

# E-Leadership Challenges & Opportunities For Pakistani Universities

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## ABSTRACT

The present study aims to explore how technology is changing the university operations, the challenges and opportunities which the Electronic leadership comes across in Higher Education. 2 public universities were purposively selected from Punjab. Qualitative method was used and interviews were conducted from 12 university leaders, 6 from academic and 6 from nonacademic. Thematic analysis was done and three major themes emerged. The results indicated that the need to change the working operations and work attitude was recognized by the e-leaders and the operations were transitioned to virtual environment. During this transition, adaptation of university culture, e-skills development of the team members, maintaining balance between work demands and personal life, practicality of technology, supervision of employees in e-environment, maintaining quality of online education, financial limitations were some of the challenges faced by the E-Leaders. On the other hand, innovation, learning new skills & behaviour, technological orientation, flexibility & improvised work processes to create and sustain a virtual learning society were seen as some of the opportunities.

**Key Words:** E-Leadership, Challenges, Opportunities, Higher Education, Public Universities

## 1. Introduction

Leadership styles and patterns have seen a shift from the industrial age to post industrial age and then to information technology age, which has brought with it structural changes demanding reshaping of the

concept of leadership. Petrie (2014) reported that the leadership styles and strategies which were effective in the past are not properly aligned to address the changing demands and challenges of the future. Hence, there is a gap which calls for a more updated approach of leadership which is able to cope up with the rapid digital revolution. The new concept in leadership, the Electronic Leadership (e-leadership) is not considered just as an add-on of traditional leadership, rather it reflects a complete change in the way the leader performs and operates within and outside the organization. For Leading in a virtual context, a fundamental change of leadership is required as asserted by Avolio and Kahai (2003), and the role and techniques for virtual leader team interaction differs from the traditional leadership (Garcia, 2020)

One of the first definitions of the term E-leadership as presented by Avolio et al., (2000) is “to incorporate the new emerging context for examining leadership”. The author further defines E-leadership as a way of leadership in which “individuals or groups are geographically dispersed and interactions are mediated by technology” (Avolio et al., (2009, p. 440). Body of knowledge of E-Leadership paradigm comprises of 3 categories, a form of leadership through the usage of electronic means (an electronic form of leadership), working groups who communicate electronically and usage of technology as a mean of communication between the leader and the team. Some authors are of the view that the objectives & functions of leadership remain same while performing in traditional environment or e-environment. However, the implementation becomes different where the e-leader is connected with the virtual team electronically (Das Gupta, 2011; Jonhson, 2010; Avolio & Kahai, 2003; Avolio et al., 2000).

The importance of leadership role in the higher education environment and its increased complexity has been a subject for study for many years (Barnett, 2004; Marshall, 2007; Knight & Trowler, 2001; Drew, et al. 2008). For Stiles (2004) an effective leader in educational setting is one who can think out of the box and bring innovative solutions for the problems. Leader in the higher education setting may face challenge of leading with uncertainty as stated by Barnett (2004), Hanna (2003), especially when the long term way is not clear, it requires courage for leaders to take actions. The complexity arises as the leadership responsibilities are shifted to e-environment, like creating & sharing vision, reinforcing the values, engaging and motivating the team members to perform and managing change while working electronically (Darics, E., 2020). According to Kotter (2007), this ability of the leader to guide change is the ultimate test of leadership. According to Das Gupta (2011), as the leadership is functional in e-environment, common challenges which exist are isolation, bridging physical distances, confusion, communicating effectively, keeping the team on track, conveying enthusiasm. For the leadership to be effective, Brake (2006) suggested use of practical guidelines which included understanding the culture and applying cultural intelligence, communicate effectively, be able to motivate, resolve conflicts, think with clarity and in a proactive manner. According to Raitskaya & Tihkonova (2018), soft skills which are important in Higher Education are social and communication skills, cognitive skills (including problem solving skill, time management skill, critical thinking, skills of learning) and personal attributes and emotional intellect including optimism, empathy, flexibility, working under stress, motivation. Some of the highlighted qualities of educational leadership by different researchers include relation building, common sense of vision, collaborative engagement. (Scott et al., 2008). As many of the challenges faced by the leader in higher education are similar, promoting creativity and innovation in collaborative innovation networks, sharing resources, ideas and practices helps to find more effective, streamlined ways of supporting learning. (Hanna, 2003; Yelder & Codling, 2004).

