the validity and reliability of these scales in determining cultural strengths and weaknesses.

The work-role discriminate function sufficiently differentiated the supervisor role from the other three. This supports the earlier findings regarding the role's low means and standard deviations. As anticipated based upon the preliminary statistics, there was not a great deal of differentiation between the leader and administrator roles. This finding was consistent with Reed's (1995) regarding the inability of the instrument to clearly differentiate along these constructs.

Eighty-five percent of the 62 program heads were classified as transformational, while 54% of the 231 faculty were classified as residing in weak cultures. The percentages for the 46 programs used to examine the fourth research question were similar, with 87% of the programs classified as transformational and 60.9% classified as having weak cultures. With the percentages so high in these two classifications it is understandable why the discriminate function did such an inadequate job of differentiating between groups.

Research Questions

This research was based upon the premise that the only thing of real importance that leaders do is to create and manage culture. To that end, four questions were examined to provide insight into this theorized relationship between leadership and culture. Following are some of the conclusions drawn regarding each of the questions.
First Research Question

The first research question addressed the leadership styles displayed by heads of four-year hospitality management programs. A 17-question instrument was administered to program heads in an attempt to differentiate the leader’s style as either transactional or transformational. While 85% of the sample was classified as transformational, reservations regarding the 17-item scale must be taken into consideration when evaluating this finding. However, these reservations notwithstanding, this finding is encouraging since the transformational leadership style is more potent than the transactional style (Burns, 1978, p.4). This style is often more effective because the transformational leader attempts to fulfill the needs of followers and simultaneously seeks to satisfy the higher level needs of everyone.

Second Research Question

The second research question attempted to measure the cultural strength of hospitality education programs along the four cultural dimensions of values, heroes and heroines, rites & rituals, and cultural network. A 20-question survey instrument was administered to the faculty of these programs in order to ascertain an overall culture score for hospitality education. Of the 231 responses, 125 or 54% classified their respective program culture as weak. There were not reservations regarding this instrument so this finding is considered to be quite representative. This finding may concern program heads because it is difficult for individuals to determine what behavior is desirable in a weak culture.
Third Research Question

The third research question was concerned with how the behavior of program heads could be differentiated along the classifications of: supervisor, manager, administrator, and leader. Program heads responded to 40 questions intended to classify them into one of these work-role categories. Of the 61 valid program head responses, 39 or 64% were categorized as leaders while 22 or 36% were categorized as administrators. These findings are fairly consistent with the theoretical model since 85% of the sample had transformational styles. However, if the model was truly representative, the 9 transactional leaders should have been categorized as either managers or supervisors. Once again, the reservations regarding this instrument must be taken into consideration when evaluating these findings.

Fourth Research Question

The final research question addressed the relationship between the leadership styles and work-roles of program heads and the cultural strength of four-year hospitality management programs. This question was explored by using all of the data obtained from each of the survey instruments.

The model proposed that program heads that displayed transformational styles and resided in weak cultures would rank highly on the leader work-role. While transformational leaders found in strong cultures were expected to rank highly on the administrator work-role. Subsequently, program heads with transactional styles found in
weak cultures were anticipated to rank highly on the manager work-role. Transactional leaders in strong cultures were expected to rank highly on the supervisor work-role.

Forty-six programs were used to create a discriminate function that measured the model's ability to distinguish between these roles based upon the leadership style of the program head and the program's cultural strength. The analysis proposed that of the 46 program heads, 1 would be rated as a supervisor, 5 as managers, 17 as administrators, and 23 as leaders. The reality was that 32 or 70% of the programs were rated as leaders and 14 or 30% were rated as administrators. The model only correctly classified 18 of the 46 possible classifications. This equated to a 39.13% accuracy rate, with a tau statistic indicating that classification based on these discriminating variables made only 18.84% fewer errors than would be expected by chance.

With 40 of the 46 programs classified as transformational, and 28 of the 46 programs classified as having weak cultures, the theoretical model proposed that the majority of programs would be characterized along the leader work-role. This was the case, with 32 of the programs being classified under the leader work-role. However, the model incorrectly predicted that four individuals were leaders even though they were in strong cultures. In addition, as previously stated, the model did not accurately predict the work-roles of the 6 transactional programs since all of the programs were classified as either administrators or leaders.

