



Review article

Leadership in academic dentistry

Mahesh Verma^{a,*}, Nairn H F Wilson^b, Christopher D Lynch^c, Aditi Nanda^a^a Maulana Azad Institute of Dental Sciences, New Delhi, India^b King's College London, London, UK^c University Dental School & Hospital/University College Cork, Wilton, Cork, Ireland

ARTICLE INFO

Keywords:

Leadership
Academic dentistry
Dental education
Oral healthcare
Oral and dental research

ABSTRACT

The transformational changes occurring in academic dentistry are a response to many, different innovations as well as new demands, challenges, pressures and expectations. Despite dental schools and clinical academic centres having responded to rapid, multifaceted change, the ever increasingly complex and changing nature of oral healthcare provision, together with the growing body of evidence on the impact of oral health on general health and wellbeing at all ages, requires academic dentistry to redouble its efforts to remain fit for future purpose. Central to success in this demanding quest is strong, visionary leadership.

1. Purpose

The purpose of this article, the first in a series of opinion pieces on aspects of leadership in academic dentistry, is to provide an overview of the leadership required in academic dentistry. The article also underscores traits of the leaders needed to realise the goal of academic dentistry for it to be recognised as a dynamic, forward-looking, bio-medical academic discipline.

2. Leadership

Leadership is the act of influencing individuals and groups and providing opportunities to achieve positive outcomes and realise goals [1,2]. The act of leadership pivots around the 'personal virtues' of communication, motivation, inspiration and encouragement, through which leaders inspire individuals. In defining leadership, it is imperative to distinguish between leadership and management [3].

A leader has vision, sets goals and enables individuals and groups to attain them. For this purpose, a leader should command moral authority and respect. A manager works at the operational level to devise and implement strategies to accomplish goals through planning, the adoption of policies, logistics and the control of processes in the context and within the limitations of legal and governance structures. A leader acts to challenge the status quo and focuses on the future, thereby enhancing effectiveness. A manager establishes and, in an ideal world, maintains a well-oiled system, building on the status quo, thereby enhancing efficiency [2,3]. That said, in coherent organisations, leaders and managers complement each other to collectively deliver successful

outcomes both in day to day operational activities and preparedness for the future [4–6].

3. Levels of leadership

The success of an organisation, including dental academic institutes, requires 'cohabitation' of leaders in the different levels (strata) of the leadership hierarchy (Fig. 1). Leaders belonging to different leadership strata should share the common purpose of success and responsibility to fulfil the goals of their organization [7–9].

Front line leaders occupy the bottom, but largest tier of the leadership hierarchy. They oversee and lead the day to day activities of the organisation (e.g. a department or academic unit) by implementing the responsibilities and duties assigned to them. In academic dentistry, front line leaders are responsible for day to day effectiveness and quality improvement in teaching and learning, research and clinical/laboratory practice in their discipline, through the application of institutional policies. While front line leaders are typically consulted on the formulation of strategies and goals, their principal role is implementation rather than future-proofing.

Service leaders, who typically coordinate the activities of front line leaders at the academic group or division level, tend to have roles in institutional performance, including chairing institutional committees, resource and facilities development and assisting the institutional leader in his/her roles and responsibilities, including representing and deputising from them from time to time. In many establishments service leaders are members of an institutional leader led executive team, supported by senior managers.

* Corresponding author.

E-mail address: dpmajds@gmail.com (M. Verma).<https://doi.org/10.1016/j.jdent.2019.05.002>

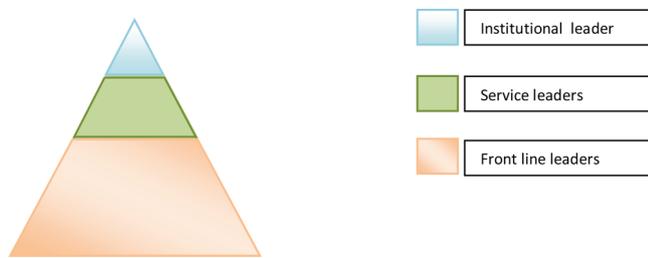


Fig. 1. Levels of leadership.

