Emerging Issues in Higher Education Leadership: Results from Round 1 of a Global Delphi Survey

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Abstract

This chapter focuses on the emerging issues facing the leadership of Higher Educational Institutions (HEI) globally. The reader is alerted to the fact that many of these issues are emerging in the 21st century due to the impact of the Fourth Industrial Revolution (4IR). A brief description of the 4IR is rendered to highlight the intersection of HEI leadership and the impact of this emerging new 4IR context. The chapter probes the issues facing the leadership of HEI through a robust literature review and the results of a first round Lockean Delphi survey of HE leaders in several countries such as Canada, the USA, and South Africa. The Delphi survey highlights four issues facing HE leadership, followed by suggestions for the second round Delphi survey to probe these four issues further.

Keywords: Higher Educational Institution (HEI), leadership, Fourth Industrial Revolution (4IR), Delphi survey, globalization, gender equity, racial equity, mentorship, e-leadership, funding

1 Introduction

Scholars suggest that we have entered the Fourth Industrial Revolution (4IR) and the impact of this revolution on society in general, and education, particularly are topics under in-depth analysis (Bonciu 2017a; Bonciu 2017b Chung 2017; Fonseca 2018; Kodama 2018; Zucconi 2016). This detailed analysis is no less acute, concerning our need to examine the type of leadership needed by higher education institutions (HEIs) to survive and thrive in this emerging context of the 4IR in which we see the integration of the real world

(the physical world), with the biological world (particularly with humanity), and with the digital world (the virtual world) (Bonciu 2017a; Fonseca 2018; Panchak 2016). What type of leadership might be optimal for HEIs to ensure that faculty and students are equipped to address the emerging issues arising from the emerging 4IR context? Our research seeks to answer the question of the best leadership style for higher education (HE) in 4IR settings through iterations of Delphi surveys probing: 'what issues are emerging in higher education as weak signals that might require adaptation or change on the part of higher education leadership?'

2 Method of Research: Lockean IS Delphi Survey

In the first phase of our research, we seek to answer this question, 'what issues are emerging in higher education as weak signals that might require adaptation or change on the part of higher education leadership', by reporting on the Delphi survey responses of thirty-one HE leaders. We attempted to survey a global sampling of HE leadership, but as the details in our table of respondents highlight, we could not secure responses from a range of countries. We hypothesize that this might be due to language barriers, a lack of time to respond due to the demands of leading in a global pandemic, or a lack of interest.

With so many contextual, cultural, and personal factors that could contribute to leadership in HE, and thus effective leadership development, we attempted to gain a 'snapshot' of the key issues challenging HE leadership within the current context. This 'snapshot' approach is best afforded by a Delphi survey as the Delphi presents a holographic-type image of the complex whole (Bowen 2009; Jain & Sharma 2005). The Delphi survey was developed in the 1950's by the American military to assess the maximum nuclear payload required to serve as a deterrent to any Russian nuclear threat. This initial study was known as the 'Rand' study, and it brought together several experts in the field. These experts responded to a series of iterative surveys until a point of consensus was reached concerning the correct level of nuclear payload to serve as a deterrent to the Soviet Union.

There are five different types of Delphi methodologies (Linston & Turoff 2002). Each type of Delphi method encompasses a different philosophical model or system. The particular Delphi Inquiring System, or methodology, that we used for this study into emerging issues in HE leadership was the Lockean Inquiring System. The Lockean IS is described as follows:

In brief, Lockean IS are the epitome of experimental, consensual systems. On any problem they will build an empirical, inductive representation of it. They start from a set of elementary empirical judgements ('raw data', observations, sensations) and from these build up a network of ever expanding, increasingly more general networks of factual propositions. A typical Lockean point of view is the assertion that one doesn't need any theory in order to collect data first, only to analyze it subsequently (Linstone & Turoff 2002: 20).

This Lockean IS Delphi approach for this particular research project has the strength of its 'ability to sweep in rich sources of experiential data'. The weaknesses, on the other hand, are those that beset all empirical systems. While experience is undoubtedly rich, it can also be extremely fallible and misleading (Linstone & Turoff 2002: 22).

3 Our Survey Within the Context of the Fourth Industrial Revolution (4IR)

The 4IR is briefly described as,

… based on the connection of everything. [The] Keywords are 'automation' and 'connectivity. In other words, the fourth industrial revolution is an industrial revolution created by ICT convergence which are IoT (Intemet of Things), AI (Artificial Intelligence), Robot, Mobile, 3D Printer, Unmanned Vehicle, Drones, Nano and Biotechnology, Materials Science, Quantum Computer. The Hyper-connect revolution in which everything, people, things, space, everything connected and interacted, emerged as a new future paradigm. The scope of the connection has become possible from the 'IoT' to the 'IoE', and the 'offline' connection and intelligent IoE (Chung 2017).

With this understanding of the 4IR as a backdrop, we reached out to HE leaders in Western countries concerning their perceptions of issues emerging for HE leadership within this 4IR context. It seems evident that HEIs might be interested in understanding the symbiosis between the physical, biological, and digital entities and how the intersection of these might shape the learners of today for the reality of tomorrow (Kern 2017). A leadership question

emerging for HEIs in this new 4IR context might be: 'Are the programs, methods, and delivery platforms currently deployed by higher education institutions relevant to the emerging 4IR?' (Zucconi 2016). This question of relevance is primarily a leadership question. The question of relevance relates to leadership if, for instance, we espouse Greenleaf's Servant Leadership approach that contends that it is the ethical responsibility of the leadership of an organization to anticipate the future challenges that might undermine the health or sustainability of the organisation (Spears & Lawrence 2004).

As one theorist suggests, effective leadership is highly conceptual. This conceptual dimension of leadership possesses the capacity to understand where an organization is currently and where it needs to be in the emerging future (Katz 1955). With Katz's framework in mind and with the emerging 4IR as an overarching context, we framed our first Delphi question to read: 'What issues do you see emerging in the next three to ten years that are critical to higher education leadership?'.

