Leadership Frames and Perceptions of Effectiveness among Health Information Management Program Directors

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Abstract

Leadership is important to health science education. For program effectiveness, directors should possess leadership skills to appropriately lead and manage their departments. Therefore, it is important to explore the leadership styles of programs' leaders as health science education is undergoing reform. Program directors of two and four-year health information management programs were surveyed to determine leadership styles. The study examined leadership styles or frames, the number of leadership frames employed by directors, and the relationship between leadership frames and their perceptions of their effectiveness as a manager and as a leader. The study shows that program directors are confident of their human resource and structural skills and less sure of the political and symbolic skills required of leaders. These skills in turn are correlated with their self-perceived effectiveness as managers and leaders. Findings from the study may assist program directors in their career development and expansion of health information management programs as a discipline within the health science field.

As academic health centers receive greater pressure from the Institute of Medicine and accrediting agencies to reform health science education, the question of leadership arises. These centers have taken a leadership role in reforming health professional education by partnering with educational institutions to improve the health of communities.

To achieve health education reform, health sciences educators must apply effective leadership skills.[1] College and university leadership is challenged on how to best approach educational reform across health science fields. This article discusses leadership styles employed by program directors of one health science department, health information management, in directing programs for health science education reform.

Key Words: Leadership frames, health information management, program effectiveness

Introduction

Bolman and Deal Leadership Model

Bolman and Deal note that leaders view organizational experiences according to leadership styles or frames. They define the four frames of leadership as structural, human resources, political, and symbolic. Structural leaders define clear goals, assign specific roles for their constituents, and coordinate specific activities with specific policies, procedures, and chains of command. The structural leader tries to align the internal processes of the organization to the external environment while dealing with organizational dilemmas.[2,3]

The human resource frame focuses on needs of people. Leaders working within the human resource frame value the feelings and relationships of people, and assume the organization must meet basic human needs through facilitation and empowerment. The political frame focuses on individual and group interests. Political leaders advocate and negotiate between different interest groups for use of limited resources. Political leaders build power bases through networking and negotiating compromises. The symbolic leader develops symbols and culture to shape human behavior and reflects a shared mission and identity for the organization. Leaders working in the symbolic frame instill enthusiasm, a sense of charisma, and drama to the organization.[4,5]

Similar to Bolman and Deal's leadership model, Howard groups leadership styles into four types—Type A, B, C, and D. Type A (fact based) leaders were comfortable with environments that require theories, analysis, and technical processes.[6] These leaders perform best with emphasis on the bottom line. Type B leaders (creativity based) develop an environment that promotes creativity and spontaneity whereas problem solving takes on an artistic, flexible, and imaginative approach. Type C (feelings based) leaders makes decisions based upon intuitiveness, emotions, and interpersonal relationships rather than facts. Type D (control/power based) leaders exercises control over people, tasks, and environments. These leaders are inflexible, choose control in how they respond to people, and are advocates for tradition.[7]

The Bolman and Deal and Howard analyses of leadership styles are similar.[8-10] Type A closely aligns with the structural frame, Type B with the symbolic frame, Type C with the human resource frame, and Type D with the political frame. The Bolman and Deal leadership model has been studied extensively and most recently in college leadership.[11] Thus, the Bolman and Deal Leadership Orientation Instrument (LOI) was an appropriate instrumentation tool for the study.

Bolman and Deal LOI—Self

The Leadership Orientation Instrument (LOI)-Self instrument has 32 questions that describe specific behaviors indicative of distinct leadership frames. For example, the statement *"think very clearly and logically"* reflects the structural frame of leadership. The 32 questions identify statements indicative of the structural, political, human resource, and symbolic frames. The respondents indicated how often each item was characteristic of their behavior on a Likert scale from 1-*never* to 5-*always*. The LOI-Self has demonstrated high reliability using the Cronbach's alpha (0.92 for structural frame, 0.93 for human resources frames, 0.91 for political and 0.93 for symbolic).[12] High reliability has also been shown using the Spearman Brown coefficient: (0.93 for structural, 0.92 for human resources, 0.91 for political, and 0.93 for symbolic).[13] No published validity studies exist although the instrument has been used in corporations, higher education, and K-12 schools across the United States and healthcare environments.[14-19]

