Leadership in academia: Individual and collective approaches to the quest for creativity and innovation

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Abstract

This chapter summarizes the specific challenges for leadership in academia with a focus on universities, and discusses recent approaches to facilitate the development of leadership abilities in this context. Individuals and groups in academia essentially strive for creativity and innovation through knowledge creation and transfer. Their performance is measured relative to specified targets (e.g., quality and quantity of publications, third party funding, teaching and student supervision). We argue that in academia constant tensions between creativity and innovation on the one hand, and structures, procedures, and (legal) regulations on the other hand persist. This poses significant challenges to leadership. The chapter starts with a short characterization of the most pressing challenges, and their implications for leadership. We then distinguish between leadership *of* universities (i.e., administrative leadership) and leadership *in* universities (i.e., research leadership). Next, we depict approaches that highlight leadership as a property of *individuals* and as a *collective* phenomenon in academia. Finally, we draw lessons for leaders and organizations who seek to create enabling conditions for sustained successes in the quest for creativity and innovation.

Keywords: academia, collective, creativity, innovation, leadership, university

Introduction

In this chapter, we focus on leadership in universities, as one specific form of leadership in academic contexts. Universities essentially strive for creativity and innovation through knowledge creation and transfer. As higher-education institutions, they play a crucial role in society, and are considered "key institution[s] for social and economic development" (Mohrman, Ma, & Baker, 2008, p. 5), especially in the knowledge economy. Firstly, universities educate students and prepare them for professional careers. This implies that universities in part shape future leaders (e.g., in Business Schools; Elmuti, Minnis, & Abebe, 2005). Secondly, universities generate new knowledge and apply it for the betterment of society (Burkhardt, 2002). With these targets in mind, universities worldwide compete for resources and recognition (Muller-Camen & Salzgeber, 2005).

This competition is based on targets such as hiring outstanding faculty, increasing student numbers, successful grant applications, and industry collaborations. Direct comparison through rankings of organizations in higher education, such as the *Times Higher Education World University Rankings* or the *QS World University Rankings*, further increases the pressure on organizations and individuals in them. Moreover, competition between universities has also resulted in fundamental changes of the requirements and expectations with regard to leadership in these organizations (Kondakci & Van den Broeck, 2009; Smith & Hughey, 2006; Smothers, Bing, White, Trocchia & Absher, 2011).

Leaders in academia are challenged to meet the interests of a range of different stakeholders, such as governments, students, accrediting bodies, administrative as well as academic staff, or industry partners (Milliken, 1998). Leaders in academia are held to high standards with regard to excellence in research, teaching, and service (Corlett, 2005). Moreover, leadership in academia spans across multiple levels, including individuals, teams, and the entire organization (Bolden, Petrov, & Gosling, 2008).These and other factors have led to the conclusion that "leadership in the corporate arena, however complex that might be, is

substantially less complex than leading in academia" (Lowman, 2010, p. 241). In the following, we draw from Peus, Welpe, Weisweiler, and Frey (2015) to present a pointed characterization of four of the most pressing challenges and their implications for leadership in the academic context: *managing autonomy, constant change, uncertainty, and neglect of systematic leader selection and development.*

Managing autonomy

As Raelin (1995) remarks "academic freedom or professional autonomy represents not only a primary basis for career choice by those in the academic profession but also the pivot around which one establishes the value of professionalism in academe" (p. 210). Researchers are likely to be driven by a motivation to advance their specific field of research and to develop expertise in this area. Similarly, students, especially postgraduates and PhD candidates, focus on the completion of degrees for their personal advancement. Both groups do not automatically target university-wide goals—but must be encouraged to do so. We therefore concur with other authors (e.g., Davies, Hides, & Casey, 2007; Yielder & Codling, 2007), who discussed creating a vision, communicating strategy, and aligning individual and organizational goals as major tasks for leaders in academic contexts. At the same time, means of control as well as rewards and sanctions in academia are rather limited in comparison to other organizations (Hüther, 2013). Although deans and department heads control the allocation of some resources, the impact of these measures is limited, for example, if academics are able to generate substantial third-party funds. Senior academics such as tenured professors would only be dismissible in exceptional cases. Moreover, universities are regulated by legal requirements and structures (e.g., national constitutions or state laws). These limit autonomy in the governance of universities, at least in public ones. In essence, the co-existence of formal and informal structures as well as academic traditions increases the complexity of leadership in academia.