Due to the COVID -19 pandemic, sudden changes have taken place in the way work was being done around the world. Face to face interaction has been limited and significant human interactions were taking place through the use of information technology. As a result, new work environment shaped up where the work is mediated through use of internet, limiting face to face interaction, and requiring the reconstruction of the concept of leadership. Abrupt change was brought in the way educational institutions were operating and education being provided to students. Like in other parts of the world, the universities and other educational institutions in Pakistan were closed down in March 2020 due to COVID pandemic which resulted in halt of the academic as well as administrative activities of the Universities. The administrative activities and academic activities were seen to rapidly transit to the online platforms. As a result of which, online apps and platforms have seen a massive increase in usage. In the changing dimensions, it was required by the leaders in the higher education to examine ways to lead their university through the use of ICT and sort approaches which work well in their context.

Although digitalization and use of technology has been seen in every sector, many authors recognize that there are not enough studies and more research is required to better understand the E-Leadership paradigm. Likewise, exploring E-leadership in education also showed limited researches in the past few years (Das Gupta, 2011; Sutanto et al., 2011; Van Wart. et al., 2019). In the current scenario where the teaching, learning, administration and management was being transferred to online system in educational institutions across Pakistan, there was a dire need of understanding Electronic Leadership (E-Leadership) in higher education to cope up with this changing demands and trends. As the E-leader is to work in technology mediated environment, which was not available to the traditional leaders, the E-leaders come across different practices with new challenges and opportunities. It was therefore important to know how technology is changing the way university operate, which challenges the leaders face and how they are able to create opportunities for institutional development and attainment of their goals. This study focused on the exploration of E-Leadership challenges and opportunities in public sector universities of Punjab, Pakistan.

### **1.1 Objective**

The objective of this research work was:

1. To probe how digital technology is changing the way public universities operate.
2. To explore the challenges faced by Electronic leadership in Pakistani public universities.
3. To explore opportunities of technology usage for Electronic leadership in Pakistani public universities.

### **1.2 Research Questions**

1. How technology usage influences the performance of universities?
2. How leadership perceive the challenges of technology use in Pakistani universities?
3. How leadership in Pakistani universities perceive the opportunities of technology use?

### **1.3 Significance of the study**

As the study explored the existing technology usage practices in universities, the challenges and opportunities related to technological usage, it serves as a baseline study in context of Pakistani Public Universities and would serve as reference for future studies related to e-leadership in educational context.

The findings of this study are helpful for arranging instructional procedures for structuring leadership planning programs in the higher education by addressing the challenges and utilizing the opportunities.

## **2. Research Methodology**

Qualitative research design was selected for this research, as this was an appropriate design to provide systematic information about opportunities and challenges faced by e-leadership in Pakistani public universities. According to Creswell (1994) "A qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting". All employees working in Public HEC recognized universities of Punjab comprised the population of the study. Purposive sampling strategy was used for university selection. This sampling technique was selected as it is a thoughtful choice of informants due to the qualities they possess. According to Bernard (2002), Lewis & Sheppard (2006), researcher thoughtfully selects the participants who can provide the information based on knowledge or expertise. Purposively 2 universities were selected from Punjab to collect the data through homogenous sampling strategy. One university was selected from Central Punjab, while other was from Southern Punjab. Criteria considered was adoption of LMS, conduct of online classes, online exams, online administration in university as prescribed in HEC guidelines. Homogenous sample selection is considered to be a purposeful sampling scheme in which the setting, groups, individuals are selected based on similar or specific characteristics (On wuegbuzie & Collins, 2007). Interview were used for the data collection. A total of 12 participants participated in the interviews, out of which 06 held academic leadership position while 06 held administrative leadership position. 01 Controller Examination, 01 Treasurer, 01 Registrar and 03 faculty heads were selected from each public university. Interview protocol was self-developed by the researcher for exploring challenges and opportunities of technology use for leadership in Pakistani universities, which was validated by subject experts. For qualitative data, thematic analysis was done and themes were identified. According to Creswell (2012), unfolding and emerging of themes from the data includes answering the major research questions and at the same time forming an in-depth understanding of the central phenomenon.

