Journal of Interprofessional Care,
December 2008; 22(6): 630–638

informa
healthcare

Leadership styles in interdisciplinary health science education

BONITA SASNETT[1] & MARIA CLAY[2]

[1]*Department of Health Services and Information Management, and* [2]*Office of Interdisciplinary Health Sciences Education, School of Allied Health Sciences, East Carolina University, Greenville, North Carolina, USA*

Abstract
The US Institute of Medicine recommends that all health professionals should deliver patient-centered care as members of interdisciplinary health science teams. The current application of the Bolman and Deal Leadership model to health sciences provides an interesting point of reference to compare leadership styles. This article reviews several applications of that model within academic health care and the aggregate recommendations for leaders of health care disciplines based on collective findings.

Keywords: *Leadership styles, interdisciplinary health science education*

Introduction

The Institute of Medicine, which advises United States policy makers on health-related issues, recommends that all health professionals deliver patient-centered care as members of interdisciplinary health care teams. Unlike countries such as Canada, the United Kingdom and Australia that have incorporated teamwork into the delivery of health care (Gilbert et al., 2000; Gray & Armstrong, 2003; McNair et al., 2005; Wilcock & Headrick, 2000), renewed emphasis on team delivery of care in the United States requires profound changes in health sciences education, change among other ingredients in critical leadership skills to transform organizations (Connelly, 1978). Recent inclusion of the Bolman and Deal four frames of leadership into the health sciences offers a theoretical model for exploring health sciences leadership and may provide a means of discussing missing skills required to affect the type of organizational change proposed by the Institute of Medicine (IOM, 2002).

Leadership theory

Bolman and Deal (2003) note that leaders view organizational experiences through sets of preconditioned lenses: structural, human resource, political and symbolic. These allow comparisons to be made among leaders, leadership gaps to be identified (especially if leaders

Correspondence: Bonita Sasnett, EdD, Assistant Professor, Department of Health Services and Information Management, School of Allied Health Sciences, East Carolina University, Health Sciences Building, Suite 4340, 600 Moye Boulevard, Greenville, NC 27858-4353, USA. Tel: +1 252 744 6181. E-mail: sasnettb@ecu.edu

ISSN 1356-1820 print/ISSN 1469-9567 online
DOI: 10.1080/13561820802293006

resort to using only one lens in all situations), and permit organizations to bolster their leadership cadre through leadership development and recruitment.

Structural frame

The structural frame emphasizes organizational charts, rules, policies, procedures and chains of command. It relies heavily on data analysis in assessing the bottom line of the organization. People must be held accountable for their results. Consequently, the structural leader is the social architect of the organization (Bolman & Deal, 1991a; Mosser & Walls, 2002; Turley, 2004).

Human resource frame

The human resource frame focuses on people. Leaders value the feelings and relationships of people and assume that the organization must meet the employee's basic human needs (Bolman & Deal, 2003). Problems are defined in terms of individuals; balancing their needs with the expectations of the organizations becomes the primary goal of leadership (Bolman & Deal, 1991a, 2003; Mosser & Walls, 2002; Turley, 2004). Leaders lead by their facilitation and empowerment skills.

Political frame

The political frame focuses on conflict and competition in the organization, which brings about the need for coalition building, bargaining and negotiation. A key role of the political leader is to advocate and mediate between different interest groups for limited resources through careful assessment of power distribution. Consequently, political leaders use persuasion, compromise, networking and negotiation skills (Bolman & Deal, 1991a, 2003; Mosser & Walls, 2002; , Sharpe, 2005; Turley, 2004).

Symbolic frame

Symbols express an organization's culture by the patterns, values and beliefs of its membership (Bolman & Deal, 2003). The symbolic leader recognizes and utilizes ceremony, myth and ritual to create a team spirit within an organization (Bolman & Deal, 2003). Consequently, enthusiasm and charisma are traits exhibited by leaders working within this frame (Bolman & Deal, 1991a, 2003; Mosser & Walls, 2002; Turley, 2004).