**Summary of research questions.**

The information obtained from the examination of these questions may prove useful to certain individuals. University presidents and future potential program heads
should be interested to discover that the large majority of current hospitality program heads displayed a transformational leadership style. This information may assist administrators in selecting future program heads as well as faculty who aspire to program head positions. Transformational leaders can be beneficial to an organization because they are able to transform the feelings, attitudes, and beliefs of followers toward the achievement of organizational goals.

Although a transformational style may be preferred, this research did not support the assumption that this style would lead to a strong organizational culture. While 85% of the overall sample of program heads were transformational, only 40% of the faculty indicated that they resided in a strong culture.

Sample Differences

Program Heads

As mentioned in the response rate section in chapter 4, program heads were contacted twice in order to elicit responses. The original 53 program heads that responded to the initial mailing were compared to the 9 who responded after being contacted via phone and fax. All 9 respondents were rated as having transformational leadership styles. This was not too alarming since 44 of the original 53 respondents also displayed this style. Likewise, the work-roles of these 9 respondents was similar to the overall population.

One difference of interest between these two samples was that only 1 of the 9 programs (11.1%) that these respondents were head of was rated as culturally strong. This percentage was smaller than the 35.8% of the initial respondents who were heads of
programs with strong cultures. Perhaps the lack of a strong program culture was the factor that led to the program head's nonresponse in the first place.

Faculty.

As mentioned in the sampling procedures section in chapter 3, the sampling frame obtained from CHRIE was supplemented with names from the Internet web sites of ten universities. Of the 110 non-CHRIE faculty selected from the university web sites, 27 responded to the survey instrument. Of these 27, 14 (52%) rated the culture at their program as strong. In comparison, of the 204 CHRIE member respondents, only 41% rated their program's culture as being strong. Of the total sample, only 93 faculty rated their culture as strong. Therefore, the non-CHRIE members comprised 15% of the respondents who rated their culture as being strong.

Why a larger percentage of non-CHRIE members rate their programs as strong is unclear. However, it should be recalled that these 27 non-CHRIE members were chosen from the top ten hospitality management programs in the United States. The cultural strength scores of the 86 (27 non-CHRIE and 59 CHRIE) respondents from top ten programs were compared to the 145 respondents from all other programs. Of the 86 respondents from top ten programs, 48.8% rated their program as strong. In comparison, of the 145 respondents from other programs, only 35.2% rated their programs as strong.

Why a larger percentage of top ten faculty rated their programs as strong could be due to other factors not addressed in this research. The size of the program and the number of years it has been in existence may influence the culture. In addition, whether the program is within a public or private institution, and where the program is housed
could also affect the program's culture. These and other factors could be examined in future research.

Recommendations

Although this research did not examine a hypothesis, per se, if one had been proposed it may have been that a transformational leadership style would lead to a strong corporate culture. Such a hypothesis would not have been supported by the findings of this research. As Bellenger and Greenberg (1978) stated, one of the reasons for conducting exploratory research is to develop hypotheses. For future or continuing research, it is realized that a null hypothesis may be that the leadership style of a program head does not effect the strength of the program's culture. However, the program's culture may be influenced by external as well as internal factors which were not examined under the scope of this research but may be explored in future research.

Another recommendation for future research is that the present research be conducted again after an in-depth item analysis is conducted to determine items which may be removed or added to the instrument in order to make it more reliable and valid. Validity and reliability of the administrator construct, in particular, was questionable because it posed problems in both this research and the original research conducted by Reed (1995). More data collected on more valid scales could solidify some of the conclusions drawn from this research.

Additional and continuing research could also follow each and every step of Dillman's (1978) Total Design Method in an attempt to increase the sample size. With a larger sample size other statistical analyses, such as factor analysis, might be feasible. In addition, some of the caveats regarding the interpretation of certain statistical analyses
conducted in this research could be lifted with a larger sample size. In reality however, even the total population of 153 program heads may not be large enough to satisfy the requirements of some of these statistical procedures.

Although it was not examined in this research, the culture and leadership style’s of programs could be examined based upon where the hospitality management program is housed. Bosselman (1998) reported that the largest proportion of hospitality programs in the United States (41.9%) are housed within a larger department. Future research could be conducted to determine if differences exist based upon whether the program is autonomous, a program within a larger department, or a department within a larger college. In addition, the leadership and culture of programs within departments could be examined based upon the different academic disciplines of the departments. Differences between business, hospitality, and home economic departments, for example, could be explored.