## **3. Results**

Education profile of respondents showed that majority (75%) were Ph.D, 16% were Ph.D Scholars while 9% had professional degree in accounting. 33% of the participants had university working experience between 15-19 years, 16% had 20- 24 years, 16% had 25-29 years, 16% had 30- 34 years, while 1% had experience of 35 years or above.

From thematic analysis of the data, 3 themes emerged from the data, which are as under:

### **3.1 Theme 1: Paradigm change under technology adoption**

#### **3.1.1 E-Communication**

The university leaders expressed that having an electronic channel for communication with team members as well students became very important during online working. The employees had their official email ids and WhatsApp groups were formed at departmental levels. Mostly Zoom was used for meetings, live interactive sessions and online classes. Learning Management System (LMS) was also used for correspondence between students and faculty as well as for sharing of academic content. Official

Facebook page and You-tube channels were used for mass level communication purpose. Majority of the participants considered good communication as an important element while working in virtual environment as when instructions given out are clear, these are well understood by the employees.

### **3.1.2E-Environment**

E-Leaders expressed that initially the transition had some challenges and it took little time to adjust in the virtual environment and alignment of the work processes accordingly. For most of the participants, the transition of work from face to face working environment to virtual environment was seen as learning experience, having its own benefits. Many of the participants also reported this transition to help in streamlining the work process, making it efficient as well as it was convenient for them to work electronically.

### **3.1.3 Conflict management**

While working in an e-environment, differences in opinions can lead to misunderstanding, conflict and resentment. All the leaders considered resolution of such conflicts to be very important to keep the online working relationship healthy and productive so that the institution objectives can be achieved. They were also of the view that clear responsibilities, clear instructions and elaboration in the first place, lessens the occurrence of conflicts in an e-environment.

### **3.1.4 E-practices**

The most commonly reported tasks which the university leaders were performing through use of technology included online meetings, online communication, online supervision, conducting online trainings, departmental coordination and other related administrative tasks. Academic leaders stated about the online classes, online correspondence with the students, addressing their concerns/applications, online supervision of research students and online exams. While leaders from administrative section added payment processing, monitoring admission process, conducting online exams, planning and restructuring of departments were some of the other tasks performed online.

#### **a. Online educational activities**

Educational Leaders shared that for continuation of educational process in the institutions, all academic activities were shifted to online mode. Both universities were following the guidelines as prescribed by HEC for online teaching. Learning Management System (LMS) was functional and courses content were being uploaded by the teachers which were accessible to the students. Freedom to use different online platforms and mode of e-learning (synchronous & asynchronous) was given. For monitoring and supervision of the academic activities, almost all of the academic leaders agreed to have regular online meetings for work related discussions. Examination process was also being carried out online through the use of technology.

#### **b. Online admission system**

Technology usage was reflected in the university admissions as regular admission process was shifted to online admissions. Applications for the year 2020-21 were being processed online which not only facilitated the students but also made the process efficient.

One participant stated that “ For the online admission process, Campus Management System (CMS) was used in which electric forms were filled by the prospective students, online submission of documents

and display of merit list. This made the process efficient and easy to record & maintain data online”.(P11).