At the outset, we thus distinguish between the HE leader and HE leadership (Dalakoura 2010). We, therefore, recognise the *leader,* which focuses on human capital, and *leadership* which focuses on social capital within the HEI (Grandy & Holton 2013; Vardiman 2006). The notion of 'leader' describes the leadership capacity of an individual by incorporating elements such as the self-awareness, self-regulation and self-motivation of an individual. The term 'leadership', on the other hand, seeks to promote an organisational culture in which leadership processes and emergence are fostered and supported and in which leadership can emerge from surprising places and in unusual circumstances, such as the liminality we encounter in 4IR contexts (Vardiman *et al.* 2006).

Before we launched the Delphi Survey, we scanned the literature to gain insight into emerging issues in HE leadership. We share the results of the literature survey in the next section.

4 A Review of the Literature
4.1 Issues Facing Higher Education Leadership – Overview
Leadership is of considerable interest in contemporary scholarship on education administration, and this interest has increased over the last few decades (Alonderiene & Majauskaite 2016; Eacott 2012). Effective leadership is perceived as the critical difference between success and failure for most

organisations, and this is no less true of the HEI. However, according to Hornsby *et al.* (2011: 97),

> ... higher education is ill-prepared to navigate the pace and significance of change in the 21st century. Leaders are pulled from among the faculty who generally resist being led anywhere; leading faculty is often referred to as herding cats and faculty training often does not provide support for those thrust into leadership roles.

In many organisations, there seems to exist a mistaken belief that because a person has technical expertise in a specific area, that technical expertise will automatically translate to leadership effectiveness. The skills approach to leadership (Northouse 2018: 56) highlights that individual attributes such as 'general cognitive ability, crystallized cognitive ability, motivation, and personality' are only one piece of a larger leadership skillset that must also include competencies such as 'problem-solving skills, social judgment skills, and knowledge'. It is difficult to determine if the practice of selecting leaders from amongst faculty further exacerbates the issues in HE leadership because faculty members are not always trained for leadership, or if these issues exist because of the powerful contextual drivers of the 4IR intersecting education institutions designed to function in the 2IR and 3IR. A summary of the leadership issues confronting HEIs as identified in the literature is presented in Table 1. We label these issues or problems as either 'Tame', 'Critical', or 'Wicked', as per Grint's taxonomy of problems – see Figure 1 below (Grint 2005). When analysing Grint's taxonomy, it is helpful to note the different leadership approaches suggested by the level or degree of complexity and severity of the problem.

When organizations face critical problems, the level of leadership is relatively mundane, requiring a command and control function. In this range, the leadership assesses the nature of the problem and then provides answers or solutions to the problems confronting the team or the organization. As one moves along the continuum in Grint's taxonomy, one is confronted by 'Tame' more complex problems. The leadership can invoke the traditional linear calculative rational decision-making model. When addressing Tame problems, the role of leadership is to develop *processes* that mitigate the expansion of the problem and address the systemic and root causes of the problem in ways that provide for organizational progress and health.
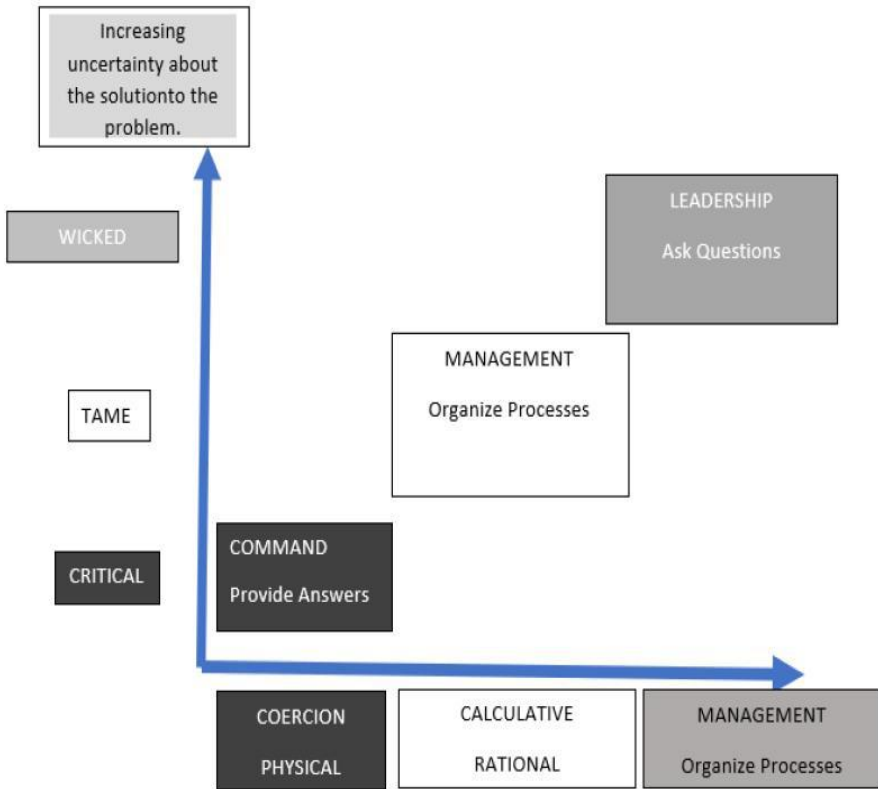
Figure 1. Grint's Taxonomy of Problems and the Social Construction of Leadership

However, when one confronts Wicked problems, problems that have no evident solution and are often vast in scope and highly complex, the role of leadership is not to provide answers. Rather, when confronting Wicked problems, leaders must design organizational contexts in which agile and collaborative problem-solving and decision-making can occur. When facing Wicked problems, leaders are not called upon to provide the right answers or the right solutions. In these 'Wicked problem' situations leaders are called upon to have the wisdom to ask the right questions – questions that open the door for creative engagement through the use of intentional critical thinking, the scraping and visualisation of big data, and the capacity to include a wide

range of diverse stakeholders who have the freedom to voice their perspectives, ideas, and findings (Schrage 2017).