Constant change

Academic organizations drive change in society, and at the same time, are required to constantly renew themselves in response to societal changes (Burkhardt, 2002). The triggers of change are manifold, from political reforms, advances in numbers and composition of student populations, to new scientific insights (Askling & Stensaker, 2002). Case studies illustrate that the complexity of organizational change in academia is in part increased by the existence of multiple power and authority structures, complex decision-making processes, and the co-existence of ambiguous goals of stakeholders within and outside of the organization (Kondakci & Van den Broeck, 2009). Therefore, academic organizations and their members rely on leadership to implement and make sense of their work in the face of constant change (Gioia & Thomas, 1996).

Uncertainty

In academic work settings, individuals are most commonly confronted with high levels of uncertainty (Smith & Hughey, 2006). High probabilities of project failure render everyday work rarely encouraging, and even worse, mostly frustrating (Mazzola, Walker, Shockley, & Spector, 2011). The lack of predictability of research success is combined with an immense pressure to succeed, and uncertainty of academic career paths (Corley, 2010). The education as part of PhD programs is often not tailored to prepare individuals for the strains of academic faculty life (Austin, 2002). As a result, leaders in academia are challenged to create stimulating environments with opportunities for individual development and self-realization (Karran, 2007, 2009), while facing uncertainties themselves.

Neglect of systematic leader selection and development

Despite a general understanding of the importance of leadership in academia, it happens that "faculty members […] end up in […] leadership roles without ever having aspired to them" (Rowley & Sherman, 2003, p. 1058). As Gmelch (2000) argues for the career paths of deans, individuals are likely to reach these positions without formal training or previous leadership experience, lacking an understanding of the required roles and impact of this task on their

academic and personal lives. Academics are mostly promoted on the basis of excellent research performance (i.e., publication output, third-party funding, and reputation in their field of research), but not necessarily because of their leadership skills or experience. In fact, in a survey of 233 professors from universities in the United Kingdom, more than 60% of respondents indicated that research and scholarship was the sole basis of their appointment (Macfarlane, 2011).

Moreover, while a long tradition of enhancing the practice of teaching and learning exists (Tigelaar, Dolmans, Wolfhagen, & van der Vleuten, 2004), programs for systematic leader development are still rare in universities. This is true for leadership roles in academic administration such as deanship (Strathe & Wilson, 2006) or heads of department (Wolverton, Ackerman, & Holt, 2005) as well as leadership of research teams (Braun, et al., 2009). It follows that, in the academic context, leaders are not prepared for their demanding roles systematically.

To summarize, universities are complex systems that constantly develop and renew themselves, while at the same time shaping the society at large (Burkhardt, 2002). Leadership in academia poses unique challenges to leaders (Middlehurst, Goreham, & Woodfield, 2009), and is described as particularly demanding (Murphy, 2003; Rowley & Sherman, 2003; Smith & Hughey, 2006).

Leadership in Academia

Despite the importance of leadership for the advancement of academia (Billiot, 2011), empirical research in this area is still relatively scarce (Bryman & Lilley, 2009; Middlehurst, et al., 2009; Rowley & Sherman, 2003). In the following, we differentiate between two forms of leadership in academia: *administrative* leadership (i.e., leadership *of* universities by presidents/principals, vice president/pro-rectors, deans and heads of departments or institutes) and *research* leadership (i.e., leadership *in* universities by professors, research group leaders, and other academic staff leading research projects).