### **c. Financial Management**

Financial governance of university in e-environment was considered very crucial by the administrative leaders as it is a very important component in the operation of the university. Certain steps were taken to make the financial processes prompt, planning was done to prioritize utilization of funds according to the situation, and deans, departmental heads were taken on board through online meetings.

### **3.2 Theme 2:Challenges for technology adoption**

Participants expressed that many barriers exist for technology based innovations while working in e-environment in universities.

As the university leadership became conscious of the need the time and the changing demands, University adopted the HEC online working policy for continuation of its operations. Participants shared that as the transition was rather sudden and lacked physical proximity, employees were not mentally prepared for this and many lacked the required IT skills for this transition. As a result, initially they faced difficulty in proper implementation of the online mode in their departments. The leaders shared that some of their team members had built negative perceptions of working online and thus were reluctant to work in this mode of environment. Further, the resistance in the attitude of their team members/ subordinates resulted in their non-serious behavior towards work, which was affecting their performance as well as the departmental activities.

Majority of the leaders shared that changing the working style within their department wasn't that easy as there were certain employees who were not keeping track of their work. The leaders also had to keep continuous follow up on their employees for timely completion of the task. As the team members were not habitual of checking their emails, they usually had to either call up or send text message to them to check their emails. Most of the E-leaders felt that their work burden had increased for which they required extended hours for completion, as they had to stay in continuous touch with their team, communicate on regular basis, frequent zoom meetings and also supervision of team in e-environment was a time taking task. Maintaining balance between personal life and work demands gets difficult while working in e-environment, allocation of specific time for work was required and there was a need to keep professional life different from the personal life.

A participant shared that“ While working online, the work load has increased, requiring to work around the clock which makes the person feel overburdened” (P7).

Supervision of the employees in e-environment was seen as a challenge faced by the E-Leaders. Some of the employees deliberately tried to avoid work and shift responsibilities to others. Lack of self-discipline of the employees and their time management was another challenge faced.

One participant shared that, “If the employees perform their work properly, less issues may arise working in e-environment. When they don't respond timely, its causes delay in the task and to make such employees work in technology mediated environment is an issue” (P5).

Another participant shared that “Flexibility which electronic working brings is misinterpreted by some employees and they start working casually, limiting discipline which slows down the task performance” (P4).

In this way, some of the leaders felt difficulty in executing the functions of leadership like supervision, influencing team members in e-environment. Almost all the leaders reported some sort of technology related issue during their working experience in the e-environment. Most common of these were unstable internet, low bandwidth, internet speed, connectivity issue, limit exhausted, limited technology infrastructure, unavailability of software, which resulted in frustration, anxiety and reduced productivity. It was also highlighted that team members were not equipped with the required e-skills to perform tasks in the e-environment. Due to this skill gap, difficulty was faced initially.

Academic leader shared that when education was shifted to online platforms, many of the students were not willing for this mode of education and online assessment, they opposed the departmental online teaching practices. In this scenario, helping students to develop knowledge, necessary generic skills and values was a challenge. Majority agreed that quality of online examinations was compromised as usage of unfair means couldn't be completely ruled out in the e-environment. Leaders also shared that initially some of the faculty members and many of the students had electronic devices and internet related issues due to which the online classes were affected. Another aspect pointed out by the participants was the online supervision of faculty members for maintaining quality of online education as well as of the research students for completion of their thesis. As online working, lacked physical interaction and there was less sense of control, this aspect was bit challenging for many for the participants. Competing for resources, financial limitations, compliance issues, retaining quality staff were the key administrative challenges working in e-environment. Administrative Leaders stated that finance of the university is already divided under certain heads and allocation in each head is made at the time of budgeting process. Reallocation of budget from one head to another head was not easy, massive budget cuts were required to equip the universities with the required technological infrastructure.

