

Higher Education Leadership in a Time of Digital Technologies: A South African Case Study

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Abstract—Since the advent of digital technologies two phrases have been used extensively in higher education institutions and these are *digital transformation* and *digital leadership*. This article's topic is crucial because some leaders and their staff do not know how to deal with change in systems accompanying the introduction of digital technologies. Institutions of higher learning are experiencing waves of change that bring turmoil, whilst leaders enhance their skills as they sail with their institutions towards a future of digital technologies. The purpose of this qualitative study was to understand effective strategies for effective digital transformation in selected universities as perceived by the participants. It examined ways in which conscientious leaders could build high performing (South) African institutions where technology will address some of the societal ills such as poverty and underdevelopment. Ten university executives were interviewed individually and in focus groups. The results demonstrate that, without a vision and collective decision making, few institutions will thrive in the current times of information communication technologies (ICTs). Furthermore, the study showed that varied skills in technologies as well as emotional intelligence will help digital leaders support their teams whilst enhancing their institutions' performance. Effective digital leaders depend on a strong vision and creating an atmosphere of sharing and support.

Index Terms—Change management, digital leadership, isomorphism, technologies, visionary leaders.

I. INTRODUCTION

None of the current universities can disavow the critical nature of digitalization in their existence. New technologies are now part of all transforming institutions and the disruption they cause is opening new futures and new opportunities. Alenezi [1] points out that “in the present era characterized by an age of revolutionized knowledge, it has become imperative and critical to comprehend the values of technological initiatives and their role in the transformation of the business models.” Leaders of higher education institutions should understand the critical role of digital transformation and how this can affect the performance of these establishments. Today, there is just no way that leaders can talk of changing higher education institutions without the incorporation of new technologies in the everyday running of these institutions. Unavoidably, the future of institutions is based on sound pillars of digitization and digitalization. Additionally, teaching and learning, research, scholarship and the general running of the university will all be

impossible without the integration of digital technologies. Hashim, Tlemsani and Matthews [2] argue that digital transformation in the global higher education environment determines the future roadmap “to a sustainable education management strategy”. As part of the planning process of universities, they use digital technology to influence access and success of students. They also transform learning to improve research and scholarship initiatives. Furthermore, [2] contend:

For integrating digital transformation capabilities, universities leverage their delivering capabilities through offshore branches or transnational distance learning, however, students will inevitably depend heavily on digitalization of education primarily driven by information communication and technology. The widespread globalized education has radically influenced the universities to shape their learning and development, delivery and continuous improvement mechanisms. (p. 3171)

Therefore, universities are gradually transforming as they are forced to respond to demands from outside their environments. Di Maggio and Powell [3] when dealing with institutional change use the concept *isomorphism* which alludes to institutional theory about homogeneity of organizations. In fact, digital technology has made universities seek what would drive them into the future; these behaviours emanate from organizational uncertainty or pressures initiated by professional groups [3]. Isomorphism is at the centre of change when it comes to universities adopting digital technology because they respond to the uncertain future. The emergence of digital technology has made universities more similar because rationalization has shifted away from the competitive marketplace as rational actors transform their organizations whilst trying to change them [4]. Di Maggio and Powell [4] try to answer the question of what bureaucracy and rationalization do to today's institutions as they declare:

Organizations are still becoming more homogeneous, and bureaucracy remains the common organizational form. Today, however, structural change in organizations seems less and less driven by competition or by the need for efficiency. Instead, we will contend, bureaucratization and other forms of organizational change occur as the result of processes that make organizations more similar without necessarily making them more efficient (p.147).

