

The future of leadership: new digital skills or old analog virtues?

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In today's dynamic world, new technologies such as big data analytics, robotics, artificial intelligence and machine learning are forcing leaders to navigate organizations through difficult times. The recent pandemic once again accelerated the pace of technological change and confronted organizations with a radical shift in reality. Working from home became the rule, and the interfaces to customers, suppliers and network partners were increasingly digitalized to stay in contact and continue to offer services.

Organizations continue to use advanced technologies for recruitment processes, scheduling complex logistic tasks, forecasting processes and financial transactions. While these technologies are useful for business success as they support or even substitute managerial tasks of leaders, they also diminish creativity, flexibility, intuition and improvisation, which are essential for organizational development. Therefore, the application of the appropriate technology is the responsibility of capable leaders and executives. In demand are leaders who can develop and coordinate the organization to meet the current challenges in a disrupted and predominantly digital business environment.

In many organizations, the rapid pace of digitalization raises questions. Decision-makers are faced with an uncertain future and are asking themselves whether leadership will gain or lose relevance as day-to-day management becomes more technological or whether leadership needs to be rethought at all for the digital age.

Some of these questions can be answered by means of our cross-border study. Examining the impact digitalization will have in the future on the relationship between managers and their team members as well as on the required leadership skills, we asked 42 managers from Italy and Austria to present their views of the future. The participants were executive managers from small and medium-sized enterprises as well as large companies. The selection of participants was intended to generate as much diversity as possible in views of the future. However, the results were strikingly surprising in their basic assumptions. Neither the size of the company nor the degree of digitization led to major differences.

Leader–member exchange

Before we explain our research and the results, we look at the literature and explain briefly two important theories we use as theoretical framework. The first theory is leader–member exchange (LMX), the most popular approach to understanding relational leadership (Martin *et al.*, 2010). The theory encompasses a dyadic point of view, considering both the leader and the followers. Accordingly, leaders have different relationships with their team members, as they divide them into in-group members and out-group members (Dansereau *et al.*, 1975; Graen and Cashman, 1975). In-group members have high-quality relationships with their leaders and are privileged to access a bigger share of leader attention, resources

and support than the members in the out-groups, whose relationships are of less quality. The better the perceived quality of the relationship, the more motivated followers are to invest in the social exchange relationship with the leader to continue to receive tangible (e.g. information) and intangible (e.g. leader trust) benefits (Erdogan and Enders, 2007).

As digital technologies are transforming the workplace, resulting in virtual working and dispersed teams, it can be assumed that remotely working followers are quickly sidelined into out-groups, whose relationships are of less quality. Consequently, the importance of the relationship between leader and followers gets strengthened once again, because only with a qualitatively high relationship can dispersed team members be reached and different needs resulting from different working situations can be addressed (Cortellazzo et al., 2019).

Digital leadership

For the definition of skills needed to manage digital transformation, we briefly discuss the theoretical construct of “digital leadership,” encompassing both leading the digital transformation and the organization in a digital environment (Klein, 2020). The term digital leadership describes leaders taking the right actions to manage digitalization of organizations (El Sawy et al., 2016) and involves leader qualities that positively influence the attitudes and behaviors of organizational members who are affected by digital technologies (Avolio et al., 2014), including specific competencies within strategic management and technology management. According to prior studies examining digital leadership (Kiron et al., 2016; Kane et al., 2019; Philip and Aguilar, 2021), leaders must be aware of recent technological developments; decide which of them represents threats or opportunities; manage their impact on products, services and the internal organization; and simultaneously lead employees in time of uncertainty. They should act as role models by fostering a supportive attitude toward change and by ensuring that employees have digital know-how. In addition, the most mentioned attributes of leaders in the digital age are being visionary, digitally savvy, highly collaborative, adaptable, motivating, creative and selfless (Day et al., 2014; Laevy, 2020; Reck and Fliaster, 2019).