One Participant shared that, “Upgrading of university infrastructure was a challenge in changing needs, which requires proper budgeting strategies and also prevents from staggering from one technology-funding crisis to the next.” (P12)

Another participant stated, “Electronic working was a novel experience for many of the employees. Adapting of attitude toward electronic working was issue for some of the employees particularly older employees whose productivity was less in e-environment.”(P10)

Human resource was also seen as a limitation as there were employees who were not willing to learn, adapt to e-environment were a hurdle. It was considered necessary to build human resource infrastructure for technology to be able to perform the administrative operations.

Table 1: Challenges of E-Leadership in E-Environment.

THEMES	SUB THEME
<b>Challenges for technology adoption</b>	<ul style="list-style-type: none"> <li>• Proper implementation of online mode</li> <li>• Negative perception of employees towards online working               <ul style="list-style-type: none"> <li>• Adopting changing work style</li> <li>• Increased workload</li> </ul> </li> <li>• Maintain balance between personal life and work demands               <ul style="list-style-type: none"> <li>• Online supervision of employees</li> <li>• Lack of self-discipline in employees</li> <li>• Limited financial and IT resources                   <ul style="list-style-type: none"> <li>• Skill gap</li> </ul> </li> </ul> </li> <li>• Maintaining quality of online education               <ul style="list-style-type: none"> <li>• Administrative challenges</li> <li>• Compliance issues</li> </ul> </li> </ul>

### 3.3 Theme 3: Technology adoption offers opportunities

Participants felt that the need of transition of work from face to face environment to virtual environment, brought with it areas of growth and development. The university leaders shared that there was a realization of the need to work online, which was very important for continuation of university operations. Meetings were held and employees were taken on board and this urgency to change was communicated to them and trainings provided online.

One participant said that, "Technology usage has brought changes in the university operations both administratively and academically. Use of information technology, applications, online platforms for teaching practices has given way to new concept of learning, which is required in the changing trends." (P9).

It was also highlighted by the leaders that the competition among the higher education institutions to provide better facilities to the students also contributed to the technological advances within the university. This required active participation and rapid adoption of available technological innovations. Further, working in electronic environment provided the universities with an opportunity to upgrade itself and its work operations. Work process have been made rapid in online mode, as many redundant steps are removed from it. Records maintenance is also being shifted to online software and modules, reducing the paper workload and accessible for quick analysis and projection making. Online admissions process was also seen as an initiative by the participants. Process was made automatic, online data was fed by the applicants, and system was able to generate reports online. Few check and balance was required with this online system, making the overall work efficient and less dependent on human personals. Other than this, online payment system was introduced, which allowed timely payments to employees in their bank accounts. Also, students were facilitated by submitting their fees and other dues online which saved them from the hustle of long ques. Another opportunity of growth which was seen was the development of online modules and software by the university to carry out the work processes in the e-environment. Further, improvement in the means of communication through use of technology was an opportunity. All the leaders agreed that technological use and working in e-environment has brought with it flexibility in work arrangements and also has resulted in improvement in technological orientation, as everyone has

started to learn IT skills and has been using technology-based resources and programs for performing their duties and task. Academic leaders highlighted that new technologies facilitate active engagement of students in their learning and empowering students to take more control of their education, as they have access to a variety of sources and different learning opportunities which meets their needs and goals.

Working in technology mediated environment, enabled the leadership to exhibit change readiness and practice change management skills. Leaders accepted the change and adapted new ways to bring in innovations beneficial to the work processes and the institutional structure. Increased self-determination was reported among the leaders to foster change and innovation within the university. They pointed out that working in e-environment also made the universities leadership realize the aspects in which they were lagging behind and also the aspects which required immediate attention and investments like developing infrastructure to support technology-mediated teaching and learning, the IT related component i.e capacity of server, bandwidth, internet connectivity etc. Utilization and optimization have become important elements when working in e-environment, which required Strategic Leadership.