Yet many researchers maintain that, as universities become homogeneous, they achieve positive spin offs. Kaputa, Loucanova and Tejerina-Gaite [5] contend that digital technology-oriented transformation in higher education institutions drives socially oriented innovations. Amongst other such innovations, higher education

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institutions can cater for diverse students and provide them with necessary tools and skills to face global challenges such as poverty, health crises and inequality [5]. These changes instigated by digital transformation have necessitated leaders to be able to deal with what Zeleza & Okanda [6] refer to as ‘mega trends of the 21st century’. Zeleza and Okanda [6] state that without digitalization not only African institutions of higher learning but also the continent’s economies and societies ‘will remain incomplete and keep them in perpetual underdevelopment’. Higher education institutions’ leaders should also realize how their institutions need to face the future prepared as they accommodate aspects such as Agenda 2063 of the African Union and other visions that seek to accommodate the success of the African institutions. In fact, Agenda 2063 is a framework that supports Africa’s growth and sustainable development.

Yet, institution of higher education’s leaders should be able to withstand the challenges in their institutions. These challenges include the students’ high expectations, managing student and staff mental health and wellbeing as well as addressing the digital divide [7]. Furthermore, conscientious leaders ought to be able to create collaborations among higher education institutions that would go beyond pedagogical focus but also enable transformational change whilst upholding social justice issues as well [8]. The questions posed in this study were the following:

- Why should organizations follow digital technologies?
- How do leaders see their role in institutions transformed by digitalization?

II. LITERATURE REVIEW

Digital leadership is a strategic use of an organization’s digital assets to achieve business goals – an effective digital leader is conscious of the business goals and knows how their occupation’s responsibilities support them [9]. McManus [10] affirms that digital leadership is vital to lead organizations through the “transition from analog to digital, and to thrive in the digital economy”. The existence of current companies in this digital age is not possible without digital leadership. Digital transformation is cultural transformation that will only be achieved if there is effective digital leadership and digital transformation must be addressed at leadership level [11]. With the advent of digital technologies in institutions digital leadership has become critical for organizations to attain success. Katanic [12] underscores how digital leaders need to embrace several qualities which include being a creative team leader, being a collaborator with other institutions, and having an agile mind-set to support innovation and the ability to confront problem with the open mind of a courageous leader. Katanic [12] explicates this succinctly when he declares:

Leaders need to know themselves in order to be able to lead others. A leader needs creativity, wit and a vision for the future of the industry they are working with. They must also have a sense that change is necessary when it comes down to doing things better — for example, taking already-established strategies and implementing new systems, such as people-centric software, from time to time if needed. Throughout these shifts, leaders should always

maintain culture so that changes can take root properly (Online).

This implies that when leaders understand themselves and their organizations, they would be able to lead the digital revolution. McManus [10] contends that organizations struggle to find leaders who have all the necessary skills of digital leadership and these include strategic, organizational, market and digital expertise. Like McManus [10], Promsri [13] argues that the success of any institution will be realized because of a leader and not technology. Furthermore, Promsri affirms that effective digital leaders have six traits, and these are digital knowledge and literacy, vision, customer focus, agility, risk-taking and collaboration. Digital leaders, as they change their own practice, should be aware of the traits they would embrace. As in all other institutions around the world, African institutions need advancement in digital technologies for progress and avoiding underdevelopment. Zeleza and Okanda [6] point out that in Africa the enhancement of digital technology at universities will magnify technology’s quadruple purposes which are teaching and learning, research and scholarship, public service and engagement as well as innovation and entrepreneurship. Several universities in Africa and around the world could not have survived the COVID-19 devastation without digital technologies which enabled institutions to use distance learning programs although some were more efficient than others. African states need more national investments to enhance technological transformation. Furthermore, [6] argue that African universities should educate, skill and empower the youth who in turn will improve the continent’s socio-economic development.

Research is showing that digital leaders in institutions may struggle with digital technologies because of barriers that hinder the use of them [14], [15]. University teachers need benefits and ways to fight resistance to change. Leaders must help their teams out of crisis as they ensure that the organization can deal with change. Hazelbaker [15] opines that leaders must be aware of how change happens; the end of something, a transition period and a new beginning. However, when there is lack of vision, institutions will struggle to implement technology. Leaders ought to fight fear, be in full control, and support staff if technology initiatives are to thrive [16]. Tenten [17] avers that change is a time of chaos which can only be addressed by visionary leaders who will address three key pillars: the organization (how the institution is organized), the foundation (core of the institution that keeps it running) and the environment (the landscape of the institution). Visionary leaders are prepared to change their purposes and behaviours as educators and, among others, they want connectedness to knowledge and professional learning, and they emphasize the value of technology [18]. These visionary leaders utilize digital technologies to achieve common goals [19]. Additionally, Quddus declares that digital leaders must use an e-culture that would lead to positive university performance.

