THE SEARCH FOR TALENT MANAGEMENT COMPETENCE: INCORPORATING DIGITILIZATION

Prof N Dorasamy, Durban University of Technology

ABSTRACT

This paper aims to examine digitalization and its effect on talent management in an increasing digitalized work environment. Using a comprehensive literature survey of contemporary quantitative and qualitative articles from various sectors, the paper reviews relevant research on talent management and various considerations in managing talent in a highly digitalized work environment.

The current global environment has necessitated the digitalization of information which can be accessed via multiple electronic platforms. In maintaining a competitive edge in the age of digitalization, organizations have been forced to attract and develop talent in an attempt to narrow the mismatch between employees and jobs. This has profoundly shifted the dynamics of traditional human resource management toward not only all the functional areas of human resources being virtualized such as e-recruitment, e-selection, e-performance, e-employee development and e-evaluation, but also managing talent through interconnected and integrated elements of human resource management across the entire organization. It is posited that talent management in the public sector requires a shift of training and knowledge required in specialized skills to personality and soft skills associated with technology advancement.

The paper argues that since digitalization is connected to complex talent management issues in the face of globalization, multiple capacity development initiatives are needed in various domains within the human resource management network. A conceptual framework focusing on transformational human resource management which employs talent management tools that are integrated throughout the organization is recommended to ensure the continuous availability of a talent pool in an era of evolving technologies and the unpredictability of situations in a globally connected work environment.

Keywords: Digitalization, Talent Management, Skills, Competency, Retention.

INTRODUCTION

Digitalization of information into electronic text provides virtual access to information both nationally and globally. It implores organizations to adopt change management strategies which promote the access to digitalized resources to a wide range of users. Widening access to information via electronic types has many benefits like providing easily accessible and retrievable information; the creation of unique resources; and the efficient management of resources which can be used by organizational systems in an integrated way. While the benefits have been recognized, many organizations are bearing the negative consequences of not incorporating digitalization into all talent management processes within the human resource management paradigm.

In the age of digitalization, new processes, systems and methods are being used to manage talent within the human resources domain. Employees as valuable organizational human capital, provide the knowledge, skills and expertise for the achievement of organizational goals.

With a focus on excellence, human resource management has been influenced by digital technologies. In the digital age, human resource management has resulted in almost all functional areas of human resources being virtualized such as e-recruitment, e-selection, e-performance, e-employee development and e-evaluation (Barman & Potsangbam, 2018).

As a strategic source of competitive advantage, talent management requires human resource practices to develop, manage and sustain talent resources through interconnected and integrated elements of human resource management (Shaffer et al., 2012). Talent management, as a driver of global competence, is empowered by a diverse range of digital technologies which provide the platform for the use of integrated and differentiated talent management practices. This is necessitated by an increasingly interconnected and dynamic global environment, requiring analytical and predictive skills; and computational efficiency to strategically manage human resources. As argued by Cascio & Boudreau (2016), digitalization shocked traditional human resource management practices, as it ushered in trends that fundamentally shifted the focus to global interaction, interconnectedness and integration for competitive excellence.

Digitalization in the 21st century needs multiple tools and human skills to mobilize information from multiple and complex domains. Such information can be explicit and practical, while other sources of information maybe tacit and difficult to communicate. However, Carlsson (2018) argued that while all sources of valuable information must be transformed and communicated to digital systems, organizations face the challenge of filtering big data to access relevant and verifiable information that can be used in human resource management. It is contended that the use of digital technology in human resource management helps to analyze workforce characteristics needed to make decisions that enhance organizational wellbeing and performance.

Similarly in the public sector, there is a shift of training and knowledge required in specialized skills to personality and soft skills associated with technology advancement. From a talent management perspective, there is a move away from focusing only on rule-enforced bureaucracies composed of employees with formal qualifications and specialized knowledge of rules and laws (Pors, 2015). The waves of digitalization has created redundancy in the search for talent associated only with formal qualifications and specialized work experience. Digitalization, whether in the public or private sector, has become a fundamental organizing principle supporting a hybrid of integrated practices in public administration. In view of the aforementioned, there is a need to shift from specialists to generalists, moving from content learning to learning how to do the job in creative ways in an era of continuously evolving technologies and the unpredictability of situations in a globally connected work environment (Owen, 2016). Relatedly, Manor (2016) argued that the boundary between professional skills and technology competencies are becoming increasingly blurred, since skills such as responsiveness, communication and discretion are not specific to professional content.

The methodological approach explained the various digitalization trends impacting talent management. This allowed the identification of gaps in talent management processes, necessitating the adoption of multidimensional digitalization patterns which mitigate risks associated with ineffective talent management.