In Table 1 the issues and challenges currently facing HE leadership, as identified in the literature, are listed and assigned a value of 'Critical', 'Tame', or 'Wicked'.

It is interesting to note that the first three of these issues, globalization, status-quo thinking, and e-leadership, relate directly to the 4IR.

Table 1: Issues and Challenges Currently Facing Higher Education Leadership

PROBLEM	DESCRIPTION	CRITICAL, TAME, or WICKED
Globalization (Goddard 2015)	The rapid and massive movement of people around the world exposing countries to new cultures, practices, and economies.	A Tame problem in that management needs to organise processes to support international students while also developing Cultural Intelligence as a skill amongst faculty members.
Status Quo Thinking (Dervitsiotis 2005; English & Ehrich 2015)	The incapacity of higher education leadership to develop agility to address turbulent contexts.	A Tame problem in that this challenge can be addressed through effective leadership selection and development.
E-Leadership (Jameson 2013)	The need to bridge between education technology and leadership. There is a gap in the research into the type and process of leadership needed for e-learning contexts.	A Tame problem in that this challenge can be addressed through further research into e-leadership and the outcomes of that research integrated into current e-leadership contexts.

Mentorship (Grogan & Crow 2004)	The need to formalise and standardise the mentorship process as well as to find effective mechanisms for mentorship that empower new leadership, rather than entrenching the old ways.	A Tame problem that can be addressed through further research into best practices and the implementation of those practices for effective mentorship of new leadership.
Gender Equity (Fitzgerald 2003; Hornsby *et al.* 2011; Killingsworth *et al.* 2010)	The need to identify the impact of bias, and the cultural hegemony of male-dominated leadership, and the infiltration of this bias and hegemony into leadership development, as well as access to leadership opportunities.	Critical problem that can be addressed in a systemic way through effective leadership policy and interventions (Young *et al.* 2006).
Racial Equity (Fitzgerald 2003; Rusch 2004, Skerrett 2011)	The lack of racial integration and the lack of representation within higher education leadership is clear (Fitzgerald 2003; Rusch 2004). Some researchers suggest that the historical trajectory actually places higher education leadership and education policy in a mono-cultural paradigm that seeks standardisation as a supposed protection of high education standards (Skerrett 2011).	Wicked problem, potentially, since racism is a wider societal problem that is carried into the education context. Societal bias and governmental policy changes might be required to address this issue.

Funding (Andrews *et al.* 2016; Davis *et al.* 2015; Jameson 2013; Jusoh *et al 2015*; Kalinski *et al.* 2015; Kezar & Lester 2009).	As the global economy slows, and as 4IR changes the face of work, the delivery models of education, traditional mechanisms and sources of funding are under strain.	A Wicked problem since the trajectory of funding difficulty seems set within the current context and will only worsen as time progresses. There is a need for innovative thinking around delivery models, pricing, and many of the 'extra' or 'hidden' costs associated with higher education.

2.2 The Issue of 'Status Quo' Thinking or Inertia in a Volatility, Uncertainty, Complexity, Ambiguity (VUCA) Context

Higher education leadership is not immune to the forces of *Terra Incognitae* (Lagadec 2009) and *vu jádè* (Day & Harrison 2007). These terms, though used to describe the challenges facing government and business leadership, are no less appropriate for HE leadership. *Terra Incognitae,* as used by Lagadec (2009), refers to the notion that we are in uncharted territory, a world un-known. *Vu jádè*, as used by Day and Harrison (2007), refers to the sense that many in leadership feel that they have 'never been here before' and that they are traversing new and uncharted territory for which there exists no map or guideposts. These unstable environments call for a different style of leadership within HE. As one author so incisively asserts (Dervitsiotis 2005):

> As a living system, a human organization evolves over time as a continually adaptive system. It is only with this mental 'lens' that we can make sense of and appreciate the strong interactions and emotional energy that a new meaning may release in individuals or teams in the workplace. Traditional leadership's usual response to 'hold things steady' trying to maintain the same strategy in periods of rapid change can be disastrous.

The notion that holding things steady in this period of rapid change might

prove disastrous is also true for the leadership of HEIs (English & Ehrich 2015). Status quo thinking, inaction in the face of globalization and the incapacity to adjust to the positive and challenging dimensions of functioning in a globalized context is just some of the challenges that leadership of HEIs face (Goddard 2010 2015). This status quo thinking in the face of globalization is further challenged by 'VUCA' (Bolman & Deal 2015; Das & Ara 2014; Drucker 2013; Halamka 2011; Hood 2015; Moore 2014). VUCA stands for 'Volatility, Uncertainty, Complexity, Ambiguity'. A great deal has been written about the type of leadership needed to thrive in a VUCA world (Bawany 2016; Bolman & Deal 2015; Das & Ara 2014). Many of the skillsets and mindsets that are suggested for business and military leadership may be transferable to education leadership. VUCA is a reality for every organisation in the 21st century, and HE leadership needs to be aware of its presence and its antidote known as 'VUCA prime' (Lawrence 2013).