Administrative Leadership

We define administrative leaders in academia as individuals with permanent or fixed-term roles in which they manage academic organizations or parts thereof. Leaders in this category include, but are not limited to, university presidents/principals, vice presidents/pro-rectors, deans and heads of departments or institutes. In our view, individuals in these roles are responsible for the leadership *of* universities. These individuals often fulfill various roles at the same time, such as being figureheads for their departments, leaders of staff and students, and liaisons with external stakeholders (Hoff, 1999).

Smothers, et al. (2011) analyzed expectations of the leadership abilities and traits of 'ideal' administrative leaders (e.g., deans, department heads) in business schools of private and public universities in the United States. Expectations were context-specific, varying substantially across private and public universities. Conceptualizations of ideal leadership in private universities included managerial acumen, representing stakeholder needs to faculty, facilitating external reputation and faculty research productivity, as well as leading by example. The picture of ideal leaders in public universities included balanced focus of teaching, research, and service, being an enthusiastic administrator, facilitating faculty research and productivity, being equitable, an effective administrator, and strategic motivator. Across public and private university contexts, these findings underline the multitude of expectations that are associated with the leadership of universities. Qualitative research involving deans of business schools in American and European universities confirms this picture (Bolton, 1996). Individuals in these roles report that they suffer from intra- and inter-role conflicts, excessive workloads, and were not formally prepared for their tasks. They feel less powerful than leaders in business contexts, but as being held equally accountable.

Further, managing conflict appears to be an inherent component of academic life. Department heads indicate spending more than 40% of their time managing conflict (Stanley & Algert, 2007). Finally, department heads indicate significant levels of stress caused by the need to

perform well in their administrative functions and in their roles as faculty members as well (Gmelch & Burns, 1993; Gmelch, Wolverton, Wolverton, & Sarros, 1999). Similarly, the literature witnesses the 'squeeze' and challenges of academic deanship (Gallos, 2002; De Boer & Goedegebuure, 2009).

In order for administrative leaders of universities to be able to meet these challenges, they need various competencies: analytical and communication skills, understanding and sensitivity to handle student affairs, personal characteristics (e.g., humor, empathy) as well as skills to successfully establish and maintain external relations (Smith & Wolverton, 2010).

In a systematic literature review of leadership at the departmental level, Bryman (2007) summarized thirteen forms of leadership that predict departmental effectiveness. They include: (1) a clear sense of direction/strategic vision, (2) preparing department arrangements to facilitate the direction set by the leader, (3) being considerate, (4) treating academic staff fairly and with integrity, (5) being trustworthy and having personal integrity, (6) allowing the opportunity to participate in key decisions/encouraging open communication, (7) communicating well about the direction the department is going, (8) acting as a role model and having credibility, (9) creating a positive and collegial work atmosphere in the department, (10) proactively advancing the department's cause with respect to constituencies internal and external to the university, (11) providing feedback on performance, (12) providing resources for and adjusting workloads to stimulate scholarship and research, and (13) making academic appointments that enhance the department's reputation.

Several of these aspects have been linked with *transformational* leadership before, a leadership style that builds on motivation and performance through intellectual stimulation and individualized relationship building, among other leadership abilities (Bass & Avolio, 1994).

In fact, there is initial evidence that transformational leadership is effective in administrative leadership positions. Brown and Moshavi (2002) conducted a field study with 440 university

faculty members from 70 different academic departments. Their results showed that department heads' transformational leadership (i.e., motivating through visions, appreciation and support of the individual, encouraging to others to think 'outside of the box', values based action and role modeling) significantly predicted faculty ratings of satisfaction with supervision, extra effort, and organizational effectiveness. In contrast, transactional leadership (i.e., an emphasis on task completion and respective rewards or punishments) did not significantly influence faculty ratings.