Institutional leaders assume overall responsibility for the performance, success, standing and direction of travel of their organisation. The onus on institutional leaders is substantial, as they have decision making authority which influences the attainment of goals and the effectiveness of their organisation, and, in the process, the career progression of all those working and studying in the organisation. Institutional leaders, amongst many other attributes, must be strategic thinkers, with well-developed political acumen, allowing them to develop a clear, forwarding-looking, relevant vision attainable by their organisation.

While there are merits in external appointments to vacant leadership positions, an effective institutional leader should give equal weight to an internal ‘bottom up’ approach to the recruitment of replacement front line- and service leaders. This ensures an element of institutional personnel development and succession planning. This, in addition, helps incentivise individuals in institutions to develop leadership skills and encourages their involvement in the ongoing success of the institution and the realisation of its goals.

4. Suitability for institutional leadership

An organisation with the wrong person at the helm is susceptible to the perils of the environment in which it operates. So, who should be considered for institutional leadership of a dental academic institution? Should the institutional leader be ‘hired’ from amongst dental academics, or a wider pool of candidates?

A candidate for institutional leadership with good leadership credentials and skills, but no previous experience of the complexities and nuances of a dental academic institute may offer a fresh leadership perspective. They may, however, run the risk of failing to grasp the importance of the critical, complex interrelationships between education and training, clinical practice and oral and dental research, and, in the process, provide less than ideal leadership [7]. Similarly, a dental academic with a good grasp of the dynamics of a dental academic institute, but limited leadership skills and acumen, may be perceived to suffer limitations as an institutional leader. Given the obvious benefits of familiarity with the nuances of dental academic institutes, it could be argued that a suitably experienced dental academic with appropriate leadership skills should typically be the preferred candidate to lead a dental academic institute. This, however, requires investment in prospective institutional leaders, specifically high-level leadership training [1,7,10,11]. Irrespective of the background of an institutional leader, he/she will need the support of service leaders and managers with complementary skills, as it is unusual for any one person to possess all the skills, attributes, knowledge and experience to lead a dental academic centre. Hence, when a new institutional leader is appointed with a different skill set to the previous institutional leader, he/she may need to change the membership of his/her executive team of service leaders and senior managers to optimise the effectiveness of the team and make any necessary change in the direction of travel or emphasis.

5. Traits of a leader

There are certain traits that individuals must have to become

Table 1
Traits of a leader.

Analytical interpreter
Strategic thinker
Team/camaraderie builder
Emotional intelligence
Commitment to Beta Mode

successful leaders. The traits of a leader must collectively be greater than the sum of the parts, often being compared to the Matryoshka nesting doll [12]. The desirable traits of a leader are summarized in Table 1 [1,7].

5.1. Analytical interpreter

This trait relates to logical thinking -visualising, collecting, sorting, weighing up and articulating information to facilitate interpretation to inform problem-solving and decisions making [13].

Gifted clinicians and researchers tend to have good analytic interpreter skills, helping to equip them for leadership roles. If, in addition, these individuals are familiar with university ‘politics’ healthcare regulation, educational policies and research governance, they should be able to apply these skills to provide leadership of a dental academic institute, together with oversight of management processes and systems. Analytic interpreter skills are further enhanced by financial cognisance, resource building capacity and good problem-solving, comprising problem identification, analysis, description and causation of the problem, options appraisal and implementing of the solution [14].

5.2. Strategic thinker

This trait pertains to those activities that rely on perception, inventiveness and decisive interventions which maintain momentum and help adapt to change. To be effective in this area a leader needs to be aware of the real time status of his/her organisation, including the attitudes and commitment of its students, staff and faculty, through institutional engagement, and understanding of the extraneous environment locally, nationally and internationally. Also, an understanding of trends and future needs and expectations is critical to effective strategic capabilities.

Change can be brought about only when the need to change is accepted. To be resilient towards change, leaders need to be strategic, i.e. accept that change is constant, and appreciate that change is positive and to be welcomed, as it creates opportunity to restructure, modernise and, in the process reinvigorate elements of the organisation.

5.3. Team/camaraderie builder

Leadership is often likened to a game of chess, with manoeuvring of the “players in the team” to maintain momentum (the game plan) and attain goals. Selection of team players appropriate for the task, gathering intelligence (knowing the strengths and capabilities of team members) building their trust, identifying system players (individuals who work well within a system), constant coaching, proactive feedback, accolades to sustain effort and conflict resolution are important aspects of this trait of a leader [15]. That said, an effective leader needs to be impartial when dealing with disciplinary issues such as under-performance. Popularity and effectiveness in leadership do not necessarily go hand in hand. Pleasing half the team, half of the time can be the norm in providing effective, proactive leadership, especially during challenging times.