Additionally, leadership frames can be used to evaluate managerial and leadership effectiveness. According to Bolman and Deal, research conducted on Florida and Singapore school principals indicates all four frames were associated with effectiveness as a leader or manager.[20] In both groups of administrators, the structural frame was the strongest predictor of managerial effectiveness whereas the symbolic frame was the strongest predictor of leadership effectiveness.[21] Women were rated slightly higher in each frame than men, but the differences were not statistically significant.[22]

Thompson undertook a similar study examining gender and use of leadership frames among lower, middle, and upper managers.[23] Thompson found leaders who use three or four frames regardless of the leadership dimension were more effective in their leadership roles. Gender was found to have no impact on leadership effectiveness. Perceived effectiveness as a leader is a function of multiframe leadership behavior. Balanced leadership, defined as use of three or more frames, was found to yield both effective managers and leaders.[24]

The Turley study of the radiation therapy program directors by self report concluded that these directors were more effective managers than leaders due to their usage of the human resource and structural frames.[25] To improve their leadership effectiveness, these program directors could benefit from development of their political and symbolic skills, although 44 percent of the respondents used three or

more frames, indicating multiframe or balanced use associated with Thompson's definition of effective leadership.[26] Similarly, in the Miller study of occupational therapy directors, 40 percent rated themselves a multiframe user indicative of effective leadership.[27] These and other studies have found multiframe leadership is related to effective direction of programs.[28,29]

Background

Recent studies in nursing, occupational therapy, graduate medical education, radiation therapy, and interdisciplinary health science education have examined leadership styles using the Bolman and Deal leadership theory.[30-34] Two of the studies looked at the leadership styles, organizational climate, and program effectiveness respectively among nursing and medical education programs.[35,36] Specifically, the Mosser and Walls study compared the leadership style of nursing chairpersons with the organizational climate of the nursing department. In the Mosser and Walls study, colleagues rated chairpersons highest on the human resource frame (49.8 percent), followed by structural (43.5 percent), symbolic (32.4 percent), and political (32.0 percent) frames. Twenty-two percent of chairpersons were identified as using all four frames while 39.5 percent were reported as using no frames. The Sharpe study compared the program directors' leadership style with graduate medical education effectiveness.[37] Medical residents again rated their program directors highest in the human resource frame followed by the structural, political, and symbolic frames. Results indicated the combination of structural and human resource frames was most commonly identified among program directors. Program effectiveness as measured by career development, education satisfaction, academic, personal, and professional development was significantly correlated with frame use.[38]

The Miller study examined the leadership styles of directors of occupational therapy programs whereas the Turley study examined the leadership within radiation therapy programs.[39, 40] Findings from the Miller study indicated program directors self-reported their human resource skills the highest (83.7 percent), followed by the symbolic (76.5 percent), political (74.8 percent), and structural (72.5 percent) frames.[41] Forty percent of the sample reported using three or more frames while 17.6 percent were not using any frame. Miller's study deviates from other studies in the high scores reported for the symbolic and political frames.

The Turley study of self-reports of radiation therapy directors indicated the human resource frame was most frequently used (72.9 percent), followed by the structural (69.5 percent), symbolic (40.7 percent), and political (32.2 percent) frames.[42] Turley found the number of frames reported used by program directors was fairly consistent ranging from 15.3 percent reporting zero frames used to 23.7 percent using three frames.[43] The use of one, two, and four frames ranged from 18.6 to 22.0 percent.

The Sasnett study examined leadership of interdisciplinary health science education programs where program leaders were from a variety of health science disciplines.[44] Study results found program leaders operated most often in the human resource frame (66.7 percent) followed by the symbolic (46.7 percent), political (26.7 percent), and structural frames (6.7 percent). Program leaders reported using more than one frame combination, the frame combination of human resource and symbolic was cited most frequently (40 percent). This study examined the use of leadership frames and program continuation, and concluded there was a significant correlation of program continuation to symbolic leadership.[45]

In summary, these health science studies indicate the human resource frame is the common orientation of program directors and the number of frames employed by managers varies widely. The findings that healthcare managers use the human resource frame more often than other leadership frames is similar to results found in other industries. Bolman and Deal's four frames provide a theoretical model for exploring leadership in other health science programs not previously studied.