How the leadership style and role of the program head effects the productivity of individuals within the culture could also be examined. Are faculty and students in a strong culture more productive then those in a weak culture? Are the followers of a transformational leader more productive than the followers of a transactional leader? Although these question were beyond the scope of this research, further research regarding the effects of leadership and culture on productivity could prove interesting.

When conducting research on leadership, there is often a concern regarding who is best suited to evaluate the leader. In this research the leadership styles and work-roles were determined by administering a self-evaluation instrument to the program heads. These findings were then compared to the results obtained from the faculty members.
regarding the program’s culture. Future research could be conducted which compared the
program head’s self-evaluation with a faculty evaluation of the program head’s perceived
leadership style. A comparison of these findings could be used to cross-validate the
results obtained from each instrument.

In conclusion, this research was conducted to explore certain questions regarding
leadership and corporate culture in four-year hospitably management programs. Based
upon the research findings certain conclusions were drawn and recommendations were
made. Although the research sample was representative of the overall population, certain
reservations regarding the instruments used limited the generalizeability of the research
conclusions. This research can provide an exploratory first step for future research on
these important issues.
APPENDIX A

CORPORATE CULTURE SURVEY
The Corporate Culture Survey
Developed by Rollin Glaser

Directions: Below you will find twenty statements. Read each statement carefully and
decide how true the statement is of your organization. Use the following key to make your
decision.

D = Definitely True This statement is definitely true of my organization.
M = Mostly True This statement is true of my organization most of the time.
0 = Occasionally True This statement is occasionally true of my organization.
S = Seldom True This statement seldom is true of my organization.
N = Not True This statement is definitely not true of my organization.

I. New employees are carefully oriented to the organization's traditions, that is, the way
things are done around here.

2. When someone performs well in our organization, a great deal of recognition is
provided, including appropriate ceremonies.

3. In this organization we have a number of well-established traditions (e.g., an annual
clean-up day or a biannual meeting at which there is open discussion of problems
among all the managers in a division).

4. Our organization has people who are good at telling the company's legends and folklore
to newcomers.

5. Our organizational values are clearly reflected in our physical facilities.

6. The heroes of this organization are kept meaningful to us through their stories, even
though some of them are no longer present.

7. Managers in this organization often develop personal rituals through which they are
identified by the organization and by their employees (e.g., a manager might make a
habit of congratulating employees on the anniversary of their joining the
organization).

8. Members of senior management share stories that communicate a philosophy of what
the organization is all about.

9. Senior managers in our organization typically establish traditions that focus people's
attention on important programs, goals, or organizational beliefs (e.g., participation
in community affairs by adopting a local school, or an annual sales contest among the various divisions).

10. This organization publicly rewards employees for work that furthers the goals of the organization.

11. We have certain ways of communicating with and relating to one another (e.g., the way we address one another and the style of interactions).

12. There is a strong, informal communication network that ensures that significant stories are widely shared within the organization.

13. People in this organization recognize a concept or ideal that symbolizes what we stand for (e.g., customer service, quality of product, or diversity of product line).

14. There are people in this organization whose success serves as a model for others to follow.

15. At our management meetings small rituals are commonly observed (e.g., the chairperson always begins by asking each participant to share a recent project success).

16. Our organization has respected old-timers who possess a rich reservoir of company history at their fingertips and who share this through stories about the organization's past.

17. Our senior managers traditionally participate in selecting new employees.

18. Nonconformity is accepted, even applauded, in this organization if the nonconformist produces outstanding work.

19. People in this organization take seriously our important ceremonies (e.g., a CEO's annual address to all employees, or retirement celebrations).

20. There is an important tradition of mentoring (formal and informal) in this organization, so that newcomers and younger members of the organization are successfully assimilated.
APPENDIX B

LEADERSHIP-CULTURE

DIMENSIONAL SCREENING SCALE
LEADERSHIP-CULTURE DIMENSION SCREENING SCALE

PART I - SCHOOL/COMMUNITY CULTURE

Listed below is a series of statements about factors related to school/community culture. Read each statement carefully and use the following key to choose the response that matches most closely the extent to which each statement characterizes your community’s attitude about your school.