Value of Digitalization for Human Resource Management

Digitalization has initiated a tremendous sift of human resource management toward computer-based information systems, computer hardware and software applications to better manage, supervise recruit, appraise and train employees with the objective of increasing

productivity, performance, communication, employee satisfaction and engagement. E-human resource management supports the maintenance of records, data storage and retrieval of information in a systematic and easily accessible manner. Therefore, employees need to be more involved with digitalized organizational systems, so that effective communication and efficient decision making can improve overall organizational performance. Additionally, employee involvement in diversified digitized organizational activities requires continuous participation in e learning activities that build on their skills and knowledge. From a talent management perspective, organizations have to ensure that they have a talent pool that can contribute to the achievement of organizational goals. This requires a focus on transformational human resource management which employs talent management tools that are integrated throughout the organization. These tools help in talent analytics, providing information on talent profiling, training needs and performance management (Venkatesh, 2016).

Further, digitalization has contributed to a more competitive and transparent online labour market. This has created diverse opportunities for organizations to transform the way they attract, recruit, train, develop, engage and retain their employees (Tanwar, 2017). Instead of perishing, organizations need a judicious combination of employees, technology, structures and processes to address the problem of attracting and retaining employees in a highly digitalized work environment. One of the best practices to address these challenges is talent management. The drive towards talent management provides employees with opportunities to grow personally and professionally. However, with digital advancement, talent management has shifted toward engaging employees appropriately with digital tools and methods. This is an imperative to survive in the digital war for talent, as every organization needs to maintain the pace of change or lose their relevance in an era of accelerated technological change (Sivakami, 2018).

Human resource management is responsible for not only improving the competency level of employees, but also recruiting, retraining and performance managing employees. Employing the right persons in the right positions is a challenging and critical task, if any organization intends to maintain its efficiency and competence levels. In preparing employees for a digitized workplace, the relevance of training and development can have a tremendous influence on having the requisite talent relating to technological proficiencies available within the organization (Rakhy & Vijayan, 2018). Additionally, Gardner et al. (2003) claimed that digital awareness among human resource professionals is critical for building on the digital competency pool for any organization. Rakhy & Vijayan (2018) argued that the transformation of traditional human resource management to strategic human resource management increased the competitiveness and promptness of organizations in attracting and retaining talent.

Digitalization has provided the predictive analytics to enable human resource management integration with prudent strategic actions. If the public sector wants to compete in the digital economy, then it has to invest in human capital; and technology of data and analytics (Billon et al., 2010). Streaming big data enables effective decision making in real time. However, there has to be successful collaboration between human capital and technology to manage human resource issues based on analysed and digitized facts. While it makes smart business sense to work with analytics even in a highly volatile and dynamic digital economy, professional knowledge and analytical skills is an imperative (Carlsso, 2018).

A combination of technologies like HR Intranet, Self Service Software, Integrated HRM Suite Applications (ISA) software and Interactive Service Application provide the virtual space for data management, integrated reporting, streamlined communication and enhanced navigation (Sinha & Mishra, 2014). Such technologies provide opportunities for competency acquisition

analytics, capability analytics, capacity analytics, recruitment channel analytics, corporate culture analytics, employee performance analytics and leadership analytics, (Barman & Potsangbam, 2018). These analytics help in systematically identifying employees that drive or retard the achievement of organizational outcomes. This can be considered as a smart business approach to achieving traditional human resource management responsibilities in a more interactive way that is faster and cheaper.

In considering the various philosophies of human resource talent management, Collings & Mellahi (2009) suggested that talent management should focus on the following:

Categorisation of people

By focusing on people with rare skills and who are difficult to replace compared to other employees, employers differentiate investment in employees who need to be attracted, retained and developed as high potential employees. Relatedly, Sparrow & Makram (2015) posited that organizations are being compelled to shift from pay for the job to pay for the person approach in view of jobs being unpredictable too flexible and complex to be crafted by human resource systems. With reference to digitalization, those with the relevant talent have increased power and opportunity which organizations need to prioritize as an investment in an internal talent pool.

Key human resource practice

Aguinis & O'Boyle (2014) argued that human resource practices must be part of a coherent organizational strategy, which embodies identifying and recruiting talent; attracting talent; diminishing attrition through engagement and retention; identifying core internal talent; managing talent flows; training and developing employees; and talent performance management. These practices not only add strategic value, but incorporate high performance talent practices which can generate social recognition.

Management of positions

Instead of managing people, value creation through a combination of categorization of people with the management of positions approach allows for a systematic identification of posts, complemented by the development of high performance employees to occupy the positions. Such a matching approach according to Al Ariss et al. (2014) not only facilitates the creation of a talent pool which is critical for organizational success , but also links talent management to knowledge markets, organizational design and strategic insight.