Multiple frames

Important as it is to know the leadership frame within which leaders operate, it is equally important to know how many frames they use. Each frame has its unique effectiveness, but a leader who can draw upon multiple frames is a more comprehensive leader than one who relies exclusively upon one for all situations (Bolman & Deal, 1991a). The ability to utilize multiple frames not only provides a greater repertoire of skills from which to draw, but also enables leaders to operate easily with flexibility and adaptability.

Information on the number of leadership frames used, and which predominates, is easily obtained through the Bolman and Deal Leadership Orientation Instrument (LOI) The LOI, composed of a 32 item survey, can be used to assess one's own skills (LOI-Self) or by colleagues to assess the skills of their leader (LOI-Other) (Bolman & Deal, (1990). The LOI

has been extensively used for over 25 years and has contributed to the inclusion of the Bolman and Deal Leadership Frame Theory in higher education (Bolman & Deal, 1999; Monahan, 2004; Sharpe, 2005; Small, 2002; Villanueva, 2003; West, 2005) in kindergarten through high schools, and in corporations across the US (Bolman & Deal, 1991b). The LOI is being used to assess health sciences program leaders in the fields of occupational therapy, nursing, radiation therapy, medical residency, interdisciplinary education and health information management by a self reported survey (LOI). This article is a review of several applications of the Bolman and Deal theory within academic health care and the aggregate recommendations for leaders of health care disciplines based on collective findings.

Review of the application of Bolman and Deal in academic health sciences

Organizational changes within the health sciences have brought about the need to study leadership and programmatic effectiveness of professional programs. Many of the programs are undergoing changes. At this time, occupational therapy programs are experiencing a period of transition where leadership is critical (Miller, 1998). Nursing programs are experiencing faculty shortages requiring good organizational leadership (Mosser & Walls, 2002). With the cessation of interdisciplinary grant funds, programmatic changes are occurring requiring effective leadership for the continuation of interdisciplinary education at the university.

These studies using the Bolman and Deal frames in health care include examinations of leadership styles in occupational therapy, nursing, radiation therapy and medical residency education. One of the authors of this paper (BS) has also applied the Bolman and Deal model to assess the leadership styles of interdisciplinary leaders of the Quentin Burdick Interdisciplinary Health Training Grants and health information management program directors in two and four year institutions (Sasnett, 2006).

Occupational therapy program directors

Findings from a 1988 study indicate that occupational therapy directors use all four leadership frames: the human resource frame was used most frequently (83%), the symbolic frame was used next (76%), followed by the political (74%) and, lastly, the structural frame (72%). Findings indicate that the OT directors perceive themselves to use single-frame the most (25%), all four-frames next (21%), followed by three-frames (18%) and, lastly, two frames (17%) (Miller, 1998).

Nursing chairs

The LOI is used in a descriptive study to examine the leadership behaviors of nursing chairpersons and the relationship of leadership styles to the organizational climate of nursing programs (Mosser & Walls, 2002). Results show that faculty could identify at least 60% of their nursing chairpersons as consistently using the Bolman and Deal leadership frames. The human resource frame is perceived to be used most of the time (49.8%) with the structural frame of leadership coming in a close second (43.5%). Faculty members perceive their chairs to use the political frame the least of the four frames (32.0%). The data also show that nursing chairs do not rely on a single frame, 22.1% being identified as using all four frames, 16.6% using a single-frame, 12.6% using two-frames and 9.2% using three-frames (Mosser & Walls, 2002).

Radiation therapy program directors

A 2004 study uses the frames to self assess leadership approaches of 59 radiation therapy program nationwide (Turley, 2004). Findings show that radiation therapy program directors most often use the human resource frame (73% of the time), then the structural frame (70%), then the symbolic frame (41%), followed by the political frame (32%). With respect to multiple usage, 44% use multiple frames, 22% use paired frames, 18.6% use single frames, while 15.3% could not be identified as using any frame (Turley, 2004).

