

Effective Leadership for Overcoming ICT Challenges in Higher Education

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Effective Leadership for Overcoming ICT Challenges in Higher Education: What Faculty, Staff and Administrators Can Do to Thrive Amidst the Chaos

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Preface

Information, communication and technology (ICT) in higher education brings new challenges to all stakeholders that include faculty, staff, administrators, students, alumni and the board of trustees. Because the Knowledge 4.0 environment can provide innovative capacities to stressed higher education institutions (HEI), it is vital that its incorporation into the academic culture is effective and lasting. Unfortunately, the very nature of higher education – one that has long ties to tradition and academic values, does not lend itself easily to Knowledge 4.0. Yet, without embracing emerging ICT strategies, higher education risks losing its capacity to serve societies educational needs. This book asks how we, as educators, can shift mindsets, practices, policies, and attitudes in higher education such that we can fully serve society and create lasting change in our continued VUCA environment.

HEIs have long been called upon to manage large amounts of information about their students, programs and structures, embedded in complex digital technology networks and expert technical practices and imagined as “smarter universities.” These complex projects must be thought of in a new architecture of technologies, experts, standards and practices to enable new technologies to be linked to institutions and processes, so that they can significantly transform higher education itself. Against this backdrop, this volume asks the question “How can we effectively lead in higher education if and when we embrace ICT”? The argument that this volume suggests is that effective leadership in HEI requires that stakeholders at all levels and in all roles, be it formal or informal leadership, learn to adapt more quickly and to consider the potential features and benefits of ICT. It is the premise of this book that we cannot succeed unless we work together across all roles in higher education. Only in this way HEI can thrive and serve its faculty, students, and, ultimately, the society at large.

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Chapter 1

Starting Our Conversation

Antonella Carbonaro and Jennifer Moss Breen

1. Introduction

Leading in higher education is becoming more and more complex, leaving many to wonder why they choose to work in the higher education environment. With the increasing reliance upon information and communication technology (ICT) within the higher education institutions (HEI), leadership becomes even more difficult. Despite the multiple benefits afforded to learners using ICT, its innovative use creates unchartered and confusing territory for most HEI leaders. Utilizing the talents of three disparate but intertwined groups including faculty, staff and administrators, HEI seeking to use ICT to reach a broader student pool need to be adept at adaptation. Usually, administrators are charged with formal leadership, faculty are primarily responsible for teaching, scholarly work and service while staff hold diverse supportive roles within most institutions. Despite streamlined job descriptions and roles, research and practice suggest that leadership in HEI is increasingly contested, powers fragmented, and respective groups of agents conflicted. This affects the performance and sustainability of HEI institutions undermining directly research output and teaching excellence. This volume examines how HEI might adapt more quickly to ICT, whether embracing ICT diminishes or enhances learning, and how to lead most effectively within our emerging volatile, uncertain, complex and ambiguous (VUCA) learning environments.

HEIs have long been called upon to manage large amounts of information about their students, programs and structures, embedded in complex digital technology networks and expert technical practices and imagined as “smarter universities.”

These complex projects must be thought of in a new architecture of technologies, experts, standards and practices to enable new technologies to be linked to institutions and processes, so that they can significantly transform higher education itself. Technological skills in artificial intelligence, expert systems, big data,

knowledge representation, distributed and pervasive technologies, open data, smart cities, privacy, security, etc., can contribute.

Against this backdrop, this volume asks the question “How can we effectively lead in higher education if and when we embrace ICT”? (The “we” in this question includes administrators, faculty and staff). The argument that this volume suggests is that effective leadership in HEI requires that stakeholders at all levels and in all roles, be it formal or informal leadership, learn to adapt more quickly and to consider the potential features and benefits of ICT. It is the premise of this book that we cannot succeed unless we work together across all roles in higher education. Only in this way HEI can thrive and serve its faculty, students and, ultimately, the society at large.

2. Chaos in HEI

In a blissful state, HEIs would operate in a state of regularity, equilibrium and stability. Perhaps this was the illusion that led many of us to pursue a career in higher education. Perhaps we envisioned languid days of walking across campus while percolating our upcoming lecture. Perhaps we had dreams of a classroom filled with young minds eager to learn. Perhaps it was the notion of time dedicated to research that drew us into the field alongside the notion of creating new knowledge. In some instances, these jobs and dreams still exist. Unfortunately, however, it has become obvious that HEI has moved well beyond regularity and has moved full throttle into chaos. Higher education has been thrust into the twenty-first century.