Management of strategic pool of collective human capital

The investment in the development and retention of talent can be considered as an investment in the organization, taking cognizance of human capital investment which improves organizational competitiveness, strategic success and capabilities (Dries, 2013). Strategic assets like talent must be managed through multiple human resource practices, which take into account uncertainty; unpredictability about the demand and supply of skills; and other associated risks.

Therefore human resource investment in talent should extend beyond any traditional analyses of talent skillsets, in view of broader concerns about value that is impacted by the greater flexibility of labour in a highly technologically influenced global space.

Digitalization and Integrated Talent Management

The focus of economic value, which has been influenced by technological advancement, has shifted the focus from goods to intellectual information and assets. Talent, as a new strategic asset, develops the information and assets in organizations, thereby fostering a competitive talent environment for organizations to recruit and retain the best talents globally (Joyce & Slocum, 2012). This ensures continuity of knowledge transfer, adequate workforce supply and organizational cohesiveness. McDonnell e al. (2017) asserted that talent management should be escalated to the level of organizational priority, since managing high potential and performing employees in strategic positions cannot be incorporated into conventional human resource management practices.

Technological advancements, are driving change at an unprecedented rate, forcing both the public and private sectors to effectively adapt in order to stay relevant . Both change and competitiveness have created a necessity for organizations to identify new skills and competencies that are aligned to technological requisites and strategic goals (Cappelli & Keller, 2014). From a talent management perspective, strategic human resource management is the avenue that provides sustained competitive advantage. However, Bidwell and Keller (2014) argued that strategic human resource management must be linked to organizational strategy to give legitimacy for the management of unique intellectual assets which competitors cannot imitate.

Relatedly, Cappelli & Keller (2014) advocated a talent management system which integrates all related processes and activities to ensure that human capital provides the source of competitive advantage in a sustainable manner for long term organizational success. Such a system should prioritize key strategic areas in the organization, as well as initiate talent management practices that support organizational objectives. With the speed of technological development, organizations must guard against losing their relevance overnight. These developments impact talent management strategies, as shifts in organizational capabilities through disruptive technological advancements may require a new focus on new talent requirements for high value employees who have higher cognitive abilities to manage complex roles. Therefore, strengthening the talent capabilities of high potential and performing employees requires a differentiated human resource management architecture which encompasses a system that integrates interrelated activities at multiple levels within the organization. McDonnell, Collings et al. (2017) posited a best fit approach which allows for differentiation, since organizational culture, objectives and talent management practices are integrated specifically to the organizational context.

Digitalization and the Globalization of Talent

The transition to a knowledge economy has been accelerated by digitalization, which has harnessed connectivity between people, data and processes. Digitalization holds tremendous potential for value creation in the economic, social and political spheres. Some of the key factors driving digitalization include: technological advancement connecting people and knowledge sharing; providing citizen centric governance, reduction in cost and time through cloud mobility; use of e-commerce to broaden accessibility to goods and services; and the creation of competitive advantage through innovation (Jain, 2018). Additionally, Kadar et al. (2014) identified reasons like the creation and application of knowledge, dissemination of innovation to

address global challenges, improved governance and empowering people to innovate as some of the driving forces of digitalization in the workplace.

In using digital technologies, digitalization has broadened globalization through the use of value- enhancing opportunities. These include electronic platforms providing access to information more rapidly, without time and boundary constraints. Increased digital power has not only led to phenomenal growth in global economies, but has also created a global pool of competitive talent. Such talent is premised on the ability to create and use technologies, as well as to collect and share information to manage organizations. This has inspired the growth in competition not only in the trade of goods and services, but also the demand for digital talent.

Talent management has become progressively dynamic as digital platforms are growing and changing at an enormous momentum. Therefore, if digital technology is to be applied to almost all aspects of organizational life, every organization‟s talent management strategy must address the needs of a global digital market. While digital trends are unpredictable, organizational sustainability in a globalized era makes it imperative to participate in global economic and social systems. Globalization has the power to impact the positioning of organizations across national borders. Therefore, it is essential for every organization to understand current and emerging global trends, so that their can optimize skills to create, analyze, manage and share information (Evans et al., 2011) .

Enhanced globalization of talent has impacted the flow of skills. It has enabled people to work remotely across geographic boundaries, while creating concerns about security and costs regarding globally distributed employees. Further, the amplification of freelancing work has seen a growth in temporary employment arrangements. This has obviated the need for social interaction at work, as employees can work from home or in co-working spaces (Isaksson & Wennberg, 2016).

Access to a global network of talent, provides organizations with opportunities for increased cost efficiency. For example, the real time flow of data that is virtually accessible allows decision making to be optimized. Digitilization has decreased the barriers impacting globally accessible data. In this regard, Lee et al. (2016) claimed that the emergence of a knowledge based economy necessitates new talent to continuously add value through knowledge generating digital platforms. Information sharing and collective knowledge provides solutions for the creation of more effective business models through open source platforms.