Table 2: Opportunities for E-leadership in E-Environment

THEME	SUB THEMES
<b>Technology adoption offers opportunities</b>	<ul style="list-style-type: none"> <li>• Sense of urgency</li> <li>• Technological advancement in work processes               <ul style="list-style-type: none"> <li>• Reframing organizational structure                   <ul style="list-style-type: none"> <li>• Increased competitiveness</li> </ul> </li> </ul> </li> <li>• Providing variety of learning opportunities               <ul style="list-style-type: none"> <li>• Enhancing technical/ IT skills                   <ul style="list-style-type: none"> <li>• Flexible schedule</li> </ul> </li> <li>• Improving e-communication                   <ul style="list-style-type: none"> <li>• Innovative</li> </ul> </li> </ul> </li> <li>• Increased self-determination</li> <li>• Change management skills</li> </ul>

#### 4. Discussion & Conclusion

The rapid technological advancement has not only affected the way organizations were operating but also have made a deep impact on the educational institutions worldwide. Due to this technological advancement, the work environment is changing at a fundamental level, enabling the workforce to stay connected, communicate and perform duties through the usage of IT facilities and supporting devices. As a result, Electronic Leadership has penetrated different sectors including Higher Education. The complexity of e-leadership comes from performance of the leadership responsibilities in an e-environment, where there are challenges and opportunities. It was therefore necessary to explore how technology impacts University operations, leadership and the challenges and opportunities which the E-leader faced in Pakistani Public Universities.

The E-Leaders in the higher education fundamentally understood the need to change, created urgency and begin to bring in innovations which were beneficial for their work and the university organization a structure. They acknowledged that technology has created a fundamental shift in how the organizations and institutions were operating. Transition was seen from face to face environment to e-environment through the use of IT. University work operations were being carried out electronically, online admissions, online payments, online teaching, online examinations. E-Leaders were also performing their tasks through use of technology (online meetings, online communication, online supervision, conducting online trainings, departmental coordination and other related administrative tasks). Frequently used channel for electronic communication included emails, WhatsApp and Zoom. University leadership also took advantage of this technological advancement and developed its own applications and modules for communication. Also the applications which were previously inactive, were updated and used. Flexibility was introduced making the work processes efficient by reducing unnecessary steps and increased competitiveness of the institution. Drew (2010) and Barnett (2004) agreed that it is important for universities to operate in flexibility, be able to adapt itself to meet the demands of complex and evolving environment.

First challenge, which the E-leaders came across was adaptation of university culture and implementing the online working strategy. They had to face some resistance from employees, lack of shared interest, mistrust and worked with limited IT infrastructure yet maintained a positive environment. With regard to this challenge, Gonaim (2021) asserted that maintaining a positive culture within an organization by the E-Leader is a very important for survival and progress of the organization. E-Leaders were challenged to prepare and develop skills of the team members to work in different environment. They needed to have clear communication, team engagements, conduct some training to foster relevant IT skills. The way messages, instructions were communicated and interactions held through use of technology were crucial. Drew (2010, 2006) agreed that for maintaining a balance between ongoing work processes and changing demands, it was important to focus on the interaction, communication and human element. Ulmer (2012) concur that communication is of much importance when working in dynamic environment and it should be done carefully.

It could be seen that interrelation capabilities of the E-Leaders were required to engage staff and their mobilization was needed for attainment of departmental objective and overall institutional objective. According to Hanna (2003) focusing on the people who are expected to adopt strategic change and innovation is more effective than the focus on the structure. A common concern seen by the E-Leaders was the increased workload along with monitoring of the team members in the virtual environment. This was consistent with the findings of Drew (2010) who reported that this concern was cited by both academic leaders as well as administrative leaders. Academic E-Leaders did report that quality of online educational process was compromised. As Copper (2002), Szkeres (2006), Jalal, H., Butt, A. I. (2021) observed, that maintaining the quality of academic process is a challenge while responding to changing demands and policies.