Our research

To examine the impact digitalization will have on the relationship between leaders and their team members as well as on the required leadership skills, we selected 42 experts from the top or middle management driving digital transformation in their organizations. Among these, 22 leaders were located in Bolzano (Italy), representing small- and medium- sized enterprises (SMEs), and 20 were located in Vienna (Austria), representing multinational enterprises (MNEs). We divided the participating experts into four groups and created four moderated plenary sessions, held between December 2020 and January 2021. The experts were asked to discuss the following two research questions:

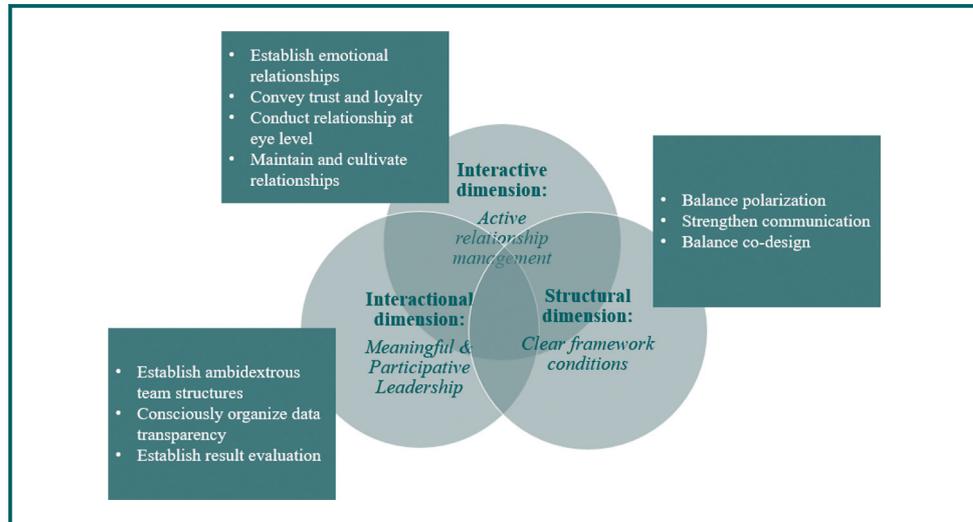
RQ1. How do digital technologies affect the relationship between leader and team members?

RQ2. What are the crucial skills of leaders to manage digital transformation?

Relationship between leader and team members

The results of the first research question show that digital technologies affect the relationship between leaders and team members to a great extent. According to the experts, an increasing emphasis on technology in daily management raises the demands on leaders in three dimensions, namely the interactional dimension (active relationship management), the personnel dimension (meaningful and participative leadership) and the structural dimension (clear framework conditions). The dimensions with their sub-categories are illustrated in Figure 1.

Figure 1 Leader–member relationships



Active relationship management

The first demand is active relationship management, which means that leaders are expected to establish an emotional relationship with their followers by showing interest, empathy and being authentic. As people rarely meet in person, but rather in virtual settings, trusting environments no longer arise automatically. Leaders need to actively extend the “coldness” of technologies with a social dimension and establish trust and confidence to create a relationship at eye level, which fits in well with the participative leadership style. Our study shows that even though technologies offer many opportunities, personal exchange and regular meetings are crucial, especially in the case of “digital distance,” to maintain and cultivate relationships.

Meaningful and participative leadership

In the age of digitization, a meaningful and participative leadership attitude is essential. Leaders need to extend regular and transparent communications to their team members. Given the fact that spontaneous meetings, e.g. in the coffee kitchen, may not happen anymore, leaders are asked to give enough time and room for informal information exchanges during virtual meetings. As a result of digitalization, technology acts like an amplifier, as previously hidden actions, processes and competencies get revealed. The experts claimed that during the pandemic, where leaders were asked to lead virtually, bad relationships of weak leaders came to light in some cases, while in others, capable leaders were strengthened by showing excellent leadership qualities. Consequently, the experts pointed out, leaders need to balance polarization. They are called upon to take countermeasures and build sustainable working relationships. Leaders are expected to listen actively to their team members and establish proactive and clear communication to convey meaning and purpose. In doing so, they can manage the changed power structure resulting from transparent data and to involve their team members into important decisions.

Clear framework conditions

According to the experts, digitalization raises the demands for setting clear conditions for the employment relationship between leaders and team members. Through clear

framework conditions, for example by creating ambidextrous team and goal structures, to ensure flexibility and efficiency at the same time, leaders encourage employees to act effectively and to be motivated in the digital transformation. Moreover, the results show that digitalization increases the amount of available data and transparency, which is often associated with fears on the part of employees and leaders. Conscious data management can reduce fears and resistance to change. It is advisable to establish a results orientation instead of assessing employees according to their working time. Common goal definitions provide team members with a great deal of room for maneuver and trust.

Skills for managing digital transformation

The more digital a company's processes become, the more the leader should strive for social bonding and interaction. For this to succeed, executives need effective leadership skills, strong change skills and conceptual digitization skills, as [Figure 2](#) illustrates.