Additionally, Allen et al. (2010) posited that organizational improvement requires strategic approaches to adapt to changing contexts. It has become imperative for organizations to steer their digital strategy toward becoming high drivers of talent in performance and productivity. Without doing so, organizations will not be able to achieve change and transformation supported by digitalization. According to Berman & Marshall (2014), the consequences include failing to upgrade skills to meet the momentum of digitalization, maintaining obsolete silo- governance structures and reinforcing and organizational structure that is not transformative and innovative. In terms of digital skills and competencies, innovative strategies require investment in talent management that is progressive, rather than an overnight response. This can help to bridge skills, technologies and organizational structures in a coherent and longitudinal manner.

As the link between human beings and technology is increasing, Berman & Marshal (2014) claimed that the interlink is symbiotic, a web in which everything and everyone are mutually intertwined. Therefore, talent management has to take cognizance of the following to

ensure that digital skills and competencies are available to optimize benefits for organizational performance (Van der Voet, 2014; Berman & Marshall, 2014; Fraszczyk e al., 2017):

1. Interconnectedness – The sharing of knowledge through digital interconnection and integration unleashes dynamic networking, quality collaboration and productivity.
2. Volume of information – The increased speed of and access to abundance information requires real time decision making using analytics to take advantage of volumes of information.
3. Enhanced transparency - Digital transformation generates more transparent information across boundaries which can be optimally used for increased performance.
4. Diminished barriers - As organizations operate in more virtual spaces, the organizational structure becomes more fluid, thereby enabling top- down and bottom-up learning.
5. Decision enablers – Faster decision making processes supported by digitalization enables easier interaction and communication through virtual platforms.

The aforementioned characteristics associated with digitalization are overlapping and dualistic, requiring the effects of digitilization on talent management to be comprehensively considered.

Global Changes Impacting Talent Management

Globalisation is embedded in all spheres of public sector governance. It enables nations to reach each other faster and in more flexible ways. Digitalization is considered the predominant facilitator of globalization. It is also a driving force for organizational and national advancement. The genesis in not only the global flow of goods and services, but also human talent has impacted the economics of globalization. This is evident in cheaper communication, fast cross border interaction, increased global GDP, increased knowledge sharing and widened networking (ingh & Singh, 2017).

As claimed by Manyika et al. (2013), technology advancement has challenged how people work. This has necessitated the digitalization of information to transform service delivery, economic growth and overall computerization of productivity. The emergence of “big data” has provided access to and use of digital information in more effective and efficient ways (Grass & Weber, 2016). However, this requires organizations to reinvent and transform internal and external core processes in an integrated and coordinated way. In this regard, the World Economic Forum (2017) claimed that organizations need to engage in constant testing and experimenting to determine what works for successful digitalization.

Some of the following global challenges require consideration in improving talent management.

Shift in Workplace Conventions

With technology making information uncontrollable and unlimited, the workplace is being influenced by shifts toward networking, greater autonomy, respect for content and greater collaboration. This is preceded by conventional paradigms like maintaining organizational hierarchy, focusing on maintaining the traditional status quo and working in silos (Susskind & Susskind, 2015). This implies greater control of employees over traditional working hours, enhanced sharing of information, a blurring of work-life blend and a greater influence of networked employees to catalyse quick decisions.

Smart working, according to Grass & Weber (2016), should not be perceived as isolation from colleagues and organizational culture. Rather, the outweighing advantages include greater

independence, employability bolstering, continuous learning and moving away from the job for life mentality. These shifts in the workplace paradigm are part of a trend toward accessing and retaining talent from a global pool of talent.

Talent Paradox

Developing skills for the digital age, requires specialized skills. Conversely, Evans et al. (2002) argued that the way employees are developed is not broad enough to empower them to collaborate with others. The paradox of talent development being too narrow and not specialized enough is a reflection of the dualities that exist in the skills needed for employees to perform according to immediate performance requirements, while also being able to be productive, collaborative and innovative in the long term. Often, the debate is whether talent management should focus on the breadth of liberal training and development or the depth of vocationally oriented training and development. It can be argued that collaboration with multiple users from different digital platforms may require specialist, innovative skills, as well as collaborative, social skills which cover the matrix of the depth and breadth of skills .

Increased Employee Mobility

The speed of innovation through digitalization has impacted people having careers in multiple organizations , as well as people having muliple careers. Job mobility is necessitated by technological change requiring work and skills transitions.

Further, rapid digital technology advancement has influenced the willingness of employees to move for better jobs. While this has increased the availability of employees, it has also increased the demand for talented employees (Felius, 2017). This has contributed to a global talent war, with organizations competing for the right people at the right time (Beechler & Woodward, 2009). If organizations are to win the talent war, then they need to be innovative and strategic.

