

## **Leadership in the Digital Age**

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I would like to thank the management of Bank Alfalah for inviting me to this session. I understand that Bank Alfalah is a leader within the Pakistani financial sector when it comes to matters digital. This should make for good interaction during the presentation. I invite all those present, in person here in this auditorium, or connected by videoconferencing in Islamabad, to break into my talk at any point with questions and comments.

Let me start by giving you a sense of the plan of this presentation. I will begin with some remarks on the definition of the term Digital Age followed by a discussion of some characteristics of the Digital Age. I will then talk about the implications of these characteristics for corporate leadership in general and academic leadership in particular. Since I am currently the director of a higher education institution in Pakistan, I will use examples from this domain to illustrate my points.

### **What's in a name?**

We know the Digital Age by many names. You may have heard the term Digital Revolution or Digital Transformation or simply Digitalization. Why do these terms have the word “digital” in them? The answer lies in the fact that the term originates in the domain of information systems. It has become technologically possible in recent decades to convert sound, visual and textual information into binary information (digits), for this binary information to be transported vast distances by wired and wireless means (the latter involving terrestrial and extra-terrestrial channels) and then to be reconverted into sound, visual and textual information at the destination. This has unleashed a vast amount of information transfer all over the world in the last three decades.

Defining the Digital Age in terms of information theory concepts is a bit too dry, however. Most people understand the concept best by the many new “things” that are now associated with it, such as the internet, email, mobile apps, mobile communication, texting, big data, machine learning, hacking, e-commerce, e-governance and social media. Others understand it best by the many new companies that have emerged on the global corporate landscape such as Amazon, Apple, Google, Facebook, YouTube, Skype, WhatsApp and so on.

Sometimes it is easier not to define a concept very precisely so as to avoid unending discussions of what is to be included and what is to be excluded. One way to define it is to simply say you know it when you see it. I am sure all of you can and do recognize the concept of Digital Age in this fashion.

### **Characteristics of the Digital Age**

Now on to the next part of the talk. What are the key characteristics of the Digital Age? What makes it different from other ages? Most of the relevant characteristics are associated with the scope, volume, and speed of information transfer that is involved.

### *Greater connectedness*

More people are now connected more frequently with each other. This should be self-evident to anyone with any experience of email, Facebook, Twitter, WhatsApp or any other form of interpersonal communication. Some of the numbers involved are mindboggling. Facebook now has more than 2 billion members. That is close to one third of humankind. WhatsApp has over 1.2 billion users. Twitter has well over 300 million active users and many more that are not active.

What this means is that people are getting a lot of information from each other. Breaking into this thickening information chain in a productive manner can be a source of advantage for a business.

### *Faster flow of information*

Linked to the first characteristic is the fact that information now flows faster along more information channels than ever before. This means that the time available to make decisions is now shorter. Others are getting information fast and may act before you do. As a corporate leader, you have to act faster.

### *Greater amount of information*

There is now simply a much greater amount of information available than ever before, exponentially so. Why is this so? In large measure, this has happened because information is stored and transmitted through integrated circuits and the amount of information that can be stored and transmitted has grown rapidly over time. There is a concept known as Moore's Law that states that the number of transistors that can be placed on each square inch of a circuit board has been doubling every 18 months.

For the corporate world this means that companies with tools and expertise to analyze these large data stocks and flows may obtain a competitive advantage. Some companies have created departments of business analytics to ensure that they remain abreast of the latest in analytic tools and techniques.

### *Less need for hierarchy*

It has become easier to operate with less hierarchy since information and decisions can be communicated more easily than before to a larger number of employees. Internal communication within companies is now easier and can be used more effectively as an HR tool, to inspire, to motivate, to align, to reward and to discipline. The reduction of hierarchy can itself be a motivating factor and can generate innovation from more sources within a company. Reverse mentoring becomes possible as managers can learn from staff more quickly.

### *Physical location is no longer a constraint*

It has become easier for companies to allow employees to work from home, from a distance, from different time zones. Video conferencing and email allow a manager to be in touch with a team irrespective of where individual members may be located at a given point in time (within limits of course). The same is possible with suppliers and customers. Virtually all sorts of information can now be communicated electronically and so the need for physical interaction, at one location in space, is disappearing. With 3D processing, a vast new domain of information transfer will become possible.

## **What does this imply for corporate leadership?**

A corporate leader has three choices when confronted by the Digital Age. He or she can resist, or go with the flow, or become a digital leader.

My sense is that there is really no choice. The Digital Revolution is so pervasive that resisting it at any level is likely to be a mistake. Going with the flow may work in some industries and sectors. But this risks losing market share over time. Digital technology and analytics allow threats to companies and industries from many sources. It is best to seize the initiative and learn to stay ahead of the curve, benefiting from the Digital Revolution and, at the same time, preventing obsolescence.

Mastering the Digital Age is not going to be easy. Established companies have legacy cost factors, whether they consist of staff or buildings or a business model or supplier relationships or all of the above. Newcomers do not face such costs. Furthermore, digital tools and processes can make it easier for competitors to attack at any or all points along the value chain of an industry or company. Amazon has completely disrupted certain retail markets, seizing control of an important chunk of market share in many. The same is true of the travel agency model.

One can get a sense of the nature of the threat and the potential for established companies that is inherent in the Digital Age by considering the fact that companies such as Apple, Amazon, Google and Facebook that have come in on the digital tsunami are now among the top ten companies in the world by market capitalization!