III. RESEARCH METHODOLOGY

This qualitative study was conducted with ten participants from ten higher education institutions in South Africa. The

sample was comprised of six women and four men. Seven of the participants were deputy vice chancellors (DVCs) and three were executive deans. None of these participants were remunerated for the study which was voluntary, and the participants were informed they could halt their involvement anytime. Their confidentiality was also assured. Data was collected over a period of six months. Each individual interview lasted for approximately 70 minutes. The interview instrument used was semi-structured interview questions. The focus group discussions spanned over 90 minutes. The characteristics of the participants are highlighted in Table I below:

TABLE I: CHARACTERISTICS OF PARTICIPANTS

Participant	Position	Race and gender	University province	University domicile
1	Deputy Vice Chancellor	Black female	Eastern Cape	Urban
2	Deputy Vice Chancellor	Black male	Eastern Cape	Urban
3	Deputy Dean	White female	Gauteng	Urban
4	Deputy Vice Chancellor	Black male	Gauteng	Urban
5	Deputy Vice Chancellor	Black female	Gauteng	Urban
6	Deputy Vice Chancellor	Black female	KwaZulu-Natal	Rural
7	Deputy Vice Chancellor	White female	KwaZulu-Natal	Urban
8	Deputy Vice Chancellor	Black male	Limpopo	Rural
9	Executive Dean	Black male	Western Cape	Urban
10	Executive Dean	White female	Western Cape	Urban

I analysed the data until it was clear that further analysis was not necessary as sets of categories had been exhausted. [20]. The ten participants were adequate for the study because data saturation was reached when there was enough information to replicate the study and the ability to get additional data was attained and thus further coding was not needed [21]. As a researcher I realized that data was becoming repetitive and this signalled saturation, and this signified that ten participants were an adequate sample. Purposive sampling was used to select participants from six urban as well as two rural universities. The power of purposeful sampling lies in the selection of information-rich participants for an in-depth study [22]-[24]. In this study I selected executives who I thought would have the necessary expertise on the subject under study. It was critical for the study to use both male and female participants because leadership may be viewed differently by different genders. Moreover, in South Africa the conditions of rural and urban institutions are different hence it was necessary to look at the institutions' different abodes. Data collection took two forms; on the one hand semi-structured interviews were conducted with each individual participant whilst on the other, as a form of triangulation, focus group interviews were conducted.

There were two focus groups of five each that were interviewed over a period of one hour and twenty minutes. The participants were strangers, and this was an advantage for focus group interviews for [25] state that focus groups are more successful when they consist of strangers rather than friends. All the participants were assured of ethical applications of research, including the anonymity of both their names and their institutions. They were also made aware of their rights as participants including pulling out of the study when they felt there was potential harm. The interviews were all recorded after the participants consented to the use of audiotape.

In conducting analysis of the data, I gave attention to the narrative analysis. An iterative process where there was concurrent use of sampling, data collection and data analysis hence data continuously informed sampling until saturation [26]. During the interviews the participants related stories of how they are affected by digital technologies. Narrative analysis involves reformulation of stories presented by participants taking into cognisance the varying experiences of each participant. All the three types of coding were utilized, and these were open coding, where I organized portions of it, axial coding and interconnecting and linking categories and finally I formulated a story through connecting the categories through selective coding. In developing the codes I labelled and organized the qualitative data as I identified different themes and relationships between them. I assigned labels to words representing certain themes in each of the responses. The storyline was developed through careful and grounded data analysis. In organising the data I used four steps as highlighted by [27]; organizing the data, building over-arching themes in the data, ensuring validity in the data analysis and the findings, and finding possible and plausible explanations of the findings.