Research Leadership

We define research leaders in academia as individuals with permanent or fixed-term roles in which they lead research in academic organizations. Leaders in this category include, but are not limited to, professors, research group leaders, and other academic staff managing research projects. In our view, individuals in these roles are responsible for leadership *in* universities. As such, they oversee the development and execution of research projects and are held accountable for research outputs. For example, researchers are required to publish their research in high-impact scholarly journals because publications are widely regarded as the number one indicator of professional success in academia (McGrail, Rickard, & Jones, 2006). Although this phenomenon, also termed 'publish or perish', and its consequences are subject to controversial discussions (De Rond & Miller, 2005; Miller, Taylor, & Bedeian, 2011), the question which factors foster academic success is legitimate. Theory and research in the field of leadership suggest that leadership constitutes a key to academic success (Bryman, 2007). We develop this view further by suggesting that successful research leadership requires individual as well as collective approaches.

Individual Forms of Research Leadership

In contrast to the attention devoted to studying administrative leadership (e.g., deans, department heads) in academia, much less work considers the role of leadership within research projects. Professors are prototypical examples of individuals who are responsible for

research leadership in universities. They are leaders in various functions, namely as academic role models (based on their scholarly reputation and achievements), as mentors to less experienced colleagues, as advocates for their disciplines or professions, as guardians of academic standards and values, as acquisitors of grants and other resources, and as ambassadors of research on behalf of the university (Macfarlane, 2011). We argue that fulfilling these multiple roles requires advanced leadership abilities. To date, the most researched leadership theory is arguably the full range of leadership model that describes a broad spectrum of leadership styles (Bass & Avolio, 1994). Although there is plenty of research applying this model in the business context, research demonstrating the impact of leadership on research productivity in academia is still in early stages.

To our knowledge Braun, Peus, Weisweiler, and Frey (2013) conducted the only study to date that applied objective outcome criteria of research leadership. In this study, 360 employees of scientific workgroups rated workgroup leaders' transformational leadership style and their own job satisfaction. The authors suggested that transformational leadership should be of particular impact in academic contexts. First, to design research for publication requires innovative research ideas that add to current knowledge. Transformational leaders enable their followers to think 'out of the box' through intellectual stimulation. Second, research projects, based on long-term goals for which success or failure is hardly predictable in the first instance, presuppose high levels of motivation. Transformational leaders motivate and inspire their followers through compelling visions. Third, transformational leaders establish strong mentoring relationships. For example, they support less experienced scholars in the initial stages of a new research project through teaching and coaching. Fourth, transformational leaders strengthen their influence because they talk about their most important values and beliefs. As posited, transformational leadership positively predicted individual job satisfaction and workgroup performance (i.e., the number and quality of joint publications one to two years later; Braun, Peus, et al., 2013). Therefore, transformational leadership appears to be a

fruitful approach to research leadership. This view is supported by findings of Keller and colleagues (Elkins & Keller, 2003; Keller, 2006), who analyzed the impact of leadership on research and development team performance, and found transformational leadership to be predictive of research based outcomes in teams (e.g., technical quality of inventions). Still, leadership researchers agree that further, in-depth empirical analyses of the impact of research leadership on academic success are necessary (Bryman & Lilley, 2009; Middlehurst, et al., 2009; Rosser, 2004; Rowley & Sherman, 2003).

Collective Forms of Research Leadership

Above and beyond the impact of leadership per se, the role of teams for academic productivity receives increasing attention. Mitchell and Lee (2011) discuss a number of challenges for research teams, among them the management of authorship issues and the integration of new team members. Indeed, leadership in the collective is entering organizations (Denis, Langley & Sergi, 2011) and seems particularly relevant for research teams: Members of research teams in academic organizations are typically highly qualified and motivated individuals. To grant them autonomy and influence on the research process is likely to improve research quality, especially in the face of increasingly complex research questions and advanced scientific methods (Younglove-Webb, Gray, Abdalla, & Thurow, 1999). The resulting shift toward collaborative research in academia has been referred to as 'team science', an interdependent approach in which research is conducted by two or more individuals. Team science takes place in smaller or larger groups of researchers from the same or different fields, and team members may be geographically dispersed (Bennett, Gadlin, & Levine-Finley, 2010). We posit that research in teams requires new, collective forms of leadership.