Research Questions

This study builds upon previous studies to determine if self perceived managerial and leadership effectiveness of health information management program directors is related to Bolman and Deal's four frames of leadership. In addition, the study explores if certain frames of leadership are more likely to be

associated with leaders or managers, and to determine if and possibly how HIM program directors distinguish between leaders and managers.

Methods

Research data were collected by surveying the program directors of two- and four-year health information management programs across the United States. A listing of the two- and four-year program directors was located at the Commission on Accreditation for Health Informatics and Information Management Education. These participants were e-mailed regarding the study and their participation. Interested participants voluntarily consented and electronically completed the Bolman and Deal LOI Self-questionnaire. The questionnaire measured perceived leadership style(s) of the participants and perceived effectiveness as leaders and managers. Two hundred and forty surveys were solicited, 97 surveys were completed—a response rate of 40.4 percent. Data from 64 respondents were used in statistical computations; 33 surveys were not used due to errors in the completion of the survey or failure to complete the entire survey. The high wastage rate was due in part to the complexity of the survey and the failure to anticipate respondent uncertainty in the instructions.

Table 1 provides the descriptive statistics. The research question investigated is what determines self-perceived effectiveness as a leader or manager of health information management program directors?

Results—Analytical Techniques

Table 2 shows the raw scores on the survey. Each leadership frame is evaluated using eight items and a five-point Likert scale with the maximum possible score for a frame of 40. In addition to the raw scores, table 2 reports the number and percentage of respondents scoring above 32 (or 80 percent, the commonly used threshold to distinguish use and nonuse of a frame. Table 2 shows HIM program directors' use, specifically reported scores above 32, human resource and structural skills more frequently than political and symbolic skills.

As table 2 demonstrates, only 20.3 percent of respondents reported scores of 32 or better in all frames while 12.5 percent reported scores of 32 or better in three of the four frames. The vast majority of respondents (67.2 percent) used two or fewer frames—primarily the human resource and structural frames associated with management.

In addition to completing the Bolman and Deal survey, program directors were asked to evaluate their effectiveness as managers and leaders. Table 3 demonstrates that program directors largely placed their effectiveness in the top 40 percent with a minute difference in their perception of effectiveness as a manager and a leader.

How does mastery of frames influence a manager's perception of effectiveness? To answer this question the categorization scheme of 32 or better (out of a possible 40) was applied to the sample. Figure 1 shows the relationship between frame use and reported effectiveness. Generally managers who mastered more frames evaluated themselves as more effective managers than those who mastered a lower number of frames. However, managers whose responses indicated mastery of two frames placed themselves into a higher category of effectiveness than managers who mastered three frames.

There is no way to determine why managers who described themselves as employing two frames believe themselves to be more effective managers than those that employ three frames and this anomaly prompted us to re-compute frame mastery. Instead of using the threshold of 32, an average score for each frame was computed and the respondents were divided into those falling into the top (bottom) 50 percent, including those who's reported scores were above (below) the frame mean. Figure 2 demonstrates the result of this re-computation—perceived effectiveness increases as mastery of frames increases from zero through four frames. This re-computation of frame mastery demonstrates the use of a relative standard (above or below the mean) may be a more informative method of evaluating performance than using the rule of 32 or better.

Chi-square analysis assessing the relationship between perceived managerial effectiveness and mastery of frames found no statistical relationship ($F_{12,64} = 20.31$, p = 0.0614). Given the lack of statistical significance, the chi-square test was computed using the rule of 32 or better to determine frame mastery. Using the rule of 32, the relationship between frame use and effectiveness was found to be more likely due to chance ($F_{12,64} = 19.31$, p = 0.0812) than using the mean categorization scheme. Therefore, all subsequent tests defined frame mastery as being greater than or less than the average score for a frame.