0  Never the case  3  Often the case
1  Rarely the case  4  Usually the case
2  Sometimes the case  5  Always the case

1. The community believes that my school is in need of redirection.

2. The community believes that the programs in my school do not meet the current needs of our population.

3. The community believes that the learning environment in my school is not as orderly as it should be.

4. The community believes that the average income of families served by my school has decreased over the past 5 years.

5. The community believes that the social climate in my school is not as positive as it should be.

6. The community believes that my school has not shown itself worthy of full support from the families served by the school.

7. The community believes that the programs in my school are not compatible with the values of families served by the school.

8. The community believes that our population is more transient than it was 5 years ago.

9. The community believes that my school is not doing the right things to educate children.

10. The community is critical of the programs in my school.

PART II - LEADERSHIP STYLE

Listed below is a series of statements about your leadership style as a principal. Read each statement carefully and use the following key to choose the response that matches most closely the extent to which each statement characterizes your approach to the principalship.

0  Never characteristic  3  Often characteristic
1  Rarely characteristic  4  Usually characteristic
2  Sometimes characteristic  5  Always characteristic

11. I give staff material rewards for achieving school goals.
12. I promote comprehensive school improvement by emphasizing teacher collaboration.

13. I praise teachers publicly for completing projects on time.

14. I motivate teachers to perform extra tasks by promoting strong belief in the school's vision.

15. I elicit cooperation from teachers by encouraging them to believe in themselves.

16. I insist that staff use instructional materials that have been endorsed by the central office.

17. I help staff sort through their feelings about organizational issues.

18. I spend a great deal of my time working in my office solving problems.

19. I oversee program implementation by checking on how closely teachers follow the approved curriculum.

20. I strictly enforce building procedures.

21. I visit teachers in their classrooms to exchange ideas about teaching and learning.

22. I review job descriptions with personnel involved to ensure that staff perform as intended.

23. I provide time at faculty meetings for staff to discuss educational trends.

24. I write memos to staff about how programs should be implemented.

25. I provide opportunities for staff to discuss their professional aspirations.

26. I encourage teachers to use standardized test results to set educational targets.

27. I meet with teachers informally to discuss collaborative approaches to meeting educational outcomes.

PART III - EXECUTIVE WORK-ROLE ORIENTATION

Listed below is a series of statements about factors that relate to educational quality. Read each statement carefully and use the following key to choose the response, based on your personal beliefs and your approach to the principalship, that matches your level of agreement with each statement.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No opinion</td>
</tr>
<tr>
<td>1</td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>2</td>
<td>Disagree</td>
</tr>
<tr>
<td>3</td>
<td>Slightly agree</td>
</tr>
<tr>
<td>4</td>
<td>Agree</td>
</tr>
<tr>
<td>5</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

28. Principals have the greatest impact on school improvement when they view teachers as experts in diagnosing student learning problems.

29. Teachers are most effective when they are required to work on tasks developed by central office curriculum specialists.

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30. Principals have the greatest impact on school improvement when they view teachers as highly competent professionals.

31. Principals have the greatest impact on school improvement when they promote accountability systems based on mastery of specific adjectives.

32. Principals have the greatest impact on school improvement when they work with staff to redefine educational goals.

33. Teachers are most effective when they are expected to implement research-based programs.

34. Student academic performance is most likely to improve when teachers are given latitude to make programs work for children.

35. Teachers are most effective when they are given the latitude to oversee their own work.

36. Principals have the greatest impact on school improvement when they closely monitor staff to ensure that administrative directives are followed.

37. School programs operate best when goals are developed by everyone in the school working together.

38. Teachers are most effective when they are expected to utilize their assessment skills to improve student outcomes.

39. Teachers are most effective when they are given autonomy in performing their jobs.

40. Curriculum and instruction are most effective when test data are used to adjust educational programs.

41. Curriculum and instruction are most effective when teachers are encouraged to work collaboratively to develop integrated programs.

42. Curriculum and instruction are most effective when teachers are required to adhere to strict time lines in presenting subject matter.

43. Teachers are most effective when they are expected select appropriate strategies from a repertoire of techniques at their disposal.

44. Teachers are most effective when they are given the latitude to make programs work for children.

45. School programs operate best when acquisition of basic skills is the major theme of education.

46. Schools are most effective when teachers are expected to implement instructional programs based on learning styles research.

47. Principals have the greatest impact on school improvement when they closely scrutinize tasks performed by teachers.

48. Student academic performance is most likely to improve when assessment of student interest is viewed as a critical part of the teaching process.