IV. RESULTS

A. Skills and Strategy

In both individual as well as focus group interviews the participants highlighted the need for an attuned form of leadership where the leaders find human relationships important as well as the need to influence the course of transformation. They reiterated the necessity for a different kind of leadership, which is digital leadership. In addition, the participants stated that it would not be easy to guide digital transformation when leaders lack the digital skills. They also underscored the importance of a digital strategy for digital transformation and leadership to be attained. Digital transformation is seen as a huge factor for change management which cannot come to fruition without an intent strategy. The participants maintained that digital leaders should lead change and be in the forefront of advocacy. In a time when there is uncertainty, they must be able to lead and give direction. P3 opined:

As leaders we need a few special skills. People resist and fight when there are changes introduced. Some become depressed and many feel deskilled. It is difficult if as a leader you do not look for solutions when such scenarios prevail. True digital leaders need digital vision and dexterity of a

captain at sea who buoys the sinking ship through turbulent waters. If as leaders we are helpless it would be tough for the followers. The best digital leaders will be those who are good communicators.

Although all agreed with these sentiments, it was interesting to note that P6 and P8 from rural institutions maintained that, although leaders may try their best, the rural institutions have other challenges which include challenges faced by rural students and their parents. P6 highlighted that rural institutions reflect what is experienced by several African universities.

P9 summarized a point that several participants raised and that is that digital leaders also need to look at the needs of African communities as they adapt the digital technologies to address the demands of the country:

Technology has taken the whole world by storm and as Africans we cannot stop it. But as a leader I feel that technologies somehow should fit within the topical debates we have in our institutions. We still must think of how digital technologies fit in the debates on decolonization and Africanization of our institutions. There are many such similar concepts we have been debating since the advent of democracy in 1994. As leaders we need to be well versed with these debates otherwise, we may miss the mark.

The idea of digitization responding to Africanization and decolonization of education was supported strongly by P1, P2, P5, P8 and P10. The participants also stressed several skills that digital leaders must utilize when leading technology whilst ensuring that they adopt effective strategies. The common ten skills that the participants collectively shared were:

- 1) Providing constant support;
- 2) Ability to manage chaos;
- 3) Leading change;
- 4) Including the decolonial thought;
- 5) Communicating often across the institution;
- 6) Digital visionary who supports emerging culture;
- 7) Using technology to address Africa's needs;
- 8) Collaborator who inspires;
- 9) Leaders who are not intimidated by negativity; and
- 10) Advocacy.

In the focus groups, the participants talked at length about the prerequisite for leaders to ensure that digital technologies are able to incorporate what they termed *decolonized digital technologies* where Africa could be able to use locally relevant programs rather than depend on the exclusive Global North's programs. Only two participants, P3 and P8, maintained that digital technologies have nothing to do with decolonial thought, yet they still affirmed that leaders should be conscious of decolonial theories if they are to be effective in African institutions. Other participants, though, such as P4, P6 and P9, indicated that leaders need to be wary of change for some digital initiatives may be bad for teaching. P5 stated:

We should not get carried (away) with the digital changes though, because some traditional approaches exude much good. Technology cannot totally overshadow the excellence of effective teachers. Whilst we talk of novel digital skills, we cannot forget the old skills are functional. For example, technology can't replace the old spontaneous discussions in classrooms. Good digital leaders should take this into

cognisance. The question is how we infuse the best from non-digital classrooms to the new digital environments.

Yet for all the participants it was critical for digital technologies to use the best practices that guarantee success. Moreover, the participants declared that the leaders' digital skills and strategies are dependent upon the vision of their institutions.