5.4. Emotional intelligence

Emotional intelligence (EI) is the ability to understand and manage ones' own emotions, and those of the people around you. It differs from IQ which pertains to cognitive intelligence. It also differs from social intelligence (pertaining to understand the feelings, personalities, and behaviours of yourself and others to seek positive outcomes in future). EI comprises five elements: self-awareness (knowing your own emotions, strengths and weaknesses), self-regulation (controlling your emotions), motivation, empathy and social skills (personal interactions and navigating situations through communication and dialogue) [16–19].

5.5. Commitment to beta mode

To attain goals, leaders must constantly refresh themselves to remain in the 'Beta Mode' of continuous improvement. Knowledge and skills in present-day society tend to a half-life of a mere five years [20]. This is why effective institutional leaders with extended terms of office benefit from occasional 'time-out' (sabbatical leave) to top up their skills and knowledge and broaden their horizons to enhance their strategic capabilities. 'Personal Knowledge Mastery' is an interesting concept in the current age of over-information. This concept dwells on three 'Ss': seek (to find out about things and keep up to date); sense (to personalise, contextualise and put into practice information learnt), and share (exchange of ideas and experiences within networks) [7,21–26]

6. Leadership framework

Leadership is a "task in process". A set of principles comprising standards expected of a leader can help give shape to the task. A leadership framework is a "toolkit" of principles comprising the standards expected of leaders [3,27,28].

6.1. Leading the organisation

This is accomplished by creating the vision of the future and setting direction through development of organisational structure and systems. This involves establishing and implementing a strategy (including a business plan to achieve objectives), organisation structure review, maintaining an effective system of work, systematic fairness to win the trust of the team players, building workforce capability and capacity and prioritisation of challenges to be addressed.

6.2. Leading the people

The task here is to build strong relationship with the team members. The check list includes: providing a safe working environment, creating effective roles and recruiting the right people, assigning the right person for the right task, effective appraisal and feedback, including the recognition and reward of 'above and beyond' performance, and providing opportunity for career development.

6.3. Leaders leading themselves

This comprises critical, self-assessment of the role that a leader performs, the relationships the leader has in the organisation, and the style of leadership. Regular three-sixty appraisal of the leadership by the service and front-line leaders can greatly assist in leaders leading themselves.

7. Leadership theories

A review of the milestones in the evolution of leadership reveals that despite different theories at different times, styles of leadership remain constant [29–39]. The earliest theory quoted is "The Great Man

Theory". This theory was professed and popularised by Thomas Carlyle in the 19th century. The theory expounds the view that leaders possess inherent talents and abilities, setting them apart from the population at large. This theory might be considered the forerunner of the "Trait theory", hugely popular in the 1920s and 1930s, which attempted to identify the "inborn innate traits" that make leaders different from other individuals. This theory, based on the chronicles of past-leaders, minimised the importance of circumstances and environmental factors. These factors are now recognised to have substantial impact on leadership qualities [29,30,34].

The 'situational theory' of Hersey and Blanchard in the 1970s assumed that "circumstance or situation" brings out the virtues of leadership, based on any one of four leadership styles – delegating, supporting, coaching or directing. Though this theory has wide applicability, it falls short of acknowledging the "personal strengths of leaders" [29,30,34].

The 'transformational theory' proposed by Burns in 1978 is perhaps the most widely acclaimed and lasting theory of leadership. It focuses on proactive leadership and innovation, whereby subordinates and the leaders work in tandem to uplift each other to improve morale and the status of their organization [31,32]. Bass conceptualised transformational leadership into four styles: idealised influence (the leader is the "role model" for the followers); inspirational motivation (the leader communicates expectations and inspires the crew to rise and reach higher); intellectual stimulation (the leaders stimulate the followers to think out of the box and be creative and innovative) and individualised consideration (the followers are provided a conducive environment to perform) [36].

Today, several leadership theories find application. No one approach to leadership covers all situations. A leader may have to exercise flexibility and apply different theories at different times and under different circumstances, according to specific situations and desired outcomes.