Medical residency program directors

The LOI–Other is used in a 2005 study to collect data on medical residency program directors. The study asks medical residents to assess the leadership styles of their program directors. The study found that of the four frames, the combination of the structural and human resource frame is most commonly used. The combination of structural, human resource and political frames follows. According to residents, 50% of the program directors are rated as not using any frame consistently while 17% use the single approach, 14% are perceived to use a paired-frame approach and 17% use a multi-frame approach (Sharpe, 2005).

Quentin Burdick interdisciplinary leaders

A 2006 study looks at the leadership style of interdisciplinary health science education leaders who had active Quentin Burdick Interdisciplinary Rural Health Training Programs (Sasnett, 2006). Findings indicate that the human resource frame is used most often (66.7%), followed by the symbolic frame (46.7%), then the political frame (26.7%) and, lastly, the structural frame (6.7%). Quentin Burdick Interdisciplinary Rural Health program directors use three frames more often (44%) then two frames (22%) and lastly single frame (18.6%) Fifteen percent did not use any frame consistently (Sasnett, 2006).

Health information management program directors

A 2007 study uses the frames to self assess leadership styles among health information management program directors across the US. The findings show that the human resource frame is used by 33.2% of the respondents, followed by the structural frame 32.4%, symbolic frame 29.6% and political frame 28.2%. Study results also show that they use a single frame most often (28.1%) followed by two frames (26.6%), and four frame usage (20.3%) (Sasnett & Ross, 2007).

In summary, recent studies of occupational therapy leaders, nursing chairs, residency program directors, radiation therapy directors, interdisciplinary health science leaders and health information management program directors attest to inclusion of the Bolman and Deal Leadership Frames Theory in describing academic health science leaders. More importantly, the similarities of findings speak to possible cultural underpinnings to leadership in the health sciences.

Discussion

As noted in Table I, the human resource frame emerges as the most prevalent frame by leaders in all six studies, regardless of discipline. This is a particularly important finding,

Table I. Prevalence of frames used by health care leaders.

	Prevalence of Frame			
Disciple	1st	2nd	3rd	4th
Nursing	Human R	Structural	Symbolic	Political
Occupational Therapy	Human R	Symbolic	Political	Structural
Medicine Residency Directors	Human R	Structural	Political	Symbolic
Radiation Therapy	Human R	Structural	Symbolic	Political
Interdisciplinary	Human R	Symbolic	Political	Structural
Health Information Management	Human R	Structural	Symbolic	Political

although hardly surprising given the culture and education of health care professionals. The prevailing health care culture, characterized as highly interpersonal and dependent upon human interactions, may serve to attract human resource style leaders who find it comfortable to exhibit leadership skills in this environment. This culture, supported by shared health care values of respect for the individual, patient/client advocacy, fairness in delivery of care and humane application of health care treatments, is consistent with and reinforces the human resource leadership style. Key to effectiveness in this culture is communication. Fortunately, health professionals receive extensive education and training in communication, interpersonal interactions, establishing empathy and rapport, and relationship building, all of which are strong underpinnings of a human resource style of leadership.

Similarities in educational and professional socialization may further create a health care culture that allows leaders and followers to appreciate and understand leadership styles that rely heavily upon the needs of individuals. Both leaders and followers understand the human context of their relationship, whether that relationship is on an individual basis or in a team context. Individuals who have been successful in such a health care environment may come to a leadership position with experience and expertise in team building, group facilitation and group management, and may find the human resource style the most comfortable fit with their background and training.

The Bolman and Deal structural leadership frame is used by four of the six leadership groups studied, as shown in the above table. For the structural leader, people must be held accountable for their results. One means of ensuring accountability is to align the internal processes of the organization with the external environment (Bolman & Deal, 2003).

The concept of accountability is familiar in health care and at the heart of most professional standards, whether in medicine, nursing, the therapies or pharmacy. Accountability may be manifested in activities such as peer review programs, quality assurance initiatives, ethical reflection on the conduct with patients and special interest group, commitment to life-long learning and adherence to boundary issues. In health institutions it is at the heart of collective responsibility for the actions of the professions. The prevalence of structural leaders is, therefore, consistent with the nature of academic medical centers as professional organizations committed to personal accountability, collective decision making and self-regulation.