B. Vision and Success

Participants acknowledged that a digital vision and strategy were factors that would guide digital transformation. They also affirmed that it is critical for institutions' leaders to accept the idea of technology in order to believe in the vision to implement digital technologies. The vision embraced by leaders is a strong guide towards an institution's organizational success and its digital plans. All the participants also pointed out that the vision will determine future success. The leaders should always have the bigger picture of where the employees want to see their organization in future. Several participants - P1, P2, P4, P5, P6, P9 and P10 - talked at length about the sense of urgency that university leaders need to embrace at all times. According to these participants, the vision magnifies the sense of urgency as it explicates the relevance of the digital transformation. Additionally, all maintained that the vision brings many positive aspects to the institutions and these include trust, hope, confidence and the realization of goals. Others indicated that vision helps minimize the chaos associated with digital technologies and reassures teams as it inspires them to work together. They also linked a strong vision to access and success of students. P1, P6 and P8 highlighted that some institutions have characteristics that make it difficult for leaders to manage changes such as digitization. P8 was forthright in stating that sometimes the vision can be thwarted by the circumstances of some students. The vision needs to take into cognisance the conditions of students such as poverty and the fact that many students come from disadvantaged schools.

P7 asserted:

The vision is like a glue that makes us stick together especially in times of potential conflicts. When you look at digital transformation you are looking at a landmine. People were trained differently, and digital transformation creates a lot of outbursts and conflicts. Good leaders will constantly show the colleagues why they need to link goals to the vision. The vision should always be supreme because it shows and determines the prize. A vision magnifies the future and that is what all teams should understand. There is nothing personal here, it is all about the advancement of the institution.

P9 also underscored the function of an effective "team vision":

When we develop a digital vision, the team should be involved. This is important when it comes to ownership and understanding of the nuts and bolts of digital transformation. A worthy digital vision should bring new positive cultures that will change the expectations of all stakeholders. The senior managers, staff, students, communities and government should be moved towards new expectations. An effective vision should not only change expectations, but it should make the future big. The vision should also look at

current debates about localization of education as well as globalization. The digital vision should be intent on changing society for the better because we are still building an engaged university.

For the participants a vision that should be created needs to explain the objectives of digitization and how this will be linked to excellence in running systems, in scholarship, research and teaching. A clear vision is owned by the team members. Some participants, P1, P2, P3, P4, P6, P9 and P10, maintained that the challenge when it comes to vision is to make everyone abide by it when people envisage a workable future of digital technologies. P2 asserted:

It is not always easy for digital leaders, for sometimes they would want to lure people towards a common vision only to discover that there is much resistance. People come with their own visions based on the past. Inculcating a vision demands trust, respect and confidence. For many campuses it will take quite some time before teams embrace a common vision. As leaders we need to make followers believe that the vision is worthwhile and that it would be meaningful to change initiatives.

P4 agreed saying:

For a common vision to be embraced quicker, we need to magnify the future and people must link success to digital transformation. The vision must also show how the teachers would benefit. Nothing is more satisfying to teachers than seeing the students succeed. An effective digital vision will bring teams together. It will kill egos as people support the common good for the success of an institution.

It was also clear to the participants that the vision should be about instilling a digital culture that promotes access and learning.

C. Digital Culture, Access and Barriers

The digital culture was found to be a culture for the future. The participants maintained that no institution can contemplate a future strategy without thinking about the role of the digital cultures in supporting that future. Yet some felt that the digital culture sometimes becomes a barrier, especially for black students who mainly come from disadvantaged historically black schools, where there were few or no teachers with expertise in ICTs. The two rural university participants, P6 and P8, as well as P2 and P5, stated that frequently technologies become the barrier for many students and teachers. P6 and P2 spoke of the constant need to close the digital gap that is always present in institutions. Students come from South African schools that reflect the inequalities found in society, hence any strategy should address ways in which digital technologies could address these anomalies.

P6 pointed out:

Right from the start, students struggle to access the university because they are expected to apply for admission online using ICTs. Many would come from remote areas to try and register in person because they are daunted in using technology. They want to fill in the application form in the traditional way and post the application for admission. For many of these they would struggle using computer technology for assignments and projects. Thus, the digital culture discourages them. This is a challenge to rural

institutions.