4.3 The Issue of Globalization

The impact of globalization is being felt by organizations in every sector, and especially those involved in education leadership (Goddard 2015). Globalization has resulted in the increased complexity of the leadership role in the HE environment (Drew 2010). While the context in which HEIs must function has changed dramatically in the face of globalization and VUCA, the leadership of those institutions may lack the agility necessary to adapt to the imposing challenges of globalization and of VUCA (English & Ehrich 2015). It seems plausible then that there are multiple issues and problems that confront the leadership of HEIs. One way of identifying some of the emerging issues arising from globalization and VUCA is through alertness to 'weak signals' (Lagadec 2009). As Mack (2015: 45) suggests:

> The search for weak signals, properly done, can enhance one's ability to spot problems early, share them with allies, and extend the senses of the organization beyond organizational boundaries. Locating leading edges of developments or warning early enough is critical. That means calling attention to developing trends neither too late nor too soon, as too late does no one much good (like yesterday's news) and comes close to embracing 'conventional wisdom', while too soon can also be problematic, with an overly visionary leadership team

ending up too far ahead of other stakeholders and accordingly out of connection with 'real world' dynamics.

It is this search for these weak signals in HE leadership that informs our research and is further discussed in the 'methods' section of this paper. To quote Mack (2015: 45) again:

The reader might notice the use of the phrase 'leadership team', because I want to strongly reinforce that the search for weak signals simply cannot yield useful results as the exercise of a single visionary leader or analyst. It must be a team effort and ideally a community effort, involving coordinated work among concerned and relevant stakeholders to yield viable results over the longer term. As such, the broader the search process and the greater the number of scanning participants, the higher the chances of yielding relevant and useful data.

2.4 The Issue of Mentorship

Mentorship is valuable as a leadership development tool within HE settings (Sheridan *et al.* 2015).

It is suggested that individuals within HEIs that receive mentorship have greater satisfaction in the workplace and clearer direction for scholarly endeavours, which in turn contributes to higher levels of engagement, retention, and recruitment (Sheridan *et al.* 2015). Mentorship is also beneficial to support networking and socialization for minority faculty moving towards leadership in HEIs (Sheridan *et al.* 2015). However, with these benefits in mind, there is also a concern that in the mentoring process, atrophy is passed from experienced leadership to emerging leadership, or as Grogan and Crow (2004: 463) refer to it: ''Old Wine in New Bottles'. There is also a need to formalize and standardize the mentorship process within HEIs (Grogan & Crow 2004; Johnson & Ridley 2008).

Mentorship is perceived in most sectors as beneficial to the develop-ment of talent and an attribute of effective leadership (Reyes *et al.* 2014; Schafer 2009). Effective mentorship is a challenge within HE leadership, both in terms of its process (how to do it) and in terms of its purpose, including the need to ensure that we do not impose old and outdated experience onto new

leadership emerging into new contexts (Grint 2007).

2.5 The Issue of Gender Equity

Tied to the question of mentorship and succession planning, both of which affect women leadership in general, and women leaders in HE in particular (Gipson *et al.* 2017; Shields & Cassada 2016), is the looming issue of gender equity within HE leadership which emerges as a universal and global problem (Fitzgerald 2003; Hornsby *et al.* 2011). Fitzgerald (2003) highlights three ways in which gender equity manifests itself in HE leadership. The first domain or 'gender script' (2002: 56), refers to studies that provide demographic data and explore characteristics, attitudes, opinions and perceptions of selected issues. These data contribute to an understanding of the broader socio-political environment in which women as leaders operate as a numerical minority.

The second domain offers explanations of career patterns and issues related to career aspirations, access to leadership opportunities, employment strategies, mentoring, professional barriers, retention and experiences of women leaders. Arguably, the central focus of these studies is the way in which women leaders face occupational and professional challenges and can be termed 'discourses of opportunity'. That is, the achievement of women in acquiring and exercising leadership positions is related to opportunities of access and personal or professional strategies.

The final domain encompasses a wide range of inquiry that seeks to understand the nature of the various education, managerial and political roles and draws attention to issues of power, visibility, collaboration, conflict and change management. In subliminal and subtle ways, this literature provides a relief map of women's ways of knowing and leading and furthermore charts ways in which women inevitably exercise leadership in schools.

Some HE researchers suggest that gender inequity is subsumed in education leadership preparation and that opportunities for students to facilitate discussions regarding gender inequity need to be provided (Killingsworth *et al.* 2010).

In a bid to address gender inequity within HE leadership, Ohio State University created the President and Provosts Leadership Institute (PPLI) to develop a pool of women and underrepresented minority Faculty members who might move into leadership positions (Hornsby *et al.* 2011). The results of this initiative present a dualistic tension. Namely, women leaders emerged from the

program ready to lead and took up administrative leadership; however, limited or no positions were available. As respondents to the post-PPLI training stated (Hornsby *et al.* 2011):

> I don't think I will [have a leadership opportunity] unless I move to another position somewhere else... there is no opportunity on campus, and I do not think our leaders recognize the amount of learning an individual has [achieved] as a result of this program.

Another said,

> This is a negative issue for me. I am now focusing on my research, so I can pursue a leadership role at another institution.

A third participant expressed surprise, in a private conversation, at having no leadership opportunities offered to her. The focus group discussions noted that deans do not always know what skills the PPLI graduate has and that the University does not leverage the graduates to the extent that it could.

It seems that within HE leadership, gender equity faces issues of inherent bias that permeates the messaging and training of women for leadership and access to leadership positions for women within HEIs. This is not just a North American phenomenon – it is a global issue (Sperandio 2010). Transformational learning around the issues of gender and leadership needs to occur at various levels as an intentional intervention if this problem is to be addressed and ultimately leveraged for HE leadership to thrive (Young *et al.* 2006).

2.6 *The Issue of Racial Equity*

Closely tied to the issue of gender equity within HE leadership is another issue of diversity and leadership, namely the inequity of racial integration and the lack of multi-ethnic representation within HE leadership (Fitzgerald 2003; Rusch 2004). Some researchers suggest that the historical trajectory places HE leadership and education policy in a mono-cultural paradigm that seeks standardization as the supposed protection of high education standards (Skerrett 2011). Longstanding stereotypes further supported this mono-cultural paradigm developed early on in the education process and perpetuated, sometimes unconsciously, in the structure of HE leadership choices and HE leadership

structures (Fitzgerald 2003; Niesche & Keddie 2011; Ward 2013). It is useful when thinking about gender inequity and racial inequity within HE leadership to grasp the nuances and layers of this type of discrimination within many HEIs globally. Women are disadvantaged compared to their male counterparts, but then it appears that women who are not of the preferred racial grouping are even further disadvantaged to take on formal leadership roles within HEIs. The privilege in North America, for example, might thus be constructed as white male first, white female second, non-white male third, non-white female fourth with the representation of each stratum in leadership lessening along the trajectory from white male to non-white female (Fitzgerald 2003).