Accountability is often operationalized through the alignment of professional/institutional goals and processes and external needs/desires. A case in point is the accountability of health institutions to address the health needs of the public, what some have called the social contract of medicine. On a more pragmatic level, alignment can occur between the duties that a professional is to perform and the scopes of practice authorized to that profession, the

alignment of tasks to skills, the alignment of policies to best practice and standards of care, just to mention a few. Health professionals understand this need for alignment and respond well to leaders who work to achieve alignment and clarity.

Although not obvious from the chart above, the symbolic frame of leadership emerges as the third most prevalent frame used by health science leaders. According to the theory, the symbolic leader uses a leadership style that shapes human behavior by seeking to reflect a shared mission and by capturing in symbolism the spirit within an organization (Bolman & Deal, 2003). Recognizing that symbolic leadership is visionary (Fidler, 1997), structural leaders enable others to share their vision and move organizations through transformation rather than revolution.

The health care leadership literature is replete with the necessity of creating a shared vision. In fact in a national study conducted by the Health Care Forum, the ability to craft a collective organizational vision was third on their identified competencies for 21st century health care leaders. According to Kaiser, "visions are values projected in the future" (p. 54) and will require transformational leadership (Bridging the Leadership Gap in Healthcare, 1992).

Whether it is building collaboration for a shared vision, creating strategies to develop and disseminate a vision, or crafting an approach to transform the organization, visioning is a critical component of academic leadership competencies (Lobas, 2006). Without passion and vision, changes of the type and magnitude demanded by new curricular mandates and ongoing health care improvement imperatives cannot be developed or sustained. Through a symbolic leadership frame, health sciences leaders may be in the best position to undertake and sustain the reform proposed by many persons knowledgeable of and committed to the continued renewal of health professional education. That the symbolic leadership frame is not as widely used as the other two leadership styles may be problematic in this time of health science transformation.

Least prevalent of the four frames is the political, focusing on conflicts and competition for scarce resources in the organization, resulting in coalition building, bargaining, conflict management and negotiation. Greater political skills are needed to garner resources for program continuation, lobby for new initiatives and negotiate compromises. Greater political savvy is certainly needed to enable health science leaders to obtain the necessary resources to sustain their efforts.

Why then do so few leaders use this frame? One explanation may be that individuals immersed in a culture that values people may have difficulty self-identifying or demonstrating to others the extent to which they use the political frame as a leadership lens. Another explanation may be that professionals trained in interpersonal communication and humanistic values, may lack skills in negotiation, bargaining and/or lobbying. As such, these political skills are less developed and thus less available to the health care leader.

Nevertheless, as health sciences institution experience greater economic constraints, their leaders will be called upon to influence the prioritization and allocation of scare resources. They must have the power to affect these decisions. Membership on key committees, participation in administrative councils, and policy-setting groups must be pursued by the health care leader even though these activities may fall well beyond the realm of traditional professional health care practices. Said differently, health sciences leaders must become key institutional leaders who can effectively negotiate for needed resources through political environments even though these may require them to utilize underdeveloped and untaught skills.

Thus far, we have reviewed leadership frames in isolation; leadership, however, also requires flexibility. As noted earlier, the use of multiple leadership frames is an effective

strategy in directing programs and promoting organizational reform. Here the data from the combined health sciences leadership studies is less directional (Table II).

Clearly some leaders emerge as using multiple frames, but equally, as many show, a preference for using only one or two frames. Unlike the primacy of the human resource frame as the preferred frame for health care leaders, utilization of multiple frames may not currently exists throughout the health sciences leadership ranks.