Managing People through Digital Tools

Virtual collaboration has influenced how employees engage with information and decision making. Felius (2017) identified easily accessible information, time saving, cost reduction and multiple sources of information dissemination as some of the benefits of digitalization. Therefore to remain relevant, organizations has to adapt to technological advancement.

Speed of Information Flow

Apart from increased accessibility to information, the increased flow of information at higher speeds has necessitated speedy responsiveness to emerging issues in a dynamic world of work. This has created an need for competent and high potential employees who can transmit ideas, initiate information flows and efficiently use innovation to access knowledge (Tarique & Schuler, 2010). This implies that talent must be readily available across various locations. From a human resource perspective, the human resource system has to strategically be involved in planning, forecasting, selecting and developing talent (Felius, 2017).

Turnover Rates

Higher turnover rates contribute to the loss of organizational memory, work disruptions and higher costs associated with recruiting new employees (Park & Shaw, 2013). The speed of technological advancement has created a gap between the required skills and skills which employees possess (World Economic Forum, 2017). Skills mismatch can exist in skills shortage, qualification mismatch, skills gap and under qualification, among others. It is therefore imperative for human resource management to match the skills requirements, to potentially avoid increasing employee turnover rates.

The study by Park and Shaw (2013) concluded that a high turnover rates was negatively associated with organizational performance. Therefore, employee retention strategies must ensure employee turnover is minimized. Such strategies should focus on attitudinal commitment, behavioural commitment, clear role expectations, job motivation and work environment (Bryant et al., 2010; Presslee et al., 2013). This can help to ensure that the costs and effort invested in employees is retained within the organization, while providing the opportunities for employees to remain in the organization.

Diversity in Labour Demands

A talent management system must respond to different skill sets which are relevant within the entire technology domain. Digitalization has created a growing demand for technological professions. According to Sabbagh et al. (2012), the most in demand technological jobs include data scientists, data engineers, analytics managers and marketing analysts. Raja and Ampah (2016) posited that the degree of technological development has created new high skilled jobs like cloud computing specialists, market research data miners and search engine optimization specialists which require specialist skill sets to successfully perform their tasks. To the contrary, digitalization has steadily reduced the demand for low-skilled jobs and possibly increasing unemployment. This is attributable to the need for hard skills in the technology industry (Organization for Economic Co-operation and Development, 2015). Therefore, organizations need employees who are digitally skilled in areas like web and application development, social media management, cloud computing, integration of software and database administration. Brooks (2016) added that apart from hard skills, technological advancement requires soft skills like solving complex problems, sound and coherent IT communication, critical thinking, creativity and emotional intelligence.

Communication

Communication has been influenced by digitization of the workplace. New methods are being used to communicate in virtual spaces. This has impacted broadened contact between various stakeholders, often resulting in accelerated information flow. Often, instant and constant communication has to be forthcoming. This has to be preceded by information verification, to ensure accurate communication. As time has become boundless in massive technological information flow, employees have to set their own boundaries in managing the transmission of information timeously. Apart from technology skills, employees need new skills in managing information transparency, security issues and democratization of information flow (Felius, 2017).

Development of Generalists

Technology advancements requires talented employees to react appropriately to a wide array of unforeseen developments. While experience and expertise is required from a specialist perspective, the global mobility of employees also requires generalists. Feluis (2017) argued that such generalists should have a variety of fields of specializations. For example, it has become necessary to have analytical, adaptability and flexibility capabilities in various fields to be able to successfully execute work in various field. Feluis (2017) refers to this as the specialist generalists, who not only need the theoretical knowledge relating to their jobs, but also the flexibility and assessment skills to manage new challenges that emerge with the rapid pace of information flow.

Output Orientation

Digitalization has shifted the focus away from performance management. Instead of evaluating how work is done in terms of inputs, the digital economy has prompted a shift toward the delivery of desired output. This is largely attributable to on demand work, which Kristensen (2016) argued is crucial in an era of constantly changing output needs. Hence, there is an increasing reliance on digitally assisted systems to help employees to help themselves. Often, there is greater responsibility on employees to manage their own development, rather than being subjected to top- down human resources management processes. Relatedly, Prassl & Risak (2016) cited the use of output orientation work models, where organizations allow virtual players to form work communities to complete tasks beyond the boundaries of the organization. This is supported by Boudreau, Jesuthasan & Creelman (2015) who asserted that the "human cloud" allows employers to outsource work on demand to workers via online platforms. Depending on task demands, employers can connect with workers to perform specialized tasks or they can aggregate crowdsourcing multiple tasks to find the best solution. It can therefore be posited that getting on demand work done to support output orientation is being increasingly driven by online platforms providing multiple opportunities to get produce the desired output through collaborative engagement.