Racism is a construct that is still deeply embedded in countries worldwide, and its effect is manifest across many domains in society. It appears that HE leadership selection is not immune to racism, and so it was surprising that it did not emerge as an issue in the first round Delphi survey. We do not think this means that gender and racial equity within HE leadership have been achieved. Instead, perhaps, it might reflect how we framed the question for the Delphi: *What are the emerging issues confronting higher education leadership in the next three to ten years?* Since gender bias and racial bias are positioned as longstanding and ongoing issues, the respondents possibly felt that these two issues fell outside the range of 'emerging issues … in the next three to ten years.

2.7 The Issue of E-Leadership

Current HE leadership continually evolves around the advance of technology, and this evolution leads to another challenge confronting the leadership of HEIs, namely e-leadership (Jameson 2013). Jameson suggests that as part of a natural progression of education technology research, considerably more attention needs to be focused on research and development in e-leadership and the related fields of e-Management and e-Governance applied to education technology. What type of leadership is best suited to facilitate e-leadership? It appears that e-Leadership poses a significant challenge and that more empirical research into effective modalities of e-leadership is needed.

2.8 The Issue of Funding

Funding for HEIs is under stress globally. In the author's home province of

Ontario, funding to HEIs has been cut by 10% (Jones 2019). Funding for HEIs is uncertain (Davis *et al.* 2015) since governments change, and so do funding priorities. So too globalization and the interconnectedness of geopolitical factors upon HE funding have an impact on the sustainability of these institutions. Take, for instance, the result of President Trump's visa policies upon foreign student enrolment in the USA (Silman 2020) or Canada's recent diplomatic falling out with Saudi Arabia and the Saudi withdrawal of over eight thousand students from universities and colleges across Canada (Chase 2018). No less poignant is the recent impact of student activism upon funding for South African universities in the 'Fees Must Fall', movement, the activism alone costing universities in the tens of millions of dollars (South African currency = Rand) (Fihlani 2019). The pressure to attract and retain students in HE programmes is intense as funding issues become more and more acute, and students also advocate better quality education for a lower cost (Kalinski *et al.* 2015).

Having reviewed the literature around issues emerging in HE leadership, we now turn to the empirical research conducted through a Lockean Delphi survey of thirty-one (n=31) HE leaders in several countries such as Canada, the USA, and South Africa.

3 Research Objectives and Methodology

The main research question of this study was as follows: *What are the emerging issues higher education leadership is likely to confront in the next three to ten years?*

The objective of this research was to understand the HE leadership's sense or perception of the challenges and issues likely to emerge in the next three to ten years. In a bid to assess HE leadership's understanding of the emerging issues confronting HE, a Lockean Delphi survey approach was adopted for this study. As discussed in the methods section previously, Delphi surveys have been used extensively for research that seeks to understand experts' perceptions of potential futures and so fit well as a method of choice for this study (Keeney *et al.* 2006; Morgan *et al.* 2013; Ouariachi *et al.* 2018; Skulmoski *et al* 2007; St. Pierre *et al.* 2006; Wilson & Moffat 2010).

This study aimed to gain a broad and global perspective on emerging issues confronting HE leadership within the context of 4IR. The research fell short of achieving a global perspective because of the lack of response from

HE leaders from Asian and Eurasian countries as well as South American countries. It might be that language, culture, and context impacted the response rate from these countries.

As a first step in the research process, we sought in this chapter to identify current problems and challenges facing HE leadership from the existing literature.

We then explored HE leadership's perceptions of emerging challenges through the instrument of a Delphi survey (Hasson *et al.* 2000; Skulmoski *et al.* 2007; Wilson & Moffat 2010).

The research question: '*What are the emerging issues confronting higher education leadership in the next three to ten years?'* was sent to over three hundred HE leaders around the world.

These leaders ranged from institutional Presidents and Vice Presidents, Deans, Associate Deans, and Faculty Chairs. The response rate of 10% (n=31) is said to be typical for a Delphi survey, and while this may appear to be a low response from participants, the evidence suggests that Delphi surveys seem to garner around a 10% response rate (Cole *et al.* 2013). Due to the respondent's need to qualify as experts in the subject matter under review, it is helpful to note that Delphi surveys, therefore, reach out to a smaller pool of respondents (Albertson & Cutler 1976). Some useful Delphi studies used only a 60 person expert panel, and there are Delphi studies whose respondent pool has been as low as 15 persons (Hasson *et al.* 2000). The authors using such low survey numbers did so because the experts were so specialised that securing respondents was challenging, and the high level of response required meant that a smaller pool would still render a rich data yield (Keeney *et al.* 2006). How then did our 31 experts respond to the question: '*What are the emerging issues confronting higher education leadership in the next three to ten years?'* Their responses are detailed for the reader in the following paragraphs.

4 Findings
4.1 Participant Profile
A sample of 31 participants (n=31) from around the world responded to the e-mail invitation to participate in the Delphi survey. Over 300 invitations were sent out; therefore, our Delphi response rate was about 10%. Table 2 indicates the profile of the respondents by gender and country of residence:

Table 2: Participant Profile

Number of Participants	Country of Residence	Gender
3	Australia	Male = 3
7	Canada	Female = 5 Male = 2
1	Kenya	Female = 1
11	South Africa	Female = 3 Male = 8
1	United Kingdom	Male = 1
5	United States of America	Female = 2 Male = 3
3	Unknown	Female = 3

4.2 Analysis of Results

Once responses were received from the 31 participants from the above countries, and a substantial amount of time has elapsed with no further replies after the second round of invitations, the survey was closed, and the process of open and axial coding proceeded.