Aggregate recommendations for health science leaders

As a first step in altering the heavy reliance on the human resource frame and in encouraging multiple frame use, health science leaders may benefit from specific leadership development and training. Especially key is the identification and education of frames currently absent from leadership skill set, especially relative to the use of the political frame. Such education programs should be sufficiently comprehensive to counter existing cultural biases of health leaders and expansive enough to allow for acquisition and comfort with new leadership skills. Unfortunately, health sciences in the US do not traditionally invest in comprehensive faculty development programs of this nature, certainly not at the scale of corporate investments. Moreover, health sciences supplement formal training programs with mentoring.

Mentoring that matches junior, less experienced faculty with more senior faculty members represents a standard practice in academic settings for development of skills and career progression. Key to this discussion is that reliance on a mentoring model for career development may result in replicating existing skills and preferences (e.g., a penchant for the human resource frame) instead of diversifying the skills of future health sciences leaders. If mentoring is to be used, future leaders would be well advised to seek mentors outside of the health sciences to acquire skills in negotiation, analysis, power and politics (Moses et al., 2005).

As an extension of the mentor model, health sciences leaders may wish to adopt another corporate approach – the corporate coach. Corporate coaches are available to work individually with leaders in real time situations to define alternative tactics and guide utilization of new skills. As such, they could mitigate perpetuation of the same cultural biases and tendencies by bringing new perspectives, insights and approaches.

As an alternative to augmenting an individual's leadership skill, another strategy is to leverage a team approach to leadership. Intentional creation of leadership teams based on Bolman and Deal frames of leadership would be analogous to the creation of interprofessional teams around specific patient care issues. Through such teams, health sciences leaders who do not possess skills in a specific leadership frame partner with others

Table II. Multiple frame usage.

	Ranking of frames used				
Disciple	No frame	Single frame	Paired frame	Multiple frames	All frames
Nursing	1	2	3	4	5
Occupational Therapy	4	1	5	3	2
Medicine Residency Directors	1	2	3	4	
Radiation Therapy	4	3	2	1	
Interdisciplinary	4	3	2	1	
Health Information Management	5	1	2	4	3

possessing complementary leadership styles and bring a full array of leadership styles to a project, program, or department. Teams seem a ready and immediate solution to fill leadership gaps, while at the same time maintaining the culture of health sciences collaboration.

Least preferable would be for new health care leaders to be recruited from outside health sciences. The scenario certainly exists that with mounting concerns for resources and the time sensitive nature of allocations, external recruitment may be the answer. However, external recruitment may bring with it its own set of issues and problems and must therefore be implemented with extreme care and caution. Externally recruited leaders may approach sensitive areas like resource allocation without benefit of shared institutional history or a culture. Likewise, leaders recruited from outside the health professions may not share the cultural elements (e.g., collegiality, consensus-building) that oftentimes underpin interdisciplinary collaboration.

Conclusion

While the approach to expanding leadership skills is uncertain, the demand for sophisticated leadership expertise is irrefutable as the challenges facing health sciences continue to rise. The Bolman and Deal leadership theory, allows us to assess leaders through the usage of four frames, offers an interesting model from which to review current leadership skills and to evaluate commonalities in leadership usage among health sciences disciplines, and perhaps to plan appropriate interventions to expand existing leadership skills. Issues such as efficacy of leadership style(s) across health disciplines or characteristics of interprofessional leadership style(s), while not the focus of this paper, are important domains that can easily be studied using the Bolman and Deal leadership model. One might even argue that such research is not only possible but must, in fact, occur if interprofessional work is to be advanced throughout higher education institutions and into practice.

Declaration of interest: The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

References

Anonymous (1992). Bridging the leadership gap in healthcare. *The Healthcare Forum Journal*, *35*(3), 49–66.

Bolman, L. G. & Deal, T. E. (1990). *Leadership orientations instrument.* San Francisco: Jossey-Bass.

Bolman, L. G. & Deal, T. E. (1991a). Leadership and management effectiveness: A multi-frame, multi-sector analysis. *Human Resource Management*, *30*(4), 509–534.

Bolman, L. G. & Deal, T. E. (1991b). Images of Leadership. *An Occasional Paper, 7.* Nashville, TN: Office of Educational Research and Improvement.