A qualitative study explored distributed patterns of leadership in academic project teams (van Ameijde, Nelson, Billsberry, & van Meurs, 2009). While concepts of leadership in the collective are still in early stages, two principles are seen as theoretical underpinnings, namely

several individuals sharing leadership as an influence process, and leadership emerging from the interaction of these individuals. To make this new form of leadership work in academia, the authors derive several recommendations, which include "embracing the complexities of leadership as a distributed phenomenon" (van Ameijde, et al., 2009, p. 776). More specifically, the internal functioning of the research team requires high degrees of autonomy, clear goal direction, mutual support, and sharing of responsibilities. Moreover, research teams need the essential expertise in a given discipline to design and conduct research projects successfully.

Latest quantitative research by Peter, Braun, and Frey (2015) supports the view that collective approaches to leadership foster creativity and innovation in academic contexts. Specifically, in two field studies with university research teams, and an experimental laboratory study with students, shared leadership, a specific form of leadership in the collective, led to higher self-ratings of creativity and better performance in creativity tasks. The relation between shared leadership and creativity was mediated by intrinsic motivation. Furthermore, shared leadership was positively related to a supportive climate for innovation. Justice perceptions mediated the positive relation between shared leadership and support for innovation.

In summary, we would like to highlight the relevance of what we term 'administrative leadership' and 'research leadership' for the functioning of universities. Universities and leaders in this context are challenged by several contextual factors, among them managing autonomy, constant change, uncertainty, neglect of systematic leader selection and development, as described above. Leadership *of* universities (i.e., administrative leadership) and leadership *in* universities (i.e., research leadership) are necessary prerequisites to the success of these organizations. While initial research supports this point (e.g., Braun, Peus et al., 2013; Brown & Moshavi, 2002; Peter, Braun, & Frey, 2015), the development of leaders in this context is not sufficiently advanced to date (e.g., Braun, et al., 2009; Rowley & Sherman, 2003). In the final section of this chapter, we therefore conclude with leadership

lessons as to how leaders and organizations can facilitate creativity and innovation in as well as above and beyond academic contexts.

Lessons for Leadership from Aacademia

We concur with Morris (2012) that "there is a leadership deficit that is taking place in higher education, and leadership development can help with this issue" (p. 33). In particular, as the review of literature above suggests, leaders in academia need 'people skills' (Riggio & Lee, 2007). In the following, we draw what we believe are the four most critical lessons for leadership from academic contexts, including *systematic leadership development programs, opportunities for feedback and reflection, facilitating team science*, and *adapting leadership to subcultures*.

Systematic leadership development programs

The academic context is exemplary of organizations that offer leadership training initiatives (e.g., Kekäle, 2002), while systematic and evidence based approaches to leadership development are still in their early stages (Peus, Sparr, Knipfer, & Schmid, 2012). We recommend that organizations design and implement comprehensive programs to prepare their staff for leadership roles *before* they are appointed (Braun, et al., 2009). The basis of such programs must be a competency framework that is specifically tailored to the requirements of leadership in that context (e.g., McDaniel, 2002). Further, systematic development is particularly needed for groups that are currently underrepresented in leadership positions. For example, Knipfer, Shaughnessy, Hentschel, and Schmid (2015) present a leadership development program for female leaders in academia. Whereas formal training teaches recent knowledge about effective leadership, the transfer of training happens in and through daily work practice (Baldwin, Ford, & Blume, 2009).