Connectedness

Various digital platforms provide the means for interaction and collaboration among diverse organizations. Prassl & Risak (2016) posited that whenever, technology is at the forefront, collaborative relationships provide economies of scale. Such networking with wider contacts often provides solutions. However, Gulati et al. (2012) posited that networking requires skills to integrate various functions into the entire organizational structure. This implies that all processes linked to technology should be integrated across global and national branches of any organization. This not only allows fast access to ITY capabilities, but also strengthens the organizations agility to respond to new needs.

Networking Skills

Building networking alliances within and across organizations in a global environment should be driven by negotiation, establishing connections and nurturing collaboration. Networking skills requires employees to be influential, proficient and analytical (Bondarouk &

Ruel, 2009). This has to be reinforced by the ability to assimilate information quicker, remain updated with relevant information, analyze important information and provide accurate information to appropriate networks. Overall, felius (2017) argued that maintaining networks is inadequate, as employees need to fully comprehend the dynamics of networking.

Data Driven Recruiting

In an age of continuous and inevitable change, flexibility, mobility and adaptation are vital. Mokyr et al. (2015) asserted that while hard skills will continue to change, technical competence has impacted a growing need for soft skills like learning ability, being able to navigate through unavoidable change and dealing with complexities. These radical transformations imply that human resources practices need to create new systems to exploit global connectivity, remote management systems, digital recruiting. These systems have to provide information that is accurate and data driven so that human resource management can recruit employees not merely based on work experience. In this regard, Stahl et al. (2012) argued that predictive analysis of potential employees should include their listening skills, negotiation competence, priority setting skills and their motivational drivers. This implies that traditional recruitment can hamper a deeper assessment of employee profiles which is needed for technologically leveraged workplace.

Learning Culture

Establishing a learning culture in a dynamic human resource environment, can provide the impetus for employees to be productive, take ownership of their learning for further development and increased responsibility. Mellahi & Collings (2010) claimed that the provision of a learning culture enhances trust, motivation and job satisfaction. In providing a stimulating working environment, organizations can foster more synchronized teamwork where knowledge is more openly and timeously shared (Felius, 2017). Further, through the career development of employees in sync with future organizational needs, human resource management can actively prepare for learning and development. This has to consider existing and new competencies required, so that planned learning can minimize the gap between existing and new competencies.

Competencies

With new competencies constantly evolving with technological advancement, employees require ongoing competency development for effective competency application. Therefore, it is critical that organizations adapt their human resource management practices to incorporate the continuous development of competencies that are aligned to technological changes. Additionally, Olafsen et al. (2015) opined that flexible practices are a necessity to get results in an increasing uncertain and dynamic global environment. For organizations to maintain relevance and attractiveness, commitment to empowering employees is critical.

Requirements for Effective Digitalization and Talent Management

Talent management broadly encompasses succession planning practices, focusing on core jobs which are critical for competitive excellence. This entails developing and managing high performing employees who play a crucial role in achieving strategically critical organizational outcomes (Boxall, 2013). With the globalization of organizations, talent management has

widened its focus to attract, select, develop and retain the most talented employees in worldwide roles. In this regard Khilji et al., (2015) posited that the scope of talent management must incorporate macro effects which should consider global talent mobility. This implies global talent management that extends beyond national influences and effects (Collings et al., 2015). Effective digitalization and talent management requires consideration of some of the following areas.

Institutionalizing Digital Culture

Radu-Alexandru (2017) claimed that the practice of management has been changed by the digital era, creating opportunities for improved decision making, performance and gaining competitive advantage. This draws on not only collecting huge amounts of data, but also sourcing the right data. However, McAfee & Brynjolfsson (2012) asserted that big data alone is inadequate for optimizing decision making, as this has to be complemented by human insight, intuition, knowledge and experience. This implies institutionalizing a data driven culture, which supports all aspects of digital initiatives within the organization. Wessel (2016) suggested that a digital plan should focus on aspects like technical issues, digital tools, skills required and cpai6tla investment. This provides the basis for management to discuss the greatest return on investment in digitalization.

Experienced Human Users

Automated systems should be used productively by human system users who have the requisite knowledge and skills. Carlsson (2018) argued that joint human and system intelligence should be built, so that system users have real time advice when working with real information. With data being collected from multiple sites like software systems, data warehouses, monitoring systems and digital devices, human system users need to process data that is usable for digital systems.

In view of technological advancements based on a hybrid of processes, upgrading the skills of a digital workforce is a necessity for them to work effectively with technology. While Cascio & Boudreau (2016) agreed that the human element cannot be replaced with human resource technology, they noted that there is an increased dependence on such technology. Such dependency has created rapidly changing demand for new skills in data science and artificial intelligence. This has heralded the need for flexible and resilient human resource approaches requiring constant investments in new skill sets to manage human resource technological platforms. However, to the contrary, Barman & Potsangbam (2018) claimed that technology led human resource management will eventually replace the human mind.