We now live in a moment of COVID-19, and we will elaborate upon that later in this chapter. This volume was in production prior to the emergence of our global pandemic. Even without COVID-19, we were already immersed in a state of chaos throughout much of higher education since the new millennium. The addition of the global pandemic has heightened the chaos and will likely change higher education forever. The impact of COVID-19 will take years to understand, and we can only vaguely forecast potential changes to higher education down the road.

So, what is the impact of chaos in higher education? And, how can leaders manage chaos in a manner that not only helps the institution to survive, but thrive? There has been a lot of discussion about the increasing complexity, chaos and disruption of HEI over the past 20 years. Terms like chaos and complexity are often used interchangeably, but they are actually quite different. Organizations function within and among systems. We have healthcare systems, governmental systems, financial systems and educational systems. Each system can be studied and applied both in theory and practice.

Higher education is typically a complex system where mutually interacting sub-units across the system work to create a product, such as an educational program or an educated graduate. In the perfect world, higher education would effectively function within a complex system. Chaos enters the higher education system when the normal patterns of action and decision-making are disturbed. The usual operations of the educational system are disrupted by external, uncertain,

and dynamic factors outside of the control of those within the system. The result of chaos is that the usual patterns of work and the interacting subunits are disturbed. This disturbance, or chaos, impacts organizational communication, outcomes, processes, work functions, and could have a disastrous impact on the creation of the product, such as an educational program or a graduate.

Chaos entered the higher education system with the inclusion several factors including alternative educational delivery models such online education, non-traditional education, increased competition, decreasing student pools and increased costs of education. Students, especially adult learners and those seeking online education, have emerged as highly profitable consumers of education. Yet, their inclusion into the traditional higher education system has created internal chaos. Many higher education organizations, as well as the faculty within them, have resisted the notion of online education as well as technological advances that can create unique and beneficial learning tools that meet the needs of the twenty-first century learner.

3. Leading in Chaos

Leadership is never easy even in systems without chaos (Burns, 2002). Though, 60 years ago, most higher education leaders benefited from regularity, equilibrium and stability. We realize that there have always been challenges and emerging mindsets within higher education. But when compared to the early twenty-first century, the 1960s seem fairly stable. So, how does one lead within a chaotic educational system?

Rost (1991) was clear that leadership is not held only at the highest levels of the organization. Rather, he contended that leaders must exist throughout the organization and at all levels of the organization so that they can bring important information into the system. In times of chaos, where unexpected and unpredictable factors can quickly invade the system, it is essential that leaders in all areas of the organization are embraced for their knowledge and experience that they contribute to organizational decision-making. Not only does leadership take place at all levels of the organization, it is also embedded throughout the organization in terms of organizational purpose and mission. Rost believed that anyone working within an organization who understood the purpose of the organization could provide valuable information that supported the organization, especially in times of chaos.

From a higher education perspective, Rost's message is clear. Faculty, staff and administration must understand the mission and purpose of the organization and that all voices within the institution need to be heard to effectively manage chaos. Unfortunately, this is not how it always goes. For many working in higher education, the bureaucracy has taken hold, and the very structures that were previously used to provide security and regularity can literally blind leadership from seeing the chaos as it emerges and understanding how to address it. HEI can be slow to admit that higher education is changing, rapidly, and that their leadership within the organization must also change.

In a Pollyanna world, higher education leaders, those at the highest levels, would seek input across campus and across all divisions, create systems

for seamless communication to occur, and reinforce the mission of the institution. Rather than the leadership pyramid model, where a few at the “top” of the organization manage the chaos, the organization would be a more circular model, where voices that carry valuable perspective and knowledge could bring important information into the system.

4. COVID-19

Our global pandemic of 2020 creates a prime example of chaos within higher education. So many external variables have impacted the higher education system it is impossible to discuss them all here. We know that campuses across the globe rapidly adapted in-class learning to online learning, sometimes in as little as two days. We know that campuses were closed. Students were sent home. Faculty and staff were displaced from their well-equipped offices to their makeshift work areas at home. Not only was there the fear of the pandemic, there was also the surreal sense of isolation for not only those in higher education, but for most of us across the globe. This is extreme chaos.