49. Curriculum and instruction are most effective when professional educators are trusted to remediate student learning problems.
50. Teachers are most effective when they are expected to engage in research on techniques to accelerate learning.

51. Schools are most effective when teachers are encouraged to work together to realign school programs with the needs of families served by the school community.

52. Principals have the greatest impact on school improvement when they facilitate work activity carried out by professional staff.

53. Principals have the greatest impact on staff when they objectively analyze all the facts before making personnel decisions.

54. Teachers are most effective when they are required to teach socially agreed-upon bodies of knowledge.

55. Principals have the greatest impact on school improvement when they view teachers as specialists who treat the educational ills of students.

56. School programs operate best when teachers are required to use carefully validated techniques in the classroom.

57. Teachers are most effective when they implement 'good old fashioned' classroom practices.

58. Teachers are most effective when they are given opportunities to share their professional expertise with each other.

59. Teachers are most effective when they are encouraged to employ creative instructional styles similar to those used by practicing artists.

60. Principals have the greatest impact on school improvement when they minister to the needs of professional staff.

61. Principals have the greatest impact on school improvement when they focus on explicit measures of productivity.

62. Principals have the greatest impact on school improvement when they coordinate problem-solving activities among staff in order to strengthen the organization.

63. Principals have the greatest impact on school improvement when they acknowledge that any intelligent person who makes a good faith effort can be a decent teacher.

64. Principals have the greatest impact on school improvement when they encourage teachers to establish personal relationships with students and clients.

65. Principals have the greatest impact on staff when they emphasize shared commitments to organizational goals.

66. Schools are most effective when teachers are required to implement programs without variation from approved procedures.

67. School programs operate best when staff are given opportunities to participate in making school-wide program decisions.
APPENDIX C

FACULTY COVER LETTER
February 20, 1998

Dear Hospitality Educator:

Leadership in any organization is critical to its success, and an individual’s leadership style can greatly affect the performance of others. It has been suggested that the only thing of real importance that leaders do is to create and manage the organization’s culture. This research is being conducted in an effort to examine this statement as it relates to hospitality education.

As a faculty member of a four-year hospitality education program your assistance is requested with this research conducted in partial fulfillment of the requirements for the degree of doctorate in hospitality management. It is anticipated that it should take approximately 15 minutes to complete the enclosed survey instrument. Your participation in this study is voluntary, however in order that the results will be truly representative, it is important that each instrument be completed and returned.

You may be assured of complete confidentiality of your responses. The instrument has an identification number for mailing purposes only. This is so that your name may be crossed off the mailing list once your instrument is returned. Your name will never be associated with the instrument.

This instrument will be used to determine the overall cultural characteristics of hospitality education programs. You may receive a summary of the results by providing your name and address on the back of the return envelope. Please do not put this information on the instrument itself.

If you have any questions regarding this research please contact me at (702) 895-4458, or if you have any questions regarding your rights as a research subject please contact the UNLV Office of Sponsored Programs at (702) 895-1357.

Thank you for your assistance.

Sincerely,

Shane C. Blum
Ph. D. Candidate

William F. Harrah College of Hotel Administration
Department of Hotel Management
Box 456021 • 4505 Maryland Parkway • Las Vegas, Nevada 89154-6021
(702) 895-3230 • FAX (702) 895-4872

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APPENDIX D

PROGRAM HEAD COVER LETTER
February 20, 1998

Dear Program Head:

Leadership in any organization is critical to its success, and an individual’s leadership style can greatly affect the performance of others. It has been suggested that the only thing of real importance that leaders do is to create and manage the organization’s culture. This research is being conducted in an effort to examine this statement as it relates to hospitality education.

As a program head (e.g. dean, department head or chair) of a four-year hospitality education program your assistance is requested with this research conducted in partial fulfillment of the requirements for the degree of doctorate in hospitality management. It is anticipated that it should take approximately 25 minutes to complete the enclosed survey instrument. Your participation in this study is voluntary, however in order that the results will be truly representative, it is important that each instrument be completed and returned.

You may be assured of complete confidentiality of your responses. The instrument has an identification number for mailing purposes only. This is so that your name may be crossed off the mailing list once your instrument is returned. Your name will never be associated with the instrument.

This instrument will be used to determine the leadership style and work role characteristics of hospitality education program heads. You may receive a summary of the results by providing your name and address on the back of the return envelope. Please do not put this information on the instrument itself.