Efficient Decision Making

The resultant integration of digitalization into all organizational functions and operations , will ensure that talent in the new environment is engrained in all aspects of the organizational environment. In this regard, Martinez & Jarillo (1989) argued that the impact of digitalization should not be underestimated as any digital changes affects organizational structures, processes and management.

Big data analytics enables organizations to extract specifically required information with speed to enable them to make efficient decisions. Further, in examining vast amounts of data,

organizations can seize opportunities to embark on improved performance. However, analyzing big data requires skilled employees who can use analytical tools to generate information that can be used for operational excellence, risk mitigation and optimal performance outcomes (Spieza, 2015).

Customizing Talent

Incorporating digitalization at all levels within the organization, implies that talent management must be a comprehensive consideration for which the entire organization takes responsibility. Hence, access to comprehensive digital information and needed skills, enables knowledgeable decision making regarding talent management across the entire organization. Gulati et al. (2012) argued that this allows for the possibility of customizing talent skills that are relevant to organizational needs. Tailoring talent competencies to digitalization allows for establishing not only competitive advantage, but also sustaining unique organizational practices.

Adapting Systems to Serve Contexts

While users need to be technologically confident and proficient, they need to develop systems that are adapted to their organizational context. The transition from data and information to knowledge requires data to be fused and synergized from different formats using a variety of analytical tools and techniques like statistical analysis, mathematical programming and visualization (Laurell & Sandström, 2016). Data is required to describe and explain talent management patterns and associated challenges. Such data requires continuous updating through automatic support to validate certainty, logical assumptions and relevance of data. Therefore, specific and broad organizational and strategic skills are needed to develop digital strategies suitable for the organizational context.

Measuring Dimensions of Digital Success

Implementation of digital initiatives has to be supported by measuring the success of digitalization, as Adler (2016) opined that digital success is not only about the implementation of digital initiatives. Other important enablers that should be measured include the achievement of organizational outcomes, management strengths, people management and the availability of appropriate skills. Further, since many digital initiatives are still in an exploratory or infancy stage, organizations may experience difficulty in identifying specific talents and skills needed for the different dimensions of the digital talent equation within the organization. Lipman (2012) speculated that this can create a fog in aligning the digital initiatives to the organizational digital strategy, hence making measuring success difficult.

Adoption of Value Generating Framework

High performance through human capital in a highly driven digital era, has implored organizations to adopt a paradigm shift based on advanced technologies. This has resulted in high impact digital human resource management, with promises of improved impact on organizational performance. Referring to the age of the "thinking machine", Barman and Das (2018) opined that human resource technology is indispensable for organizational competitiveness and excellence as it supports fast decision making, quality of human resource functions and enhanced employee productivity. However, Bustamante & Gandhi (2018) posited

that while technological advancements have taken the centre stage of human resource management, effective technology must be considered rather than being swayed by the adoption of human resource technology that does not support easy demand information, streamlined processes, accuracy of predictive decisions and sustained improvement.

Deep Analytic Skills

It is often claimed that the return on investment is greater than the cost of capital if organizations invest in data talent that is complemented by employees who are data analysts and those who can interpret and use the analytics for robust decisions (Cappelli & Keller, 2014). Digitalization has created a demand for new jobs and increased capital investment. In the absence of sufficient digital literacy, organizations cannot invest in new types of digital capital. As claimed by Cunha & Heckman (2007), digital literacy encompasses changed notions of work and how it is organized. This has to be complemented by capital investments that support resilient, continuous learning of new analytic skills.

Digital initiatives by organizations has raised challenges relating to identification of talent needs and gaps, appropriate management approaches, establishing a supportive and engaging organizational culture and the use of appropriate digital solutions to achieve organizational outcomes. Therefore, merely recruiting digitally competent employees is inadequate: they need analytical competencies to incorporate digital approaches across the entire organizational value chain.

Training and Development

Technological advancement has created competition for talented employees who are highly driven to apply technology in the workplace. Since employees are primary assets for organizational success, investment in their training and development is a crucial aspect of human resource retention strategy (Grass & Weber, 2016). The pace of technology has created a dilemma of skills shortage. The World Bank (2016) speculated that by 2020 there will be a shortage of 756,000 information and communication technologies professionals. It also estimated that 90% of jobs will require digital competence. Therefore, revolutionizing training and development is vital for upskilling mature employees; reducing unemployment; and sustaining innovation and competiveness in the workplace.