It was therefore important for the E-leaders to address these issues reflecting on their perceptions and attitudes with regard to work culture and institutional structures. Leaders must know themselves and have a clear vision of what to achieve for being effective. E-Leaders personal resilience, consistency and competency to model the way to others is crucial in fluctuating circumstances. Further, for remaining

relevant with the changing circumstances, E-Leaders are required to tailor their efforts for innovation, which requires knowledge, skill and behavior. Cranston, Ehrich and Kimber (2004, 2006), Aziz, Butt & Noureen (2021) seems to reflect this stance in their work.

It was pointed out that the era of emerging reality of technological advancements and working in virtual environment has created opportunity for higher education institution and the leadership to learn new skills, improvise their work processes and to create and sustain a virtual learning society. For this, it was important that the e-leader accepted the change, were willing to take risk, had self-determination, were able to think creatively & innovatively and help others to deal with change. This resonated with Marshall (2007), Cohen (2004), Hanna (2003), Whitch urch, (2006) that the capability of the university leadership to streamline the work processes and adapt and innovate it according to the demand of the time and lead the university steadily is crucial.

It can be concluded that technological usage has the potential to transform the higher education, with its increased use of technology dependent resources. These new technologies have drastically changed the way instructional process and administrative activities were carried out, thus creating opportunities of growth as well as challenges which the E-Leaders come across while working in the Higher Education Institution.

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## REFERENCES

- Avolio, B. J., Kahai, S. & Dodge, G.E. (2000). E-leadership: Implications for theory, research, and practice. *The Leadership Quarterly*, 11(4), 615-668. doi:10.1016/S1048-9843(00)00062-X
- Avolio, B. J., & Kahai, S. S. (2003). Adding the " E" to E-Leadership: How it may impact your leadership. *Organizational dynamics*. 31(4), 325–338. [https://doi.org/10.1016/S0090-2616\(02\)00133-X](https://doi.org/10.1016/S0090-2616(02)00133-X)
- Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual review of psychology*, 60, 421-449. doi.org/10.1146/annurev.psych.60.110707.163621
- Aziz, F., Butt, A. I., & Noureen, S. (2021). A Constructive Approach to Develop an E-Leadership Model for 21st Century Universities. *Indian Journal of Economics and Business*, 20(4).
- Barnett, R. (2004). Learning for an unknown future. *Higher Education Research & Development*, 23(3), 247-260.
- Bernard, H.R. (2002). *Research Methods in Anthropology: Qualitative and quantitative methods*. 3rd edition. AltaMiraPress, Walnut Creek, California.
- Brake, T. (2006). Leading global virtual teams. *Industrial and commercial training*, 38 (3).doi.org/10.1108/00197850610659364
- Cohen, P. (2004). The crisis of the university. *Campus Review*, April 21-27, 9-12.
- Cooper, T. (2002). Concepts of “quality”: And the problem of “customers”, “products”and purpose in higher education. *Proceedings of HERDSA Annual Conference*,25, 144-151.