The real-time decisions of leaders within higher education dramatically impacted the health and well-being of students, faculty and staff. Daily huddle meetings were held. As this COVID-19 pandemic is still emerging as this chapter is being written, we really don't fully understand the implications of our actions today. Nor will we know how today's decisions will impact the coming years. Nor do we know whether life will ever get back to “normal.” We now live in the petri dish of chaos, and we hope and pray that our leaders adopt the model proposed by Rost rather than leadership models where power and decisions lie at the top of the organization, thereby creating an information vacuum that has the potential to create dangerous blind spots for the institution.

For now, we can only watch, see and pray. For the future, we hope that we can learn from the global pandemic not only about epidemiology but also about the nature of leadership not only in higher education, but across all sectors, so that we can sustain a global society and increase the well-being of all.

5. Overview of the Volume

This volume contains 12 chapters, this chapter included. This collection of chapters tells the story of how we might effectively innovate in chaos by utilizing both human and technological assets. Our authors work across the globe in higher education environments from Russia, Poland, Spain, Italy, Canada, Spain and the United States. In this volume, authors illustrate frailties within HEI and how we might sustain, yes, even thrive, amidst today's chaotic HEI environments. Authors share insights and outcomes of innovative efforts that can be applied across the globe. We provide a brief overview of each chapter below.

Chapter 2 titled “Russian Higher Education: What Does the Future Hold?” by Zoe Shneider, illustrates the cause and outcome of brain drain within HEI. At a time when innovation is more vital than ever, HEI have difficulty recruiting and retaining young talent. Workers who are new to the workplace, especially

those under 30, and who desire to contribute within the HEI setting often become disenchanted with their institution because of its lack of ability to innovate, their lower pay scale and lack of opportunities to advance within the institution. Shneider states

Most universities in Russia base their educational programs on the Soviet structure. But neither the Soviet system nor the contemporary version teaches students to think or to give their own opinions, instead, everyone waits for ready answers. More than that, none of these programs corresponds to real life, and thus they cannot meet the needs of modern society.

We see in this chapter how a National culture impacts the HEI system, and that the long-held cultural beliefs, customs and mindsets can inhibit not only innovation, but also the ability to foster new talent within the HEI sector.

Taking a different view on innovation in their chapter “Online Education for Students Living at the Margins: One US University’s Outreach,” Gretchen Oltman and Martha Habash share an example of educational innovation from a more humanistic view. Both working in a US Jesuit institution, promoting social justice is the primary mission of these faculty. In Chapter 3, we see a unique initiative where online learning is delivered to students on the margins. Through the Jesuit Worldwide Learning network, undergraduate leadership majors from abroad and who were forcibly displaced were selected as scholarship recipients to complete their bachelor’s degree at Creighton University in Omaha, NE, in an online learning environment. They walk us through the story of the creation of this initiative, the challenges faced along the way, and the outcomes achieved for students. Moving an institution online is difficult and working in areas where technology lags far behind creates a new set of challenges. By linking together marginalized students with those with all the rights held within the United States, students gained a unique and powerful learning experience that broadened their global mindset. Oltman and Habash shared that students at the margins were able to earn a degree that may otherwise be unattainable and that their learning peers, those in the United States, learned much more than they might have if they had been in the traditional classroom.

Krzysztof Kozlowski, in our fourth chapter “Caught in Between: Managing Students and Teaching Affairs in University in Transition” discusses the need for faculty and students to work effectively together, build community, and explore cultural, social and economic realities surrounding them. While these engaging discussions can create worthwhile outcomes, Kozlowski shares that often the well-intended interactions fall short of expectations. He elaborates that disparate goals between these two groups and the additional intertwining of stakeholders outside of HEI such as employers, parents and other influencers can decrease the effectiveness collaborative work across the institution.