Table 3 shows the responses for managerial effectiveness were very similar to leadership effectiveness responses. The two differences were: a) one more person placed themselves in the top 20 percent of leaders and b) the one person who identified themselves in the 20-40 percent range of managers, the second lowest category, ranked themselves higher on leadership effectiveness. Overall the group rated themselves higher as leaders than managers. Does frame mastery influence perceptions of leadership effectiveness? Unlike the managerial effectiveness findings, chi-square indicates a statistically significant relationship ($F_{8,64} = 20.59$, p = 0.0083) between frame mastery and perception of leadership effectiveness.

The difference in statistical significance shows HIM program directors view leadership and management differently but the question remains, what is the difference between a manager and a leader? Although mastery of all frames was not found to affect managerial effectiveness, while being statistically related to leadership effectiveness, it does not mean that individual frame mastery does not affect this group's perception of managerial effectiveness. Chi-square tests found three of the four frames, structural ($F_{3,64} = 18.91$, p =0.0003), political ($F_{3,64} = 13.54$, p = 0.0036), and symbolic ($F_{3,64} = 9.60$, p = 0.0222) were significantly related to perception of managerial effectiveness. The human resource frame was the only set of skills that was not significantly related to managerial effectiveness ($F_{3,64} = 4.67$, p = 0.1972).

In addition to the four frames being significantly related to perception of leadership effectiveness, chi-square tests show each frame is also individually related to this perception, structural ($F_{2,64} = 14.69$, p = 0.0006), human resources ($F_{2,64} = 8.91$, p = 0.0116), political ($F_{2,64} = 13.23$, p = 0.0013), and symbolic ($F_{2,64} = 13.92$, p = 0.0009).

ANOVA tests were performed to determine if managerial effectiveness, leadership effectiveness, or the number of frames mastered were related to years in current job or years as a manager. In no case were years in a current job or years as a manager found to be significantly related to perception of effectiveness or mastery of frames.

Discussion

Unlike the clear distinctions often drawn regarding managers and leaders (i.e., managers should be concerned with or proficient in issues comprising the structural and human resource frames while leaders will be more adept in the political and symbolic skills), it is clear that perception of managerial effectiveness among HIM program directors is related to structural, political, and symbolic competencies. In this group, perceptions of the use of these three skill sets have a direct bearing on self-assessment of managerial performance. Structural skills were consistently rated higher than political and symbolic skills but the skills in all three frames are seen as related to managerial effectiveness by the respondents. Interestingly, human resource or interpersonal skills (e.g., concern for others, sensitivity for others' feelings) were unrelated to perception of managerial effectiveness.

The major difference among this group between managerial and leadership effectiveness is their perception that leadership effectiveness relates to all frames whereas effective management requires a smaller set of skills than effective leadership. Effective management was seen as requiring structural, political, and symbolic skills while leadership requires human resource skill in addition to the other three frames. The inclusion of human resource skills into the perception of what is required to be a good leader is understandable—a key to strong leadership is the ability to motivate others and insure their actions are congruent with goals sought. To achieve these ends it is helpful if employees believe there is more than a professional relationship between themselves and their supervisor and/or the organization where they work. This line of thinking is consistent with Barker's view that leadership is not a set of skills or abilities

but investing oneself in the process of building relationships and understanding the ethical and psychological drivers of behavior.[46]

A significant deviation from theory is the significance of structural and human resource frames to leadership effectiveness. According to Bolman, effectiveness as a leader or manager is associated with different combinations of frames.[47] Managers were associated with the structural and human resource frames whereas leadership is associated with the symbolic and political frames.[48,49] While the exclusion of human resource skills from managerial effectiveness and inclusion into leadership effectiveness was discussed above, the inclusion of the structural frame into leadership effectiveness presents more of a challenge to the posited division of skills between managers and leaders. This may be an attribute of the surveyed population. HIM professionals are characterized by their attention to detail and it is understandable that program directors would not identify someone as a leader who could not think logically, plan, and execute action. Theorists, on the other hand, are comfortable differentiating idea generation and team building from execution.