Feedback and reflection

We concur with Lord and Hall (2005) and consider leadership development as a gradual refinement of leadership behavior. It requires self-directed learning and continuous adaptation

and modification of leadership practices to the specific requirements of a position and to the dynamic environments of the organization (Enos, Kehrhahn, & Bell, 2003). Academic leaders must be encouraged and guided to initiate and facilitate their personal learning from daily leadership challenges (Knipfer, et al., 2015). *Reflection* is a catalyst of learning in organizations for individuals as well as teams as it allows people to generate meaning from an experience (Knipfer, Kump, Wessel, & Cress, 2013). *Systematic feedback* is a necessary and valuable means to gather information about other's perceptions of one's strengths and weaknesses with regard to leadership (Anseel, Lievens, & Schollaert, 2009). We therefore recommend that organizations provide opportunities for feedback and reflective learning in order to further develop leadership abilities (Peus, 2014).

For example, Pearson and Kayrooz (2004) introduced the Reflective Supervisor Questionnaire (RSQ) for research supervisors. Studies with the RSQ revealed four subsets of facilitative supervisory practice: formal guidance, mentoring individual development, expert coaching, and sponsoring participation in academic practice. Tailored to the reflection and development of leadership skills in organizations, Peus, Braun, and Frey (2013) developed and validated the Leadership Style Assessment (LSA). The instrument covers transformational leadership as well as transactional and laissez faire leadership, and integrates situational contingencies of leadership. Based on the LSA, leaders in academia (e.g., universities, research institutes) and other contexts can reflect their leadership styles and receive feedback from others on their strengths and areas for further development.

Facilitating team science

Based on the innovative concept of team science (Bennett, et al., 2010), we encourage leaders in organizations who strive for creativity and innovation to empower their teams. Collinson and Collinson (2009) argue that employees in higher education value dialectical approaches to leadership such as, for example, alterations between delegation and direction, proximity and distance, and internal and external engagement. The same may be true for other organizations

in which high levels of complexity and desire for autonomy are present. Rather than determining creative and innovative outcomes, leaders need to create the enabling conditions for effective teamwork. One way of doing so is to enhance team reflexivity, "the extent to which teams reflect upon and modify their functioning" (Schippers, Den Hartog, Koopman, & van Knippenberg, 2008, p. 1593). In the reflection process, team members openly share their views of team achievements as well as shortcomings in current projects. Transformational leadership is one viable means of fostering team reflexivity, which in turn positively relates to team performance (Schippers, et al., 2008). As an additional approach, leaders may involve their teams directly in the leadership process to foster autonomy and participation. In order to be able to 'share the lead', leaders are required to create an internal team environment in which team members experience a shared purpose, support each other, and are given voice to express their opinions freely (Carson, Tesluk, & Marrone, 2007).

Adapting leadership to subcultures

Lastly, while leadership is of general interest in the academic context, universities naturally comprise different disciplinary subcultures, which are likely to diverge in the preferred patterns of academic leadership. For example, Kekäle (1999) identified preferred leadership patterns in four disciplines at two Finnish universities. Drawing from interviews with 56 researchers, some of the main themes that emerged were: academic freedom and democratic leadership in sociology, independence in history, sustainability and democratic leadership in ecology, and exact knowledge and teamwork in experimental physics. Thus, leaders in other organizational contexts can learn to be sensitive to potential subcultures *within* their organizations, and to adapt their leadership accordingly.

Conclusion

We characterized leadership in academic contexts with a focus on the promotion of creativity and innovation under sometimes less-than-ideal contextual conditions (e.g., desire for autonomy in the face of strict traditional regulations, constant change, uncertainty, neglect of

leadership selection and development). With this contribution, firstly, we seek to highlight that leaders in academia are well-advised to take these particularities into account. Secondly, we encourage learning from academic contexts for sustained successes in the quest for innovation and creativity. Leadership in modern, 21st century organizations is no 'command and control' relationship. Leaders not only in academia, but also in many other types of organizations, needs to communicate compelling visions, share responsibilities, and manage complexity in order to be effective.

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