P2 assented with this and added:

The university will need to do more assistance to first year black learners whose schools were poor to mediocre when it comes to ICTs. More support needs to be given to these students who had never lain their hands on a computer. The paradox with many of these is that the digital culture that is supposed to prepare them for the future becomes a barrier. University planning should always think about such students. Education will be a disservice if students are delayed because of digital technologies.

However, many of the participants declared that the digital culture will positively prepare all for the future, including students, university administrators and their teachers. They asserted that it should be the responsibility of all university leaders to ensure that no student is left behind because of their inability to use technology. They also added that effective universities will always have programs that would empower students coming from disadvantaged backgrounds. P1 declared:

What will be the point of introducing digital technologies if they will be a hindrance to students and their lecturers? We should have formal programs to support the acquiescence of the digital cultures. We should also support our colleagues who maintain that they are also not digital natives. The strategy should embrace these, or institutions are doomed if there is resentment against technologies.

Generally, the participants concurred that digital technologies will be far effective if they promote both access as well as success of the students.

D. Collaboration and Digital Technologies

The participants also assented in various ways that without cooperation amongst university colleges and university departments the digital technologies will flounder. The participants maintained that collaboration among departments within the institutions will be positive for all the role-players. They added that university leaders should take it upon themselves to have empowered ICT departments that would be able to work across the university to help guide all, including the administration personnel, senior managers, teachers and students.

P3 declared:

What we did in our campus was to establish a computer centre which attends to technical queries and task related queries for students who would like to use various computer programs for their class work. It helps as we wire the campus, we also need to be connected. For many who were born before computers in the teaching staff they need continuous support. Digital technologies will be meaningful and effective if people have confidence.

P8 added to the above:

The kind of teaching we are promoting in classrooms is more collaborative and therefore it should be no different than when we learn the digital cultures. We should look at this as teams that collaborate towards success. When we collaborate, we will achieve more in research, teaching and scholarship in general. The collaboration will break the silos that many of our institutions seem to promote. Even the administration of the universities will highly improve when

there is the working together culture.

In support, P10 declared:

As we move towards digital competence and digital transformation let us support transformational models that would support effectiveness and mastery across the institution. As managers we should ensure that technologies improve the way we do things. What will be the point of all these if we cannot improve our institutions? When we work together, we will improve our systems, we will better student learning and naturally research and scholarship will convalesce immensely. We need to take this opportunity of learning from one another.

The participants revealed a number of elements that can be improved by collaborative introduction of digital technologies and these include language learning, heutagogical practices, enhancing critical thinking skills, improving research skills, expanding the learning materials, and interactive technologies enhancing learning even when away from the university as well as technology overall support to learning.

V. DISCUSSION

A. Digital Skills and Digital Leadership Style

The participants showed how critical it is to lead with certain skills in a digital age. They also maintained that all leaders of higher education institutions need to undergo programs that empower leaders with the necessary skills, including a digital leadership style. Today's leadership has become so disruptive and unpredictable with technology coming into the picture and, as such, the participants affirmed that without the necessary skills the students and their teachers may not be able to perform at the expected high levels. There is much need to methodically infuse order in a time when technology disrupts the known order, the grammar of the institutions. However, these are not difficult when leaders have clear plans in their visions. Karakose, Polat and Papadakis [24] claimed that, "A leading factor in the digital transformation of educational institutions has undoubtedly been the vision of its leaders. To a large extent, digital transformation capability can be determined by the clarity of the digital strategy employed by leaders who support a culture capable of change and fostering new ideas and practices." Institutions will have problems in adjusting when the leaders do not have the necessary digital skills. Furthermore, [24] opine that when leaders are not able to successfully manage the entire situation in their institutions there can be no true digital transformation.

For this digital transformation vision to be realized, leaders need to move beyond the emergency adoption of online learning but should rather move towards a long-term vision for digital education which encompasses collaboration [8]. In many circles some people have asserted that technology or digital education opens the way for students to succeed. Many have said that it brings success as it prepares students for the global world. Yet, it is not easy to implement educational technology; there is much complexity in implementing educational technology for students, teachers and institutions [8]. Effective leaders will use various skills to

minimize these complexities as they deal with aspects such as student and staff collaboration as well as minimising the social inequalities. Quddus *et al.* [19] argue that effective leaders at higher education institutions will have the ecological leadership style as well. This means the leader has to respond to the environment of the institution as she influences the followers to tackle challenges with huge commitment. A digital leader who is also an ecological leader will be able to carry out digital transformation.