Effective leadership skills

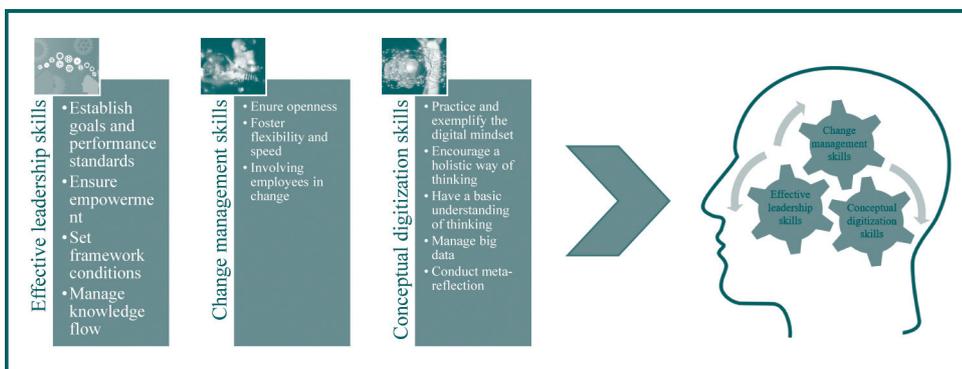
Our study show that effective leadership skills are crucial despite remote working conditions preventing personal contact to manage digital transformation. When employees are physically separated from one another through innovative work concepts such as home offices and virtual project teams, leaders are expected to exert more influence on their teams to ensure strategic alignment, generate ideas and deal with individual performance differences and conflicts quickly and effectively.

Transparent evaluation and remuneration models must be established to assess performance according to results, not hours spent on a project. Managers must create the appropriate framework and provide the necessary resources to enable their employees to achieve the jointly defined goals and maintain their ability to act. Employees must be empowered and developed to make decisions independently. If the team or the individual is not empowered to make decisions, it would be counterproductive to the success of the company. To promote self-management and employee initiative, transparency within the company and a rapid flow of knowledge and information are required. Information should be shared across companies and so-called silos should be broken down. The aim is to achieve cross-departmental collaboration that replaces internal competitive thinking.

Strong change management skills

Strong change management skills are needed for actively shaping digital change processes. According to the experts, leaders are expected to ensure an open attitude

Figure 2 Skills for managing digital transformation



toward change and the need to be open for innovations. They are supposed to make decisions quickly in response to new trends and consistently implement changes in their teams by providing orientation, inspiring employees and involving the whole team. Here, too, the personal component comes into play. For change to succeed, managers are expected to respond to their individual needs, reduce fears and inspire them to embrace change. This can be achieved by conveying purpose. If the team can recognize the meaning of the change and connect it with the meaning of the company, nothing stands in the way of successful change.

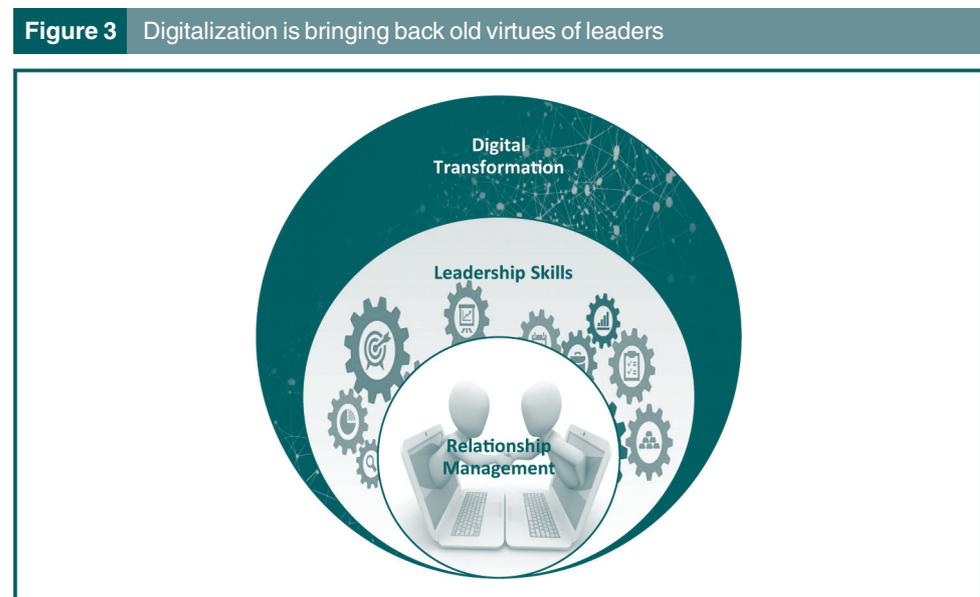
Conceptual digitalization skills

Finally, leaders and executives need conceptual digitalization skills. This means that leaders driving digital transformation only need to possess in-depth technological skills to a limited extent, as this knowledge can readily be left to the specialists in the team. Rather, mindset and holistic thinking are decisive in recognizing correlations and being able to make appropriate decisions. Reflection on a meta-level is essential, especially when it comes to dealing with big data. Because big data harbors dangers and uncertainties, leaders are called upon to strive for an ethical and secure handling of data.