If you have any questions regarding this research please contact me at (702) 895-4458, or if you have any questions regarding your rights as a research subject please contact the UNLV Office of Sponsored Programs at (702) 895-1357.

Thank you for your assistance.

Sincerely,

Shane C. Blum
Ph. D. Candidate

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Department of Hotel Management
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(702) 895-3230 • FAX (702) 895-4872
APPENDIX E

HUMAN SUBJECTS PROTOCOL LETTER
DATE: February 17, 1998

TO: Shane C. Blum
M/S 6021 (HTLM)

FROM: Dr. William E. Schulze, Director
Office of Sponsored Programs (X1357)

RE: Status of Human Subject Protocol Entitled:
"A Cause-And-Effect Relationship Between
Leadership and Corporate Culture: An Educational
Perspective"

OSP #604s0298-185e

The protocol for the project referenced above has been
reviewed by the Office of Sponsored Programs and it has been
determined that it meets the criteria for exemption from
full review by the UNLV human subjects Institutional Review
Board. This protocol is approved for a period of one year
from the date of this notification and work on the project
may proceed.

Should the use of human subjects described in this protocol
continue beyond a year from the date of this notification,
it will be necessary to request an extension.

If you have any questions regarding this information, please
contact Marsha Green in the Office of Sponsored Programs at
895-1357.

cc: G. Goll (HTLM-6021)
OSP File
APPENDIX F

COPYRIGHT APPROVAL

LEADERSHIP-CULTURE DIMENSIONAL SCREENING SCALE
Permission to Use Copyrighted Material

I, Dr. Lorrie C. Reed

holder of copyright on material entitled *The Leadership-Culture Dimensional Screening Scale*

authored by Lorrie C. Reed

and originally published in *The LCDSS: Development of a screening tool to identify transformational versus transactional executive style in settlement versus frontier school cultural settings*

hereby give permission for the author to use the above described material in total or in part for inclusion in a master's thesis/doctoral dissertation at the University of Nevada, Las Vegas.

I also agree that the author may execute the standard contract with University Microfilms, Inc. for microform reproduction of the completed thesis/dissertation, including the materials to which I hold copyright.

Signante

Dr. Lorrie C. Reed

Signature

Date

Assistant Professor

Name (typed)

Title

Representing

Chicago State University

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APPENDIX G

PROGRAM HEAD SURVEY
PART I: LEADERSHIP STYLE

Directions: Listed below is a series of statements about your leadership style. Please select the number that matches most closely the extent to which each statement characterizes your approach to leadership.

0 = Not Applicable (NA)
1 = Never Characteristic (NEV)
2 = Seldom Characteristic (SEL)
3 = Occasionally Characteristic (OCC)
4 = Mostly Characteristic (MOS)
5 = Definitely Characteristic (DEF)

1. I give faculty material rewards for achieving program goals.
2. I promote comprehensive program improvement by emphasizing faculty collaboration.
3. I praise faculty publicly for completing projects on time.
4. I motivate faculty to perform extra tasks by promoting strong belief in the program's vision.
5. I elicit cooperation from faculty by encouraging them to believe in themselves.
6. I insist that faculty use instructional materials that have been endorsed by the university.
7. I help faculty sort through their feelings about organizational issues.
8. I spend a great deal of my time working in my office solving problems.
9. I oversee program implementation by checking on how closely faculty follow approved curriculum.
10. I strictly enforce building procedures.
11. I visit faculty in their classrooms to exchange ideas about teaching and learning.
12. I review job descriptions with personnel involved to ensure that faculty perform as intended.
13. I provide time at faculty meetings for people to discuss educational trends.
14. I write memos to faculty about how programs should be implemented.
15. I provide opportunities for faculty to discuss their professional aspirations.
16. I encourage faculty to use standardized test results to set educational targets.
17. I meet with faculty informally to discuss collaborative approaches to meeting educational outcomes.
LISTED BELOW IS A SERIES OF STATEMENTS ABOUT FACTORS THAT RELATE TO EDUCATIONAL QUALITY. BASED ON YOUR PERSONAL BELIEFS AND APPROACH TO YOUR POSITION, PLEASE SELECT THE NUMBER THAT MATCHES YOUR LEVEL OF AGREEMENT WITH EACH STATEMENT.