This open and axial coding resulted in four key areas of concern for HE leadership: Relevance, Funding, Leadership, and Student Quality. We highlight the density of certain themes or emerging issues as 'n=number *occurrences*' in our discussion of the emerging issues below.

These four key areas are further defined by sub-issues, as evidenced in Figure 2, as articulated by the Delphi Respondents. We present these emerging issues in Figure 2 and in the paragraphs following Figure 2 below).

Open coding is 'the initial coding that takes place in a research project' (Coe *et al*. 2017: 104). In open coding, the data is broken down, examined, compared, conceptualised and categorised to generate an emerging set of categories and their properties (Coe *et al*. 2017). In open coding, we attempted to break the data into distinct sets of meaning by Analysing the text line by line for emerging units of data that represent some more general phenomenon (Goulding 2002). Concerning open coding, we used the digital tool Dedoose®. Dedoose® enables the user to facilitate open coding rapidly with the advantage of linked Memos and the automatic emergence of critical themes as these are

highlighted and labelled. Patterns begin to appear within Dedoose® when the researcher identifies commonly occurring ideas.
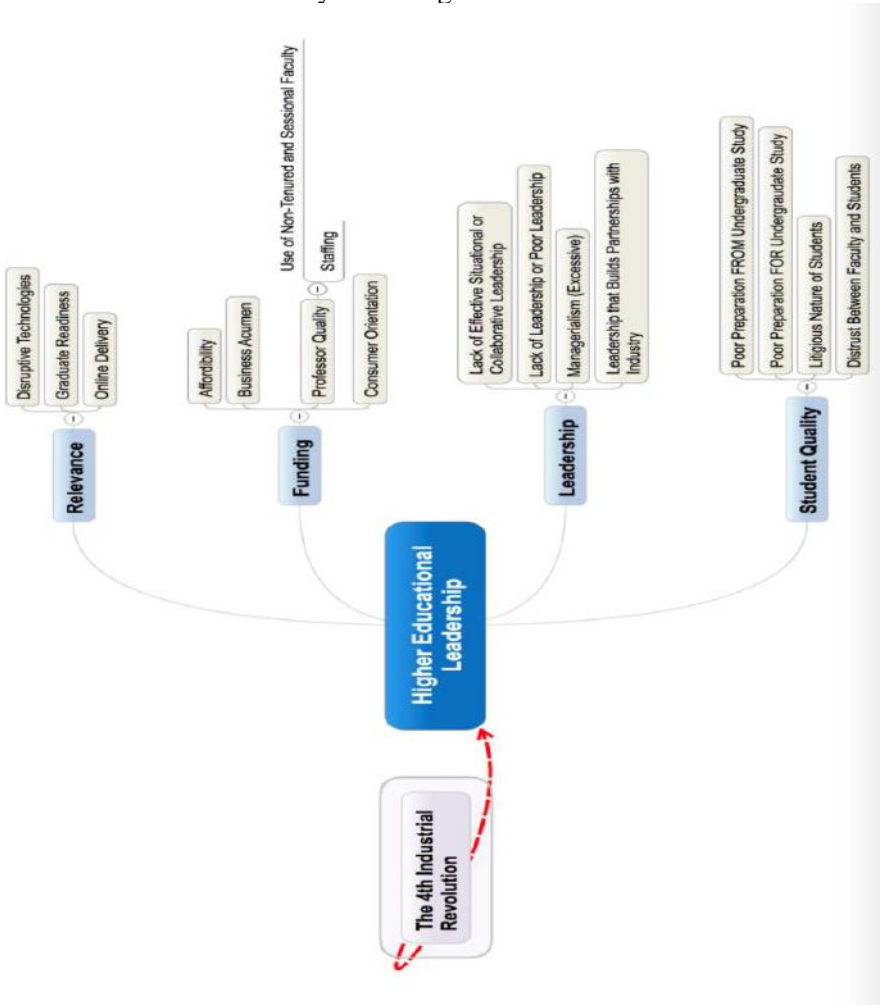

Figure 2: Mind Map of Delphi Survey Findings

In the coding process seven memos were drafted highlighting and discussing the key themes of, 'Developing Academics into Leaders', and,

'Facilitative or Open Leadership', as well as, 'Managerialism', 'Funding', 'Student Quality', 'Graduateness', and '4th Industrial Revolution'. These memos were helpful in the open coding process as critical themes began to emerge from the data and openness to the data's direction meant capturing these themes in a way that they could be returned to and reflected upon as the open coding process progressed (Goulding 2002). Another useful tool that assisted in abstracting the data emerging from the open coding is the word cloud feature in Dedoose®.

Once the open coding reached a level of saturation, the next stage was axial coding (Coe *et al.* 2017). In axial coding, we attempted to refine and differentiate the categories resulting from open coding in which we linked subcategories to a category (Klenke 2016). In axial coding, we attempted to identify the properties of a category and its different but related dimensions (Given 2012). The computer-assisted qualitative data analysis software (CAQDAS) Dedoose® was helpful in the axial coding process because of the clear organization of themes and the ease with which sub-themes could be linked to the main themes within Dedoose®.

Major Issue #1: Leadership (21 Occurrences)

It is interesting to note that in a research project focused on emerging issues in HE leadership, it is 'leadership' that emerges as the number one issue confronting HE leaders. Four key themes emerged from the Delphi analysis:

1. Effective situational or collaborative leadership (6 occurrences).
2. A lack of leadership or poor leadership (6 occurrences).
3. Leadership that partners cross-sectorally (i.e. with industry and agriculture – 4 occurrences).
4. Managerialism or 'excessive managerialism' (5 occurrences).