Is digitalization bringing back traditional leadership virtues?

Regardless of organization size, our study shows that digitalization (Figure 3) must be supported by a strong and appropriate leadership. As LMX theory suggests, leaders need to make sure they have a good relationship with their followers. They need to actively listen to their team members, set goals and framework conditions to ensure effective working outcomes. They need to make sure that their followers are part of in-groups, who have a bigger share of the leader's attention than members of the out-groups, whose relationships are of less quality. If team members lose the connection, they may find themselves in an out-group and believe the leader does not care about the relationship. This circumstance can hinder leadership and collaboration in times of digital transformation, as dispersed team members cannot be reached and some working situations cannot be addressed.

Even though the term digitalization is deeply interwoven with technology (Canaday, 2017; O'Neill, 2009; Sebastian *et al.*, 2017), this study shows that leadership skills are more



relevant than skills related to specific (digital) technologies. This confirms the assumption that digital transformation needs to be understood as a strategic change process, requiring leaders to understand the business and their teams, instead of being digital experts.

Moreover, the importance of traditional leadership and strategy competencies supports the assumption that change processes that constitute digital transformation are not that different from other organizational change interventions. Established knowledge in the field of strategic change management applies equally to managing digital transformation. It seems to reflect the fact that digitalization concerns a process of change that has been ongoing for decades, even if it has recently become more dynamic and extensive. So-called digital leaders are expected to orchestrate a team of technology experts, business experts and human resource experts (e.g. overcoming resistance and employee participation). In this regard, our research is in line with other authors who maintain that people, not technology, drive digital transformation and that organizations require leaders and not necessarily technological specialists for managing the complex changes that comprise an organization's digital transformation.

Nonetheless, technologies themselves have enormous potential to support and partially replace leaders, especially in predictable areas. While technical and methodological skills can be substituted with the use of new technologies, these new practices can diminish creativity, flexibility, intuition and improvisation. Therefore, social, interactional, strategic and conceptual skills are increasingly important, and bringing back traditional leadership skills, instead of requiring mastery of digital skills only, is critical for organizations managing digitalization. Relationship management, which is often ignored in the context of digital transformation, is particularly important as digital technologies often result in distributed teams and raise uncertainty due to the prevalence of available data and transparency.

Embodiment of digitalization in organization

Our study shows that organizations need active leaders who strategically manage and socially lead technological change as well as anchoring digitalization deeply into the organization and its members. A strategy and culture that promote fast and effective learning of and with new technologies are seen as critical elements. As strategic and culture management require time, resources and, above all, attention, digitalization must be supported by strong and appropriate leadership. They must therefore create the formal regulatory framework and structures for embedding technologies, enabling the knowledge flow within the entire organization and networking as well as explaining the “why” to their team members. However, cultures can only be controlled to a very limited extent, if at all. For this reason, leaders can try to embed a “digital mindset” in the culture through their behavior and decisions and human resource practices.

Onboarding as well as training are of central importance for the development of a digital identity, as our study highlights. In this context, new priorities must be set for training and continuing education, including for leaders, to benefit comprehensively from the potential of technologies in a strategy-driven manner. The ability to reflect on a meta-level becomes a key strategic capability. Reflective change knowledge through strategically coordinated management training lays the foundation for technological change, as organizations need leaders with strategic conceptual digitalization skills and dynamic managerial capabilities. In addition to reflective skills regarding challenges and opportunities of new technologies and new trends, there is a need for reflective handling of available data and transparency. Digitization increases the amount of available data and transparency, which is often associated with fears on the part of employees but also leaders. Conscious and transparent handling of data can reduce fears and resistance to change. Especially with regard to the use of data (for control, increasing efficiency, creativity, improving processes, facilitating tasks, etc.), critical reflection and active communication are needed.

Keywords:
Leadership,
Digital transformation,
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Skills

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