Perhaps as an answer to Kozlowski’s chapter, Chapter 5, “Overcoming Chaos by Applying Constructive Controversy into the ICT-conscious Institution,” Jennifer Moss Breen shares a unique model that has the opportunity to instill an

innovative mind set across HEI. Her premise that by using a learning model called constructive controversy, not only can innovation occur but also can occur even among those who bring differing goals and biases to the table. We know that diverse teams, those that include faculty, administration, staff and students from across campus, can create the best solutions for the institution. Challenges arise when that diversity creates confusion, disparate ideas and goals, and misunderstandings that can halt projects in their tracks. Moss Breen illustrates a process of constructive controversy that allows diverse teams to work together toward optimal decisions and innovative solutions in today's complex HEI environment.

Rob Elkington in Chapter 6 "E-Leadership as an Enabling Function for Technology-enriched Learning" discusses Industry 4.0 amidst the COVID-19 global pandemic. His thesis is that while the pandemic increases the need for effective E-leadership and E-learning, Industry 4.0 was already headed in that direction. Elkington calls for HEI leadership and IT innovators to assemble to recreate learning that meets the needs of today's learners. By developing and embracing E-leadership, Elkington makes the case that HEI can bring all stakeholders together to improve HEI and help move it into the next century.

Continuing in this line of thinking are Mohan Tanniru and Jesús Peral in their chapter "Digital Leadership in Education," Chapter 7, create a model of service-driven learning that meets not only student needs but also the needs of the broader society. By creating experiential, student-centered learning through digital leadership in higher education, they make the case that digital leadership can exponentially create value in society. They utilize prominent knowledge frameworks and integrate them with technology in support of learning to not only create knowledge but also capture it in the HEI learning environment.

In Chapter 8 "VUCA Learning-environments Demand Complex Data and Knowledge Management," Antonella Carbonaro creates a model that addresses the need for stronger connections between leaders, ICT and HES in today's VUCA learning environments. Similar to Elkington's chapter, Carbonaro is calling for HEI to devote more time and energy to equipping HEI to innovate and improve learning across the board. Through her work as an engineer, Carbonaro is able to use linked data and semantic web theories to create a tool that optimizes the higher education environment so that decisions can be made based upon data rather than guess work and customs in our increasingly complex learning environments and cultural contexts.

Four authors collaborated to craft Chapter 9 "Faculty Leadership in Learning Environments Based on Free Access to Information on the Internet." In this chapter, Raquel Pérez-delHoyo, Higinio Mora, Pablo Martí and Rafael Mollá-Sirvent link pedagogy with technology in an open-source learning environment. ICT has become prevalent in HEI, but stronger linkages are needed between learning models, pedagogy and technology. Built from an engineering lens, this chapter shares a process through which faculty can use something we have, free access to the internet, to create learning, that is, meaningful and grounded in sound pedagogical practices.

Chapter 10, by Dr Balázs Sárvári, entitled "The ICT-paradox: Chances and Barriers for Modernization in Higher Education Institutions," focuses upon the

role of modern ICT on leadership practices in HEI. In this chapter, Sárvári shares the literature about educational technology and leadership styles and focuses on the related practices of Hungarian universities based on government strategies, scientific sources and six interviews with Vice Rectors of Education and an expert of that field. He also discusses the presence of external actors in governance at academic institutions is limited by the technological rigidity of embedded actors. Recommendation includes compiling institutional-level ICT strategies with national and international documents and a guaranteed mandate of “IT leaders” in the top management of HEIs.

Chapter 11, written by Dr Christ Heasley entitled “More than a Data Point: Validating Authentic Identities through ICT-conscious Practices,” shares an interesting perspective on the validating authentic identities through ICT-conscious practices in higher education. Using social construction theory and the theory of intersectionality as theoretical frameworks, Dr Heasley illustrates how universities and colleges might adapt data management strategies such that student identities are captured more accurately. Only when institutions understand the true nature of their student body can they begin to authentically serve student learning needs and cultural expectations. Using meta-analytic techniques as well as personal narratives from marginalized individuals, Heasley creates a new picture of how universities and colleges might adapt data collection and management strategies with the ultimate goal of making every student “visible.”

Finally, Chapter 12, our closing chapter, by our editors Antonello Carbonaro and Jennifer Moss Breen entitled “Moving from Chaos to Clarity in an ICT-conscious Institution: A Final Word,” shares a way forward through the use of adaptive leadership and adaptive learning. Our hope is that the ideas shared in this volume can launch new initiatives that bring ICT more directly into alignment in HEI environments.

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