It seems that the leadership of HEIs is perceived by the followers (those being led), or by those participating in the leadership processes, as lacking leadership capacity and skill in the four areas indicated above. One wonders if the emerging context of 4IR and the rapid changes this new sociological phenomenon brings with it is part of several forces that create a perception of leadership incapacity for leaders who find themselves leading in *Terra incognita* (Lagadec 2009).

It is also noteworthy that respondents articulated leadership deficiencies from what appears to be a 'deficit' mindset rather than from a 'positive' or 'growth' mindset. Is it possible that this deficit mindset highlights expectations that followers or co-leadership have that are not being met, as opposed to a sense that HE leaders are doing well, but could improve in certain areas? For instance, one respondent stated, 'we need leadership that is open to critical thinking and debate'. Another respondent said, 'we need leadership that collaborates with other universities rather than competes'. Yet another respondent suggested, 'we need effective leadership (department, faculty and institution-wide)' and a similar response that stated, 'there are limitations on effective management'.

It seems significant that throughout the range of responses, there prevails a sense of the lack of effective leadership expressed either in deficit terms of what leaders are not doing or being, i.e. that they 'should not be excessively managerial'.

Is it possible that in trying to frame their concerns around what the respondents to the survey perceive to be a lack of effective leadership amid the VUCA context (Bawany 2016), driven by the emerging 4IR, that HE leadership uses the handle 'management' or 'excessive managerialism' to denote the issue of 'status quo thinking?' This distinction between management as upholding the status quo, and leadership as a visionary change agent, is articulated by a wide range of leadership scholars (Daft 2018; Northouse 2018). Amid the VUCA context that 4IR invokes, visionary leadership is paramount to effectively navigate the rapid change occurring daily in every sector of society. Status quo thinking or excessive managerialism at the cost of quality innovation could be a fatal flaw in HEIs in the context of 4IR (Dervitsiotis 2005).

As detailed by other researchers, the liminality of VUCA invoked by 4IR should lead to 'communitas' (Day & Harrison 2007; Leitch *et al.* 2013; Ndalamba *et al.* 2018). This 'communitas' would emerge as a heightened commitment to cross-sectoral partnerships and higher levels of collaboration between HEIs (Jäppinen 2014). Our respondents articulated their concerns that the HE leadership that they were a part of is not embracing this collaborative and agile form of leadership (Harrison 2016). Perhaps part of the catalyst of status quo thinking emerging within HE leadership is what Timothy Mack (2015) terms 'Response to Complex, Multi-Sector Changes'. He states:

Another trend involves the continuing inability (or lack of inclination)

of many governments, organizations, corporations, and NGOs (non-governmental organisations) to understand and address potential negative change. To put it in a more specific context, many organizations and companies adapt to change, not when they should but only when they must adapt, but their adaptations are often too late.

Perhaps it is incumbent upon HE leadership to develop 'Rapid Reflection Forces' (Lagadec 2009) that function to alert the leadership to weak signals through the procurement and analysis of big data, which 'feed leadership decision-making processes like never before' (Mack 2015: 42). The capacity for HE leadership to overcome status quo thinking in a VUCA environment might arise if that leadership can 'hold the ship steady' while leveraging 'experimentation at the margins' (Dervitsiotis 2010). Dervitsiotis highlights:

> The appeal of multiple actions on the margins derives from management's inability to predict the future. This practice helps evaluate options that guard against anticipated uncertainty. In periods of rapid change, involving major shifts as to what is regarded as a proper way for the organization to conduct its business, experimenting through the parallel implementation of multiple small-scale actions provides valuable information from the exploration of the effectiveness of different strategic options.

This experimentation at the margins means that HE leadership invokes the option to avoid costly and potentially damaging mistakes by trying new solutions *in situ* on a smaller and manageable scale before mainstreaming those solutions that work while having the ability to jettison those that do not. It might be useful in the second round Delphi survey to highlight this notion of 'status quo' or '*laissez-faire*' leadership as the most common emergent issue in the first round Delphi survey findings and request respondents suggest potential solutions to this challenge. Invoking this type of data-driven approach to leadership within HE organisations means that leadership styles might need to evolve to support a change-oriented leadership style (McCarthy *et al.* 2017).

Major Issue #2: Curriculum/ Cultural/ Subject Matter Relevance (18 Occurrences)

When respondents mention 'relevance' as a major issue in HE contexts, and

within HE leadership, they are referring to the challenge that HE leadership faces concerning keeping pace with the rapidity of change. It appears that emerging trends are such that the subject matter of today might be redundant in the world of tomorrow. The emerging issue of relevance seems to be felt even more acutely within the context of the emerging 4IR and the sense that the curriculum of the 2nd and 3rd industrial revolutions is hopelessly outdated for the new reality that is now upon us in the 4IR. As one respondent stated,

> The challenge for higher education is to reinvent itself based on the needs of the future rather than [the] past.

Another aspect of relevance is not just that the curriculum be updated to match the emerging 4IR, but also that the pedagogy be updated to match the generation produced by the 4IR. As one participant put it:

> Continuing to be regarded as THE source for learning in an increasingly sound bite news cycle and with information sources seemingly everywhere, it be a challenge to maintain the notion of University as a place where essential knowledge is conveyed that is different from consumerist knowledge that seems more appealing – on the face of it – to the uninformed (e.g. Daniel Pink, Dan Airley, Malcolm Gladwell).

As we rapidly move into the context of the 4IR few are able to anticipate the kinds of employment changes accurately, employment losses (Bonciu 2017a), and scientific emergence that will accrue from the coalescence of the:

> … physical (autonomous vehicles, 3D printing, advanced robots, new materials), digital (internet of things, relationship between things, and people connected by technologies and platforms), and biological (genetic sequencing and genetic engineering, synthetic biology and biological editing) (Kuruczleki *et al.* 2016).