The results are similar to Turley who found human resource and structural skills were the dominant frames used by radiation therapy program directors.[50] Obviously management and leadership are not the same thing and many authors have attempted to explore the difference between the two concepts. Bolman and Deal associate managerial effectiveness with structure and human resources and leadership effectiveness with symbols and politics.[51]

Other studies have developed the idea of balanced and unbalanced leadership based on the number of frames used to study the impact of leadership on various organization attributes such as employee satisfaction, program effectiveness, and program continuation. Balanced and unbalanced leadership is determined by the number of frames a manager receives or reports a score of 32 or greater. Managers with scores above 32 in three or more frames are deemed balanced, where two frames or less are deemed unbalanced.[52-54]

Study Limitations

The limitation of this study is response bias. Based on a response rate of 40.4 percent the conclusions may be only generalizable to those willing to respond to an online survey and may not reflect the beliefs of all HIM managers.

A second weakness is the study relies entirely on director's self-perceptions of their own effectiveness. These self-perceptions were upwardly biased as evidenced by more than 75 percent of the respondents placing themselves in the top 40 percent as effective managers and leaders. This study would be improved by using either a subjective measure of effectiveness based on the perception of either superiors or subordinates or introducing a more objective measure of effectiveness.

A final weakness is the lack of other data to explain the responses. Information on the length of the program (two or four years), program size (number of students, size of faculty), and age of program as well as other variables may be helpful to determine if there are systematic differences in program director responses based on the environment they work in.

Areas for Future Research

Future studies may wish to rely on other measures of effectiveness; other researchers have used employee judgments to assess effectiveness. Obviously the perceptions of either the superior to or subordinates of the program director would provide a less self-interested assessment of effectiveness. An additional benefit of the use of subordinate assessments of effectiveness would be the ability to obtain multiple views of a director's performance rather than relying on the single interpretation resulting from either self-assessment or the assessment of a superior.

It can be argued that even third-party assessments are insufficient to measure effectiveness and that future studies should pursue more objective measures of effectiveness such as employee turnover,

program growth (number of student, size of budget), and/or pass rates on RHIT or RHIA exams. These types of measures speak directly to the duties of managers and leaders to maintain operations and develop their programs.

Future research must explore the relationship between the frames of management, in particular the political and symbolic behaviors that are infrequently cited by this group of program directors' skills, to successful program operation as measured by objective measures of success such as enrollment growth and high pass rates on the RHIT/RHIA exams. Only after these relationships are documented will we know if it is fruitful to explore how to instill skills and take the steps necessary to nurture these skills among program directors. At this point we have only taken the initial step, demonstrating that the four frames of leadership are correlated to directors' perception of their own effectiveness; whether the four frames of leadership influence the perceptions of superiors or subordinates and the operation of HIM department must be more rigorously tested.

Conclusion

This research highlights the leadership skills or frames where HIM program directors see their greatest strengths and weaknesses. HIM program directors perceive their greatest strengths in the human resource and structural frames. Similar to prior studies, HIM program directors report less use of political and symbolic skills than human resource and structural skills. However, the question remains whether training in these areas would enhance the manager's perception of effectiveness. Distinguishing between management and leadership based on human resource skill, as one of their primary strengths, may explain why they perceive themselves as leaders rather than managers.

On the other hand, they report low use of political and symbolic skills, which is related to their perception of both managerial and leadership effectiveness. Accordingly, training in political or symbolic skills could enhance directors' skill sets and make them more confident as managers and leaders. This training could be beneficial for directors at any point in their career since neither the number of years in the current job or years as a manager were correlated with perceived effectiveness or frame mastery.

The literature often supports the idea that effective management is associated with structure and human resource frames while effective leadership is associated with political and symbolic frames.[55,56] This dichotomy is not seen among the HIM program directors who relate effective leadership with all four frames or demand what might be called a completely balanced approach to leadership.

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Table 1

Descriptive Statistics

Gender		
Female	62	96.9%
Male	2	3.1%
	64	
Years in Current Position		
5	21	32.8%
10	16	25.0%
15	9	14.1%
20	7	10.9%
20+	11	17.2%
	64	
Years as a Manager		
5	7	10.9%
10	8	12.5%
15	7	10.9%
20	13	20.3%
20+	29	45.3%
	64	