8. Types of leadership

The 'Tannenbaum and Schmidt Continuum' (Fig. 2) incorporates several schemes or types of leadership displayed as a spectrum [36]. The extreme ends of the spectrum are determined by the 'range of actions' of the leader, as determined by the degree of authority assumed by the leader and the degree of freedom afforded to members of the team. Four types of leadership are identified in the spectrum:

- 1 'Tells': the leader is authoritarian, identifies the problem, decides without discussion, dictates to the team and expects unwavering implementation.
- 2 'Sells': resistance from members of the team is overcome through discussion. Then, the leader decides, having 'sold' the strategy to the members of the team, who are anticipated to comply.
- 3 'Consults': the leader identifies the problem, a discussion with the team ensues, suggestions from the team players are taken on board before a decision is reached and implemented. Team commitment is assumed.
- 4 'Joins': the leader identifies and defines the problem but looks to the members of the team for a solution and a decision, albeit that the responsibility for the decision remains with the leader.

9. Conclusion

Effective leadership is the bedrock underpinning sustainability and progress of any organisation, and dental academic institutes are no exception. Academic dentistry, which is anticipated to continue to undergo constant change, requires strong, effective leadership to succeed and remain fit for future purpose. Given the benefits of a dental academic leading a dental academic centre, there should be much greater emphasis than at present on leadership training at all levels of dental

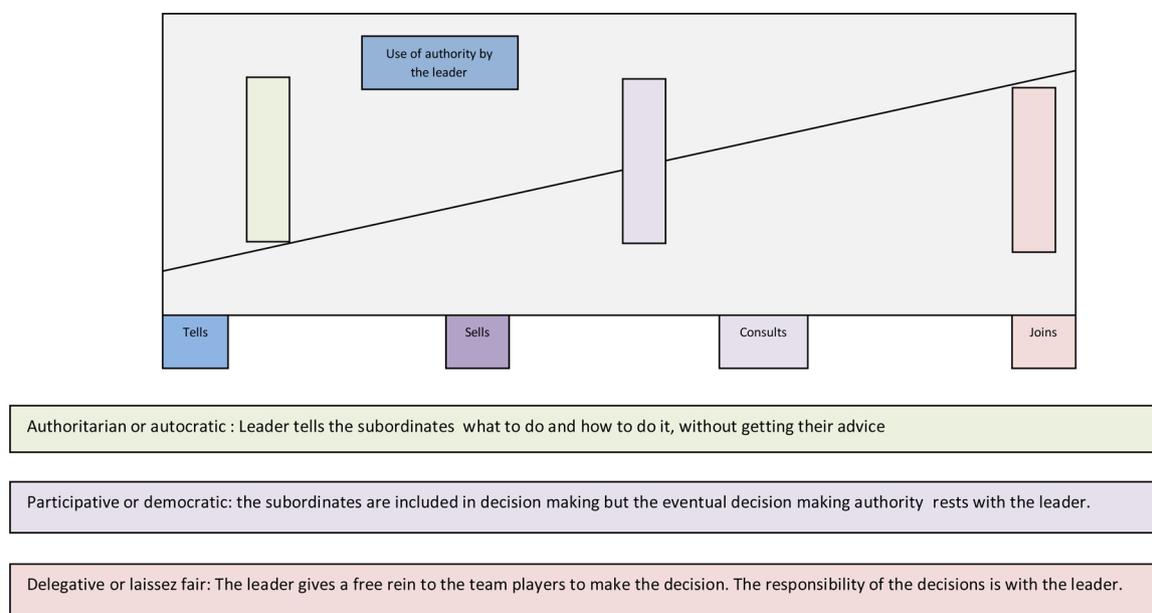


Fig. 2. Tannenbaum and Schmidt continuum of leadership style.

academia, underscored by the statement: “The purpose of a leader is to produce more leaders, not followers” –Ralph Nader [37].

Acknowledgements

Nairn Wilson, Mahesh Verma and Christopher Lynch, the authors of this paper, are most pleased to be the editors of the subsequent series of article on aspects of leadership in academic dentistry and wish to thank the authors of the contributions to the series for their help in making what is hoped to be viewed as an important, timely addition to the scant literature in the field.