The context of 4IR and the sophisticated elements highlighted by Bioncu and others lead to the question: 'What curricula innovations and learning modalities are needed to address the emerging world of 4IR?' (Kodama 2018).

Another respondent highlighted this need for relevance by stating:

> We need to prepare students for the new workforce (the 4IR and rapid changes in the labour market, AI (artificial intelligence) and automation, employer expectations and demands for more relevant evaluations of student skills and competencies.

Schwab (2016) highlights in his insightful work on 4IR that Creative Problem solving, and Critical Thinking will be the top two skills required by professionals in 2020. This change in focus supports the concern of our respondents that the curriculum of today is not preparing students for the world of tomorrow. An important question both from the literature review and from our respondents thus becomes whether or not HE institutions are shaping their learning profile to address this new priority.

Another aspect of 'relevance' for the development of the curriculum is the ability to contextualise curriculum to ensure that it is culturally relevant and culturally intelligent (Tuleja 2017). One respondent stated it in this way:

> Students accessing higher education institutions come from varied backgrounds. Students are therefore from different socio-economic backgrounds. Leaders in higher education, therefore, need to ensure faculty or academics are aware of inequalities and diversity and considerations are made for these when delivering the academic project.

Yet another respondent stated it briefly in this way:

> The second issue relates to curricula, i.e. curricula that students find relevant and decolonised.

Major Issue #3: Funding (17 Occurrences)

At the outset, one might assume that the issue of funding is more of a developing economy issue than an issue facing first-world economies. Yet, the range of responses from representatives of both developing and developed economies highlighted that funding for higher education is a poignant issue facing higher education leadership. For instance, one respondent stated incisively, 'Budgets are shrinking globally, and we need to be able to fundraise

and manage budgets appropriately'. Another respondent highlighted the emerging issue of 'Sustainability of higher education institutions in view of shrinking funding'.

Two critical issues related to funding emerged as sub-sets within this crucial issue facing HE, namely academic freedom and access. One respondent articulated the subject of the erosion of academic freedom because of diminishing funding as, 'government intervention/control (use of fiscal levers to achieve political ends)'. Other respondents highlighted the erosion of equitable access to HE when funding is limited, and thus HE becomes the purview of the wealthy.

Major Issue #4: Student Quality (12 Occurrences)

It is interesting that some respondents perceive the issue of student quality as a systemic issue that is affected by the 'pipeline' of students emerging locally from what is seen as a less than stellar public and secondary school system. Respondents suggested that this 'low-quality pipeline' is another contextual issue affecting HE leadership.

Respondents also suggested that student quality as a HE leadership issue is further impacted by the litigious nature of students and the emerging distrust between faculty members and students. One other leadership issue emerging for HE leadership is that of the mental health of HE students and the role of leadership in supporting student mental health. As one respondent stated, 'Mental health, particularly of students, but also work-life balance for staff'.

5 Discussion

The main research question of this study is as follows: '*What are the emerging issues confronting higher education leadership in the next three to ten years?*'

To address this research question, we reviewed the literature to identify emergent themes around critical issues likely to face HE leadership in perhaps the next three to ten years. Once we completed this literature review, we deployed a Delphi survey across 300 experts who serve as HE leadership. Arising from this Delphi survey and the process of open and axial coding, four significant issues emerged. The combined data of the literature review and the corresponding Lockean Delphi survey suggests that 4IR is a major contextual

factor driving the issues emerging in HE. It is not the only factor, but it indeed appears as a significant factor. This 4IR driveshaft or context helps frame the research because effective leadership has healthy 'contextual awareness' (Daft 2018: 138), and it is thus useful to observe HE leadership around the world identifying 4IR by name as a backdrop to the issues they raised in their responses. As highlighted in the literature review, 'Leadership is arguably the central concept of interest in contemporary scholarship on education administration' (Eacott 2012). Some respondents drew a sharply distinctive line between what they term 'leadership' and 'excessive managerialism. This notion of excessive managerialism might also be interpreted as 'status quo thinking', a concept that emerged in the literature review.

The Delphi survey respondent experts suggest that HEIs globally are not staying relevant to the curricular requirements of the rapidly changing 4IR environment. Yet, according to Schwab (2016) and others, it may not be evident precisely what subjects and courses need to be included by HEIs to ensure that they can stay relevant. Perhaps this is a question for the second round of the Delphi survey.

The *third major issue* highlighted is that of funding. According to the respondents, funding brings stress to HE leadership in two key dimensions: lack of funding and the political leverage imposed by the government through the mechanism of funding. Perhaps in the second round, Delphi might also probe ways in which HE leadership is experimenting to address the funding challenge. It may also be appropriate to investigate how HE leadership segregates government funding from academic freedom and if this segregation is even possible.

The *fourth major issue* that emerged from our Delphi experts is the complicated matter of student quality. This issue is complex because the respondents perceive it as a systemic, process issue, in which the pipeline of student development from public school, through high school, and on into HEis less than adequate. How this problem might be addressed at the HE level is indeed a question for the second Delphi survey, with reflections from the literature, to seek to understand how HEIs might currently be addressing this emerging issue.

6 Conclusion and Areas for Further Research
The four major issues that emerged from this study are *effective leadership,*

curricular and cultural relevance, funding challenges, and *student quality.* Each of these areas contained meaningful and relevant sub-sets of categories and related issues that further enriched an understanding of HE leadership's emerging issues. Practically speaking, it appears that HE leadership might benefit from the collective knowledge of these emerging issues on a global scale and capacitation or training in mindset and skillset to address these issues with effective leadership adequately.

The goal of the second round Delphi survey is to probe how HE leadership might transcend the excessive managerialism that is perceived as an impediment to their capacity to lead effectively in the VUCA context of 4IR. Further inquiry will be made concerning the ways in which HE leadership is addressing the challenge of contextual and cultural relevance with respect to curriculum development, funding challenges, and student quality.

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