Digital leadership is also critical in ensuring that there is the necessary access to institutions. Leaders who seek adaptive leadership strategies during times of digital technology disruption will create environments that are conducive for the students and teachers so that there can be both access and success. In fact, digital leaders who are visionaries use digital education for student success. Some maintain that for digital transformation leaders use digital technology for sustainable communication, efficient service, strategic management, readily available information, student success as well as the enjoyment of digital content [27].

The digital skills and intended digital leadership style in higher education institutions have huge implications for the country and young students. Zeleza and Okanda [6] affirm that the digital disruptions occurring at institutions of higher learning are necessary because they will result in multiple jobs in future and enable students to choose from a pool of various careers. On the one hand, sometimes institutions of higher learning will adopt these new transformations because of either what [4] calls mimetic or coercive isomorphism. Some institutions will adopt the digital skills and digital leadership styles due to either mimetic or coercive isomorphism. Coercive isomorphism occurs when external forces pressurise an institution to change as a result of cultural expectations from society [4]. Society expects all institutions this century to be technologically savvy. Yet, on the other hand, institutions may imitate others when the latter are perceived as progressive. Usually when institutions have unclear goals, they tend to mimic other successful ones, and this is referred to as mimetic isomorphism [4]. Mimesis comes from within the institution whilst coercive isomorphism is stimulated by forces external to the institution.

B. The Vision and the Support for Digital Culture

Hamzah, Nasir and Wahab [25] claims that leaders who want to implement digital leadership should use their space to bring changes to the organization's culture to have a positive impact on the education system. The participants in the study reiterated the positive application of digital leadership in ensuring that universities become successful especially when there is teamwork and collaboration. The participants showed that real digital transformation will occur when leaders change as technology changes institutions. As society becomes dependent on technology leaders should harness the power of digital technologies "in order to create cultures that are transparent, relevant, meaningful, engaging, and inspiring" [18]. Sheninger [18] also adds that leaders need to understand the origins of fear and misconceptions around technology and when these are understood leaders would be able to support their staff.

Ngcamu [28] supports this as he avers:

The application of the digital leadership approach is desperately needed in South African universities to improve communication amongst the key stakeholders including students: promote teamwork, accountability, transparency and productivity and eliminate wastage. The digital age has influenced the entire society to be reliant on technology. (p.146)

A good vision can lessen the fears of technology and improve communication in higher education institution. Tenten [17], when he contemplates vision, avers that educational leaders should pose five digital transformation questions. If these questions are answered they will clarify the vision towards the acceptance of digital technologies:

- 1) Do we have a compelling vision for e-learning?
- 2) Do we have our vision for flexibility aligned with a strategic plan that recognizes the importance of digital transformation?
- 3) Is this vision supported by all senior executive team members?
- 4) Is our digital transformation integrated with overall educational planning?
- 5) Is the staff directly involved in the visioning and strategic processes for this digital transformation?

These questions position the vision and ensure that the institution is ready for digital technologies. The burden in South Africa is also whether the vision is linked to the calls for decolonial education. In 2015/2016 students in South Africa called for decolonial education.

McLeod [16] proclaims that education institutions that struggle with technology integration and implementation are those whose leaders lack a collective vision for how digital tools will be used to enhance effectiveness. In addition, [16] contends that the most successful schools have rich visions for how digital technologies will transform learning and empower students. Leaders need the digital leadership skills that would enable them to underscore the vision for digital technology.

McManus [10] insists that the planning of a clear vision is critical to a successful institution. Digital leaders comprehend the strength of a vision used as a unifying ambition that propels collaboration [10], [19]. Furthermore, digital vision ensures that digital leadership is built, and that it represents the new form of leadership [10]. A successful digital leader will provide a vision and mission and earn respect and trust from staff [19].