## **Views of corporate leaders**

One way to get a sense of the implications for corporate leadership is to hear directly from corporate leaders themselves. In the research that I conducted for this talk, I came across a Master's Thesis where the author had conducted interviews on the subject of digitalization with corporate leaders in Sweden. (Shahyan Khan, *Leadership in the Digital Age*, Stockholm Business School, 2016). Here is what some of them had to say.

*On disruptive potential:* "Digital transformation is extremely disruptive. I do not think we have the potential to fundamentally change behaviors in such a short time at any point in world history..."

*On speed of decision-making:* "There is now the danger that we misjudge the market and be swept away. Daring to do a product test faster, more trial and errors, forces us to act instead of reflect. The time between idea and realization has become much shorter."

*On speed and scope of communication:* "I lead better through digital and virtual channels, you can reach hundreds within a heartbeat, and be more mobile and agile than any physical leader trying to talk to everyone individually. Governance through virtual means is today and will continue to be a game changer for leaders and organizations."

*On the perils of interconnectedness:* "Everyone sees everything. It is very difficult to move away from a problem you have with a colleague or worker now that you are connected to them 24/7. At my first job, if I had a problem I could keep that to myself. Today, it is common knowledge before I can tell anyone personally because of Facebook or Instagram, even as a leader."

*On the difficulty of maintaining control: "From a leadership perspective, it is a natural disposition to be very controlling, but this will be harder now with more unstructured networking companies...as the boundaries of the firm are removed, we have to find new ways to encourage and influence our employees."*

### **What does the Digital Age imply for academia?**

Consider the standard education delivery model. It still consists mainly of a teacher standing and delivering a lecture to a room full of students, then assigning some sections from a textbook as follow up reading, and urging students to discuss questions with teaching assistants. This model is a time and place bound activity. The Digital Revolution threatens to change this model drastically.

The stand and deliver model is expensive. Faculty with the training to conduct classes at the higher education level are expensive. They can only teach 50 or so students effectively in a physical classroom at a time. If more students are to be taught, more faculty need to be hired or the same faculty must give multiple classes. Teaching assistants are needed for large classes and they add further costs. Finally, textbooks have become increasingly expensive over time.

When something becomes expensive, both suppliers and users try to find ways to reduce costs. The Digital Revolution has made it possible to do this in education as well.

For example, some universities are offering many of their large-enrolment foundational classes online. Expensive faculty time is reserved for discussion, follow-up, and clarification. Other universities have redesigned such classes as hybrids, mixing classroom delivery with online delivery to economize where possible on expensive faculty time.

An entire new system of education delivery is taking shape. This system offers MOOCs or Massive Open Online Courses. Entire classes are offered online and enrolment is unlimited and unrestricted. Companies that offer such courses include Coursera, EdX, Udacity and others. Some of these companies consist of partnerships among prominent universities such as Harvard, MIT, Stanford and so on. Some offer courses free of charge, others for a modest fee. Some are devising ways to test online students for knowledge retention and provide credit for the courses taken as well. The potential is great. Coursera alone has 24 million registered users. EdX has 10 million users.

One is beginning to hear of other innovations as well. Pearson, the big textbook company, is pioneering the use of textbook subscriptions that are limited to one semester and cost about one-third what a hardback textbook costs. Some teachers are introducing robots based on artificial intelligence systems as virtual teaching assistants.

Traditional universities have huge legacy costs embodied in their academic buildings, dormitories, laboratories and sports facilities as well as in tenured faculties and unionized workforces. These costs make them vulnerable to competitive attack from new universities who can deliver online education of high quality.

The challenge for leaders of traditional universities is clear. They have to find ways to lower the costs delivering higher education while maintaining quality. The leaders of those institutions that have high legacy costs must lower these costs over time, by finding ways to amortize the same over a larger number of students.

In order to reduce the cost per student while maintaining quality, academic leaders must take advantage of digital tools and technology. Introducing hybrid courses is one way of doing this. A hybrid course is one in which part of the teaching is done online and part is done in physical classrooms. Another way is to integrate available online materials and courses into the design and delivery of traditional courses. Large-enrolment foundational courses are often best suited for delivery in hybrid forms.

When done well, one of the advantages of the traditional delivery method is that interaction between teacher and student in a classroom can lead to higher knowledge retention than online courses. Interactions among students in a classroom also generate other benefits such as learning how to communicate one's point of view in an empathetic and respectful manner. A traditional university can use these aspects of classroom teaching to its advantage by ensuring that it has faculty with good teaching skills and by selecting a body of well-informed students with good communications skills so that potential applicants will prefer the classroom experience to the online one. The teaching reputation of a university and the quality of its student body are likely to be its greatest assets as it seeks to navigate in the Digital Age.

Traditional universities will also have to become more entrepreneurial in the use of facilities. The university may have to be transformed into a place where one comes for more than just education. Facilities such as sports, dining and shopping may have to be added in a suitable manner in order to attract more students (and other stakeholders) and derive higher revenues from each square foot of physical space that is available. Modern airports, for example, derive significant revenues from having added shopping and dining facilities.

### **Some concluding remarks**

Corporate and academic leaders will have to incorporate the digital framework into the long-term vision of their enterprises. They will have to motivate staff to work with this framework and accept the changes and challenges that are implied. Most importantly, they will have to become adept at analyzing and using digital data. Every aspect of a large company's future success is linked to the Digital Revolution, whether it relates to marketing and sales (getting information about customers' buying habits and preferences or service quality experience and views) or human resources (gathering and using information about employee skills, work preferences, and work ethics) or finance or innovation.

The Digital Revolution is a game-changer for the corporate and academic world. No one can ignore it. Those who can use digital data, tools and technology well will derive a competitive advantage and improve their chances of survival.