References

- [1] R.S. Taichman, J.W. Parkinson, B.A. Nelson, B. Nordquist, D.C. Ferguson-Young, J.F. Thompson Jr., Program design considerations for leadership training for dental and dental hygiene students, *J. Dent. Educ.* 76 (2012) 192–199.
- [2] M.P. Timofe, M.I. Ungureanu, A. Ceteau, F. Mocean, S. Albu, Leadership practices and perceptions in oral healthcare: A scoping review, *Oral Health Dent. Manag.* 16 (2017) 1–7.
- [3] P. Brocklehurst, J. Ferguson, N. Taylor, M. Tickle, What is clinical leadership and why might it be important in dentistry? *Br. Dent. J.* 214 (2013) 243–246.
- [4] S. Surbhi, Difference Between Leader and Manager (with Example, Qualities and Comparison Chart) - Key Differences [Internet], [cited 13 December 2018]. Available from: <https://keydifferences.com/difference-between-leader-and-manager.html>.
- [5] V. Popovici, Similarities and differences between management and leadership, *Ann. Econ. Ser.* 2 (2012) 126–135.
- [6] Academic Management and Academic Leadership [Internet]. Epigeum.com, (2012) [cited 13 December 2018]. Available from: https://www.epigeum.com/downloads/ulm_accessible/us/02_leadership/html/course_files/lm_1_60.html.
- [7] Physician Leadership Education [Internet]. Ahaphysicianforum.org. (2014) [cited 13 December 2018]. Available from: <http://www.ahaphysicianforum.org/files/pdf/LeadershipEducation.pdf>.
- [8] B. Peter, P. Angood, Changing Demographics, Competencies and Physician Leadership, [online] Ahaphysicianforum.org. Available at (2013) [Accessed 15 Dec. 2018] <http://www.ahaphysicianforum.org/resources/leadership-development/physician-leadership/summit13angood.pdf>.
- [9] J. Mountford, C. Webb. When Clinicians Lead [Internet]. Mckinsey.com. [cited 15 December 2018]. Available from: https://www.mckinsey.com~/media/mckinsey/dotcom/client_service/healthcare%20systems%20and%20services/health%20international/hi09_clinicians_lead.ashx 2009.
- [10] A.H. Goodall, Physician-leaders and hospital performance: Is there an association? *Soc. Sci. Med.* 73 (2011) 535–539.
- [11] D.B. Kearns, et al., Redefining the physician executive, *Phys. Exec.* 35 (32–4) (2009) 36–8.
- [12] F. Hoque, How Leaders Are Like Nesting Dolls [Internet]. Mc Graw Hill Education + Business Blog, [cited 15 December 2018]. Available from: (2014) <https://mcgrawhillprofessionalbusinessblog.com/2014/02/07/how-leaders-are-like-nesting-dolls/>.
- [13] A. Doyle, Analytical Skills for Resumes, Cover Letters and Interviews [Internet]. The Balance Careers, [cited 15 December 2018]. Available from: (2018) <https://www.thebalancecareers.com/analytical-skills-list-2063729>.
- [14] 7 Steps to Effective Problem Solving [Internet]. CrestcomLeadership.com, (2016) [cited 15 December 2018]. Available from: <http://crestcomleadership.com/2016/09/01/7-steps-to-effective-problem-solving/>.
- [15] G. Llopis, 6 Ways Successful Teams Are Built To Last [Internet]. Forbes.com, [cited 15 December 2018]. Available from: (2012) <https://www.forbes.com/sites/glennllopis/2012/10/01/6-ways-successful-teams-are-built-to-last/#2894c5732b55>.
- [16] Emotional Intelligence in Leadership Learning How to Be More Aware [Internet]. Mindtools.com, (2018) [cited 15 December 2018]. Available from: https://www.mindtools.com/pages/article/newLDR_45.htm.
- [17] D. Goleman, Emotional intelligence: 10th Anniversary Edition; Why It Can Matter More Than IQ, Bantam Books, New York, 2006.
- [18] D. Goleman, Social intelligence: The New Science of Human Relationships, Arrow, London, 2007.
- [19] W. Chou, Social Intelligence vs. Emotional Intelligence: What's the Difference? [Internet], [cited 15 December 2018]. Available from: Medium, 2016, <https://medium.com/personal-development-success/social-intelligence-vs-emotional-intelligence-whats-the-difference-7c759365127b>.
- [20] L. Chew, Introducing the Beta mode – the Beta mode – Medium [Internet]. Medium, [cited 15 December 2018]. Available from: (2017) <https://medium.com/the-beta-mode/introducing-the-beta-mode-7a646ae7baab>.
- [21] K. Mikkelsen, H. Jarcho, The Best Leaders Are Constant Learners [Internet], [cited 15 December 2018]. Available from: Harvard Business Review, 2015, <https://hbr.org/2015/10/the-best-leaders-are-constant-learners>.
- [22] R.A. Cherry, D.C. Davis, L. Thorndyke, Transforming culture through physician leadership development, *Physician Exec.* 36 (2010) 38–44.
- [23] G.E. Crites, J.R. Ebert, R.J. Shuster, Beyond the dual degree: development of a five-year program in leadership for medical undergraduates, *Acad. Med.* 83 (2008) 52–58.
- [24] N.J. Gagliano, T. Ferris, D. Colton, A. Dubitzky, J. Hefferman, D. Torchiana, A physician leadership development program at an academic medical center, *Q Manage Health Care* 19 (2010) 231–238.
- [25] J.D. Maggi, V. Stergiopoulos, S. Sockalingam, Implementing a new physician manager curriculum into a psychiatry residency training program: the change process, barriers and facilitators, *Psychiatr. Q.* 79 (2008) 21–31.
- [26] J.K. Stoller, Developing physician-leaders: key competencies and available programs, *J. Health Adm. Educ.* (2008) 307–328.
- [27] Developing Better Leaders, Delivering Better Care [Internet], NHS Leadership Academy, 2019 [cited 15 December 2018]. Available from: <https://www.leadershipacademy.nhs.uk/>.
- [28] The Leadership Framework | Effective Leadership [Internet]. The Leadership Framework: a Set of Easy to Use Principles of What Managers Must Know and Must Do, (2018) [cited 24 December 2018]. Available from: <https://www.theleadershipframework.com.au/the-leadership-framework.html#>.
- [29] The Evolution of Leadership Theory [Internet], (2019) Microtech.net. [cited 24 December 2018]. Available from: http://www.microtech.net/sites/default/files/the_evolution_of_leadership_theory_revised.pdf.
- [30] The Evolution of Leadership: How to Become a Modern Leader [Internet]. USB, (2017) [cited 24 December 2018]. Available from: <https://www.usb.ac.za/the->