0 = No Opinion (NO)
1 = Strongly Disagree (SD)
2 = Disagree (D)
3 = Neither Disagree nor Agree (N)
4 = Agree (A)
5 = Strongly Agree (SA)

18. Program heads have the greatest impact on program improvement when they view faculty as experts in diagnosing student learning problems.

19. Faculty are most effective when they are required to work on tasks developed by university curriculum specialists.

20. Program heads have the greatest impact on program improvement when they view faculty as highly competent professionals.

21. Program heads have the greatest impact on program improvement when they promote accountability systems based on mastery of specific objectives.

22. Program heads have the greatest impact on program improvement when they work with faculty to redefine educational goals.

23. Faculty are most effective when they are expected to implement research-based programs.

24. Student academic performance is most likely to improve when faculty are given latitude to adjust instructional routines as they see fit.

25. Faculty are most effective when they are given the latitude to oversee their own work.

26. Program heads have the greatest impact on program improvement when they closely monitor faculty to ensure that administrative directives are followed.

27. Programs operate best when goals are developed by everyone working together.

28. Faculty are most effective when they are expected to utilize their assessment skills to improve student outcomes.

29. Faculty are most effective when they are given autonomy in performing their jobs.

30. Curriculum and instruction are most effective when test data are used to adjust educational programs.

31. Curriculum and instruction are most effective when faculty are encouraged to work collaboratively to develop integrated programs.
32. Curriculum and instruction are most effective when faculty are required to adhere to strict time lines in presenting subject matter.

33. Faculty are most effective when they are expected to select appropriate strategies from a repertoire of techniques at their disposal.

34. Faculty are most effective when they are given the latitude to make programs work for students.

35. Programs operate best when acquisition of basic skills is the major theme of higher education.

36. Programs are most effective when faculty are expected to implement instruction based on learning styles research.

37. Program heads have the greatest impact on program improvement when they closely scrutinize tasks performed by faculty.

38. Student academic performance is most likely to improve when assessment of student interest is viewed as a critical part of the teaching process.

39. Curriculum and instruction are most effective when professional educators are trusted to remediate student learning problems.

40. Faculty are most effective when they are expected to engage in research on techniques to accelerate learning.

41. Programs are most effective when faculty are encouraged to work together to realign curriculum with the needs of the community.

42. Program heads have the greatest impact on program improvement when they facilitate work activities carried out by faculty.

43. Program heads have the greatest impact on faculty when they objectively analyze all the facts before making personnel decisions.

44. Faculty are most effective when they are required to teach socially accepted bodies of knowledge.

45. Program heads have the greatest impact on program improvement when they view faculty as specialists in the education of students.

46. Programs operate best when faculty are required to use carefully validated techniques in the classroom.

47. Faculty are most effective when they implement "good old fashioned" classroom practices.

48. Faculty are most effective when they are given opportunities to share their professional expertise with each other.

49. Faculty are most effective when they are encouraged to employ creative instructional styles similar to those used by performing artists.
50. Program heads have the greatest impact on program improvement when they minister to the needs of the faculty.

51. Program heads have the greatest impact on program improvement when they focus on explicit measures of productivity.

52. Program heads have the greatest impact on program improvement when they coordinate problem solving activities among faculty in order to strengthen the organization.

53. Program heads have the greatest impact on program improvement when they acknowledge that any intelligent person who makes a good faith effort can be a decent teacher.

54. Program heads have the greatest impact on program improvement when they encourage faculty to establish personal relationships with students as clients.

55. Program heads have the greatest impact on faculty when they emphasize shared commitment to organizational goals.

56. Programs are most effective when faculty are required to implement curriculum without variation from university approved procedures.

57. Programs operate best when faculty are given opportunities to participate in program-wide decisions.

Please answer the following questions about yourself by circling the appropriate response.

58. What is your gender? 1. Male 2. Female

59. What is your racial or ethnic origin?
   1. Caucasian 4. Asian
   3. Hispanic 6. Other (specify) ______________

60. What is the highest level of formal education you have completed?
   1. Bachelor's Degree
   2. Master's Degree
   3. Doctorate
   4. Other (specify) _____________

61. What is your position title?
   1. Dean
   2. Department Head
   3. Chairperson
   4. Director
   5. Coordinator
6. Other (specify) __________

Finally, please answer the following questions:

62. What is your age? ________ (years)

63. How many years of hospitality industry experience do you have? _____

64. How many years have you been in hospitality education? _____

65. How many years have you been at your current institution? _____

66. How many years have you served as program head at your current institution? _____
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Executive Vice President
Title

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Hospitality Education Program Culture Survey

Directions: Please use the following key to make your decision regarding how true each statement is in describing your program.
Please circle the number corresponding to the appropriate response.