Table 2

Survey Results: Frames Scores and Percentage of Sample Using Frames

	Structural	Human Resources	Political	Symbolic
Raw Score	32.4	33.2	28.2	29.6
No. > 32	40	48	17	23
% > 32	62.5%	75.0%	26.6	35.9%
		Percentage		Cumulative %
Percent using four frames (reporting 80% or more)		20.3%		100.0%
Percent using three frames		12.5%		79.7%
Percent using two frames		26.6%		67.2%
Percent using one frame		28.1%		40.6
Percent using 0 frames		12.5%		12.5%

Table 3

Respondent Perception of Own Performance

	Effectiveness as a Manager	**Percentage**	**Effectiveness as a Leader**	**Percentage**
Top 20%	20	31.3%	21	32.8%
61-80%	28	43.8%	28	43.8%
41-60%	15	23.4%	15	23.4%
21-40%	1	1.6%	0	0
1-20%	0	0	0	0

Figure 1

Relationship between Perceived Managerial Performance and Frame Use
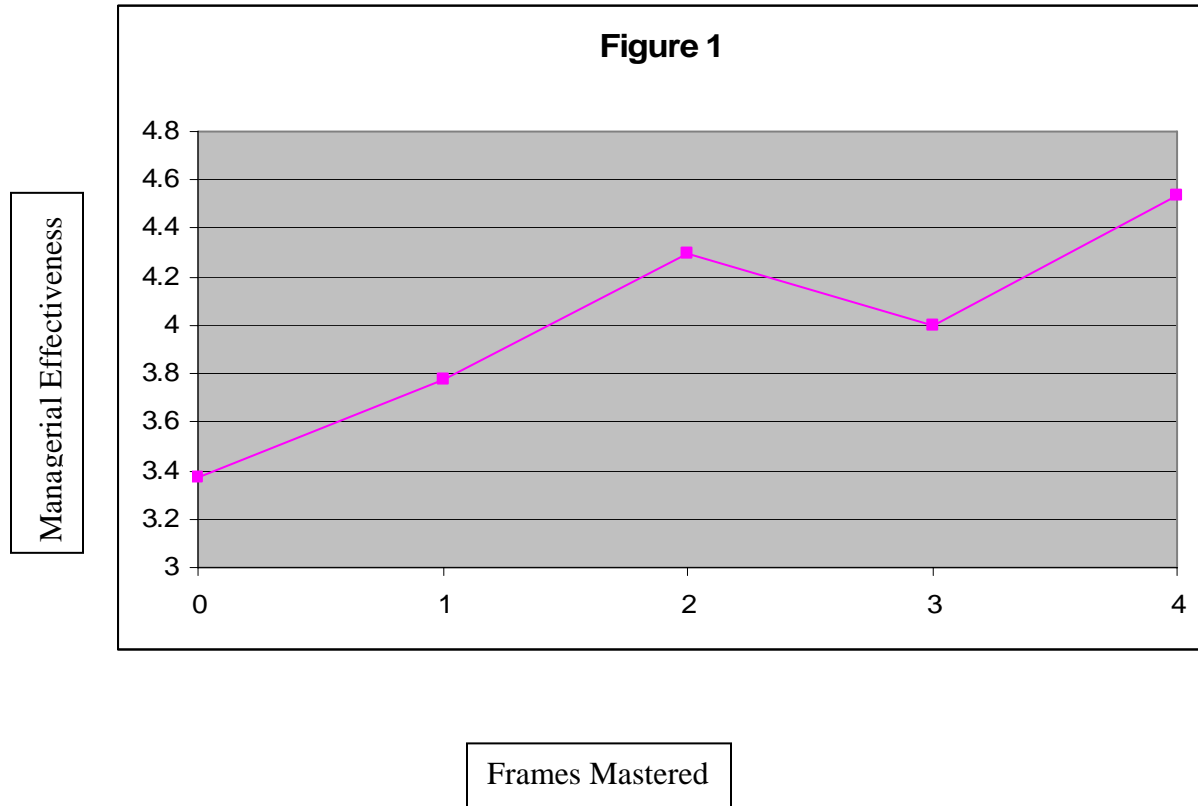(Based on self-reported score greater than or equal to 80 percent)

Frames Mastered

Figure 2

Relationship between Perceived Managerial Performance and Frame Use
(Determined by self-reported score in the upper or lower 50 percent of sample)

Figure 2

Managerial Effectiveness

Frames Mastered