C. Fighting Institutional Barriers and Upholding Change and Technology

Leaders in South African higher education institutions need to be aware of the barriers as highlighted by the participants. Many students come to university not equipped with the necessary digital skills. Effective leaders will always need a strategy to overcome these barriers. This presents challenges for leaders who want to initiate change. Ngcamu [28] contends that there are still many academic staff members who are digitally illiterate, and they feel disadvantaged by students who can be described as a 'digital native'.

Effective leaders will always try to find ways of

overcoming the barriers. Hazelbaker [15] states that barriers to change management exist and leaders need to not only identify these but should also overcome them. When technology arrived at higher education institutions it proved that leaders cannot achieve organizational goals with the existence of barriers. Moreover, Hazelbaker [15] points out that there are four barriers that leaders need to overcome and three of these were reiterated by the participants:

- 1) **The mystery of change** – leaders should have basic knowledge of how to respond to change.
- 2) **The pit of time** - leaders ought to prioritize change projects instead of being overwhelmed by change projects.
- 3) **The wall of negativity** – it is crucial to lift the spirit of the followers as leaders magnify the future. To ward off negativity followers should be informed that they are in the middle of change.
- 4) **The illusion of quick fixes** – Constantly talking about change and strategic direction of technology is crucial in ensuring that people embrace change. Leaders should frame situations or barriers in change management language to help others deal with future change.

The participants emphasized the barriers that exist as a result of the introduction of technology, but they stated that it is sometimes daunting to overcome them. According to the participants, barriers stall change and digital technology changes. Mercader and Gairini [14] concur that there is a myriad of professional barriers to technology being introduced in higher education institutions, hence leaders ought to use professional development for teachers and more strategic planning. Leaders will also find some barriers more difficult to deal with than others. Mercader and Gairini [14] cite Ertmer (1999) who distinguishes between primary and secondary barriers to the integration of digital technologies. "Primary barriers refer to external barriers to the integration of digital technologies. Primary barriers refer to external obstacles, which are not specific to the person such as limited resources or lack of technical support. Secondary barriers are internal obstacles such as lack of confidence or different mindsets" [14].

VI. CONCLUSION

The study's findings show that progressive institutions will support and follow the digital revolution. It also shows that when senior managers acknowledge the role of digital technologies, they are likely to advance the competitiveness of their institutions. Additionally, the implications of the study demonstrate that conscientious leaders would be able to prepare their followers for the adoption of digitalization. This means that authentic leadership that accommodates the psychology of the employees is critical and, in addressing the digital gap, each leader should be inclusive in his or her leadership approach and be able to impress the vision of the institution to the employees. Digitalization will not stimulate innovation or improve higher education performance without empowered leaders. Higher education leaders who are creative visionaries will improve the competitiveness of their institutions during these times of digital transformation. The

study also shows that it is leaders who use digital leadership who will make the followers understand the chaos brought by the digital transformation. Furthermore, the difference between successful and unsuccessful institutions of higher learning will be the effective professional skills leaders use to guide their institutions. It is also clear from the findings that, without conscientious leaders, digital technologies will not benefit institutions. The study concurs with literature that it is not technology that will transform institutions for the better, but it is effective leaders who will instil a sense of success and strategy for the future. This research also revealed why institutions need visionary leaders who use strategy to support the use of digital technologies. The implications of the study are that, whilst there may be negatives resulting from the widening digital gap, intent leadership will ensure that technology is used to address some ills in society including social injustice. Furthermore, collaboration among all stakeholders in institutions will enhance the application of digital technologies and ensure that technologies address ills of society as they magnify the future. One major limitation of the study, though, is that the sample was small as in any case study research and thus the results cannot be generalizable. However, one understands the unique nature of institutions under study. A quantitative study with a wide sample may help any study show different but generalizable results. Therefore, for future research it will be worthwhile to conduct this study by sampling universities in all South African provinces.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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