0 = Do not know this about my hospitality education program (DK)
1 = Not true of my hospitality education program (NT)
2 = Seldom true of my hospitality education program (ST)
3 = Occasionally true of my hospitality education program (OT)
4 = Mostly true of my hospitality education program (MT)
5 = Definitely true of my hospitality education program (DT)

1. New faculty are carefully oriented to the program's traditions, that is, “the way things are done around here”.
2. When someone performs well in our program, a great deal of recognition is provided.
3. In this program we have a number of well-established traditions (e.g., annual picnics).
4. Our program has people who are good at telling the school's legends and folklore to newcomers.
5. Our program's values are clearly reflected in our physical facilities.
6. The heroes of this program are kept meaningful to us through their stories, even though some of them are no longer present.
7. Program heads often develop personal rituals through which they are identified (e.g., congratulate staff on the anniversary of their joining the program).
8. Senior faculty members share stories that communicate a philosophy of what the program is all about.
9. Our program has established traditions that focus people's attention on important goals, or school beliefs (e.g., participation in community affairs).
10. This program publicly rewards faculty for work that furthers the goals of the school.
11. Faculty and staff have certain ways of communicating with and relating to one another (e.g. The way we address one another and the style of interactions).
12. There is a strong, informal communication network that ensures that significant stories are widely shared within the program.
13. People in this program recognize a concept or ideal that symbolizes what we stand for (e.g., student service, research).
14. There are people in this program whose success serves as a model for others to follow.
15. At faculty meetings small rituals are commonly observed (e.g., the program head always begins by asking each participant to share a recent teaching/research success).
16. Our program has respected old-timers who possess a rich reservoir of school history at their fingertips and who share this through stories about the school's past.
17. Our senior faculty traditionally participate in selecting new faculty.

18. Nonconformity is accepted, even applauded, in this program if the nonconformist produces outstanding work.

19. People in this program take seriously our important ceremonies (e.g., the university president’s annual address or retirement celebrations).

20. New faculty feel like they are part of a team because other faculty show them around and help them learn how to do their job.

Please answer the following questions about yourself by circling the appropriate response.

21. What is your gender? 1. Male 2. Female

22. What is your racial or ethnic origin?
   1. Caucasian 4. Asian
   3. Hispanic 6. Other (specify) ___________

23. What is the highest level of formal education you have completed?
   1. Bachelor’s Degree
   2. Master’s Degree
   3. Doctorate
   4. Other (specify) ___________

24. What is your position title?
   1. Instructor
   2. Assistant Professor
   3. Associate Professor
   4. Professor
   5. Other (specify) ___________

Finally, please answer the following questions:

25. What is your age? ________ (years)

26. How many years of hospitality industry experience do you have? _____

27. How many years have you been in hospitality education? _____

28. How many years have you been at your current institution? _____
APPENDIX J

PILOT STUDY LETTER
To: To All Faculty
From: Shane C. Blum
Date: January 26, 1998
Re: Dissertation Surveys

As I mentioned during the faculty meeting on January 15, I would appreciate your assistance with my dissertation survey. The attached 20 question survey was designed based upon the work of Terrence Deal and Allen Kennedy. Other individuals have received a 57 question survey designed by Lorrie Reed. Please complete the survey and return it to my mailbox in the Hotel Department Office (BEH 346).

I would also appreciate any comments you may have regarding the wording/format of the survey. Please feel free to make any appropriate comments directly on the survey.

Thank you for your time and cooperation
Wednesday, April 8, 1998

Dear Dr. Smith:

A few weeks ago a survey was mailed to hospitality management program heads. I have received numerous responses from faculty members at your university who completed a different survey. In order to be able to use their responses in the statistical analysis of my dissertation, I desperately need a response from you, the program’s head.

I would greatly appreciate if you could complete the attached survey and fax it back to my attention at (702) 895-4872. If you have any questions regarding this research please feel free to contact me at (702) 895-4458.

Thank you for your assistance.

Sincerely,

Shane C. Blum
Ph. D. Candidate
REFERENCES


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