Bolman, L. G. & Deal, T. E. (1999). 4 steps to keeping change efforts heading in the right direction. *Journal of Quality & Participation*, *22*(3), 6–12.

Bolman, L. G. & Deal, T. E. (2003). *Reframing organizations artistry, choice and leadership*, 3rd edn. San Francisco, CA: Jossey-Bass.

Connelly, T. (1978). Basic organizational considerations for interdisciplinary education development in the health sciences. *Journal of Allied Health*, 274–280.

Fidler, B. (1997). School Leadership: Some Key Ideas. *School Leadership & Management*, *17*(1). Retrieved from Academic Search Premier on 7 August 2006 at http://web116epnet.com/citation.asp?

Gilbert, J. H. V., Camp, R. D., Cole, C. D., Bruce, C., Fielding, D. W., & Stanton, S. J. (2000). Preparing students for interprofessional teamwork in health care. *Journal of Interprofessional Care*, *14* (3), 223–235.

Gray, J. & Armstrong, P. (2003). Academic health leadership: Looking to the future. Proceedings of a workshop held at the Canadian Institute of Academic Medicine meeting, Quebec, Canada, 25 April.

Institute of Medicine [IOM]. (2002). *Health professions education: A bridge to quality.* Executive Summary. Washington, DC: National Academies Press.

Lobas, J. (2006). Leadership in academic medicine: Capabilities and conditions for organizational success. *American Journal of Medicine*, *119* (7), 617–621.

McNair, R., Stone, N., Sims, J., & Curtis, C. (2005). Australian evidence for interprofessional education contributing to effective teamwork preparation and interest in rural practice. *Journal of Interprofessional Care*, *19* (6), 579–594.

Miller, P. (1998). *Directors/chairpersons of occupational therapy professional programs: A study of leadership in higher education.* Columbia University Teachers College.

Monahan, M. (2004). *Leadership frames of presidents of Masters I higher education institutions.* West Virginia University.

Moses, H., Their, S., & Matheson, D. (2005). Why have academic medical centers survived? *Journal of American Medical Association*, *293* (12), 1495–1500.

Mosser, N., & Walls, R. (2002). Leadership frames of nursing chairpersons and the organizational climate in baccalaureate nursing programs. *Southern Online Journal of Nursing Research*, *3*(2), 1–11.

Quentin N. (2005). *Burdick Program for Rural Interdisciplinary Training* (Section 754, Public Health Service Act) Health Resource and Service Administration. Rockville, MD: Department of Health and Human Service.

Sasnett, B. (2006). *Leadership styles of interdisciplinary health science education leaders of Quentin Burdick Programs.* East Carolina University.

Sasnett, B. & Ross, T. (2007). Leadership frames and perceptions of effectiveness among health information management program directors. *Perspectives in Health Information Management*, *4* (8).

Sharpe, S. (2005). *Leadership orientation of graduate medical education program directors and residency training program effectiveness in teaching hospital: An exploratory study.* Central Michigan University.

Small, T. (2002). *A study of the relationship between perceived leadership style of nursing chairpersons and the organizational effectiveness of baccalaureate nursing programs.* West Virginia University.

Turley, C. (2004). A frame analysis of radiation therapy program director leadership. *Radiation Therapist*, *13*(1), 15–19.

Villanueva, D. (2003). *Framing leadership and commitment: An analysis of perceived leadership frames and the relationship to organizational commitment.* Our Lady of the Lake University.

West, S. (2005). *The effect of presidential leadership on faculty professional practice.* Peabody College for Teachers of Vanderbilt University.

Wilcock, P. M. & Headrick, L. A. (1992). Bridging the leadership gap in health care. *The Healthcare Forum Journal*, *35* (3), 49–66.

Wilcock, P. M. & Headrick, L. A. (2000). Interprofessional learning for the improvement of health: Why bother? *Journal of Interprofessional Care*, *14* (2), 111–117.