- evolution-of-leadership/.
- [31] S. Surbhi, Difference Between Transactional and Transformational Leadership - Key Differences [Internet], [cited 24 December 2018]. Available from: Key Differences, 2015, <https://keydifferences.com/difference-between-transactional-and-transformational-leadership.html>.
- [32] B.J. Avolio, D. Waldman, W.O. Einstein, Transformational leadership in a management game simulation: impacting the bottom line, *Group Organ. Manag.* 13 (1) (1988) 59–80.
- [33] R. Stogdill, The evolution of leadership theory, *Academy of Management Proceedings* 1975 (1975) 4–6 (1).
- [34] D.A. Van Seters, R.H.G. Field, The evolution of leadership theory, *J. Organ. Chang. Manag.* 3 (3) (1990) 29–45.
- [35] The History of Leadership Studies and Evolution of Leadership Theories [Internet], ToughNickel, 2016 [cited 24 December 2018]. Available from: <https://toughnickel.com/business/The-History-of-Leadership-Studies-and-Evolution-of-Leadership-Theories>.
- [36] B. Bass, *Leadership and Performance Beyond Expectations*, Free Press, New York, 1985.
- [37] R. Tannenbaum, W. Schmidt, *How to Choose a Leadership Pattern* vol. 51, Mass.: Harvard Business School Press, Boston, 1973, pp. 162–180 (3).
- [38] P. Žiaran, R. Kučerová, K. Melasová, The leadership triangle, suggestion for a new theory – an experimental approach, *Procedia Econ. Financ.* 12 (2014) 797–804.
- [39] R. Nader, Internet]. Pwc.in, [cited 15 December 2018]. Available from: (2017) <https://www.pwc.in/assets/pdfs/consulting/people-and-organisation/reimagining-leadership/steering-indias-workforce-in-2030.pdf>.