- Cranston, N., Ehrich, L. C., & Kimber, M. (2006). Ethical dilemmas: The “bread and butter” of educational leaders’ lives. *Journal of Educational Administration*, 44(2), 106-119. doi.org/10.1108/09578230610652015
- Cranston, N., Ehrich, L. C., & Kimber, M. (2004). “Right” versus “wrong” and “right” versus “right”: Understanding ethical dilemmas faced by educational leaders. In Proceedings 2004 AARE. Australian Association for Research in Education, Melbourne, Australia, pp. 1-17.
- Darics, E. (2020). E-leadership or “How to be boss in Instant Messaging?” The role of nonverbal communication. *International Journal of Business Communication*, 57(1), 3-29. https://doi-org.sdl.idm.oclc.org/10.1177/2329488416685068
- DasGupta, P. (2011). Literature review: e-Leadership. *Emerging Leadership Journeys*, 4(1), 1-36.
- Drew, G. (2010). Issues and challenges in higher education leadership: Engaging for change. *The Australian educational researcher*, 37(3), 57-76.
- Drew, G., Ehrich, L. C., & Hansford, B. (2008). An exploration of university leaders' perceptions of learning about leadership. *Leading and Managing*, 14(2), 1-18.
- Garcia, I. (2020). E-Leadership: A Bibliometric Analysis. *International Journal of Advanced Corporate Learning*, 13 (1), 19–34. https://doi-org.sdl.idm.oclc.org/10.3991/ijac.v13i1.12341
- Gonaim, F. A. (2021). Electronic Leadership in Time of Crisis: Challenges and Opportunities in the Light of COVID-19 Quarantine. *International Journal of Education, Culture and Society*, 6(2), 54.
- Hanna, D. E. (2003). Building a leadership vision: Eleven strategic challenges for higher education. *Educause review*, 38(4), 24-24.
- Jalal, H., Butt, A. I. (2021). Lesson from Covid-19 Pandemic and Online Teaching: Challenges and Opportunities for Teachers in Higher Education. *Turkish Online Journal of Qualitative Inquiry*, 12 (9), 4918 – 4927
- Knight, P. T., & Trowler, P. R. (2001). *Departmental Leadership in Higher Education*. Buckingham UK: Open University Press.
- Kotter, J. (2007). Leading Change. *Harvard Business Review*, 85(1), 96-103.
- Lewis, J. L., & Sheppard, S. R. (2006). Culture and communication: can landscape visualization improve forest management consultation with indigenous communities?. *Landscape and urban planning*, 77(3), 291-313. https://doi.org/10.1016/j.landurbplan.2005.04.004
- Marshall, S. (Ed.). (2007). *Strategic Leadership of Change in Higher Education: What's New?*. London Routledge.
- Onwuegbuzie, A. J., & Collins, K. M. (2007). A typology of mixed methods sampling designs in social science research. *Qualitative Report*, 12(2), 281-316.
- Raitskaya, L. K., & Tikhonova, E. V. (2018). Perceptions of soft skills by Russia’s university lecturers and students in the context of the world experience. *RUDN Journal of Psychology and Pedagogics*, 15(3), 350-363. https://doi.org/10.22363/2313-1683-2018-15-3-350-363
- Scott, G., Coates, H., & Anderson, M. (2008). Learning leaders in times of change: Academic Leadership Capabilities for Australian Higher Education. American council for research, Retrieved on 20<sup>th</sup> October, 2021 from, https://research.acer.edu.au/higher\_education/3
- Stiles, D. R. (2004). Narcissus revisited: The values of management academics and their role in business school strategies in the UK and Canada. *British Journal of Management*, 15(2), 157-175. https://doi.org/10.1111/j.1467-8551.2004.00412.
- Szekeres, J. (2006). General staff experiences in the corporate university. *Journal of Higher Education Policy and Management*, 28(2), 133-145. doi.org/10.1080/13600800600750962

- Ulmer, R. R. (2012). Increasing the impact of thought leadership in crisis communication. *Management Communication Quarterly*, 26(4), 523-542. <https://doi.org/10.1177/0893318912461907>
- Van Wart, M., Roman, A., Wang, X., and Liu, C. (2019). Operationalizing the definition of e-leadership: identifying the elements of e-leadership. *Int. Rev. Admin. Sci.* 85, 80–97. doi:10.1177/0020852316681446
- Whitchurch, C. (2006). Who do they think they are? The changing identities of professional administrators and managers in UK higher education. *Journal of Higher Education Policy and Management*, 28(2), 159-171. <https://doi.org/10.1080/13600800600751002>
- Yielder, J., & Codling, A. (2004). Management and leadership in the contemporary university. *Journal of Higher Education and Management*, 26(3), 315-328. doi.org/10.1080/1360080042000290177