Lipman (2012) cited increased employee and organizational productivity, reduced turnover, acquisition of new technological skills and professional growth as some of the critical reasons for training and development in an era of technological development. Further, training and development helps to match the right employees with the right jobs, to avoid the growing problem of skills mismatch. This is further garnered through various social media platforms like Monster & Careerbuilder which allows individuals to publicise their experience, skills and expertise and connect with the right network of organizations. Additionally, talent management platforms like Reviewsnap & Payscale allow the assessment of the skills and work experience of potential candidates with a view to determine training and development needs. Grass and Weber (2016) predicted that online talent platforms significantly contribute to improved work outcomes, as issues like misallocations in training and development programmed are assessed to against global demands. In view of the emergence of the Fourth Industrial Revolution, training and development is an imperative driver of competiveness, productivity and innovation.

Value Creation, Value Capture, Value Leverage, Value Protection and a Talent Maturity Approach for Effective Talent Management

Sparrow & Makram (2015) asserted that without the development and implementation of processes, practices and systems supporting talent management, organizations will fail to claim value in terms of the knowledge, skills, experience and capabilities possessed by in-house talent. This requires integration of talent management throughout the entire organization.

Valuable talent, which is not substitutable, capacitates any organization to sustain it‟s competitive advantage. A talented employee, who possess rare capital and can be distinguished from other employees, enables organizations to implement value creation strategies. Relatedly, Bersin (2015) refers to the adoption of a talent management maturity approach, which focuses on strengthening talent capabilities as an inclusive, integrated and systematic approach at all levels within the organization. Collings (2014) posited that at an organizational level, the exploitation of internal resources and capabilities to implement value creation strategies enables organizations to enhance their performance.

In terms of value driven processes for talent management, Sparrow and Makram (2015) identified the following four processes:

Value creation

It is the process to attract and retain talent resources to exploit their capacity to create value. Value in terms of content, the targets for whom value is created and the processes by which value is created are important considerations for value creation in terms of talent management. The availability of talent to contribute to organizational competency requires policies, processes and procedures to ensure that such resources are exploited to their full potential to main competitive advantage. His necessitates value creating in employees who cannot be imitated and are novel. Their impact is on their output , rather than on any special input of traits or abilities.

Value capture

It is the process of combining talent with other organizational resources to create dependency within the organizational context. The use value of talent has to be supplemented with processes that capture the new use value. This implies that the relational disposition of knowledge production requires bargaining between employers and talented employees. Such negotiations may require organizations to sell their resources to capture value from talent.

Value leverage

It is the process of developing and extending the captured talent capabilities to increase their use value. This involves mobilizing, coordinating and deploying talent to serve changing needs. Leveraging requires the generation of new ideas to enhance skills; implementing structures to capture and transfer knowledge and the establishment of collaboration between complementary resources to promote knowledge transfer.

Value protection

It is the process of implementing isolating mechanisms to protect the loss of talent to other competitors. Isolating mechanisms like salary growth and guarding against threats of value leaks can prevent value from being captured by competitors. Similarly, exercising greater control over competitive intelligence can protect the benefits of value creation from being captured.

The value driven processes identified by Sparrow & Makram (2015) have challenged traditional talent management approaches which have failed to consider employee culture, engagement and retention, as organizational priorities (Bersin, 2015). Further, the talent management maturity approach identified by Bersin (2015), provides a new vision on integration that extends beyond the foundational level. As illustrated in Figure 1, talent management needs to move beyond essential talent training and development; and critical talent growth (levels 1 and 2). Such low levels of maturity are exclusive and do not focus on integrating talent management with higher levels of diverse talent maturity. Having a talent strategy can be seen as talent wisdom, as it reflects on a strong sense of talent practices required for organizational needs and the adoption of a learning culture that sees talent as an asset rather than as an employee cost (Bersin, 2015). Aligning key principles like diversity, inclusivity, integration, performance management and learning with organizational culture and objectives is a key to differentiating organizations with high level talent management strategies. Such organizations are involved in level 3 and level 4 talent management. At these levels, organizations have a talent strategy that focuses on increasing talent engagement, performance and retention. These are aligned to leadership strategy and strategic objectives that are development oriented.

In attempting to pursue a talent management maturity approach, Bersin (2015) suggested that organizations should: ensure leaders‟ have a comprehensive qualitative and quantitative understanding of employees; endorse talent processes based on enhanced insight; and provide opportunities for employees to converse with the organization. Ultimately, greater understanding of employees through various channels of communication generates an increased focus on employee diversity and inclusivity, which is critical for talent management.

Collings & Mellahi (2009) argued that talent management systems should be directed at high potential and performing employees in key roles of the organization. Narrowing the focus from all the employees to a limited pool of high performers in key positions distinguishes talent management from conventional human resource management. Sparrow & Makram (2015) argued that developing a talent pool from both the internal and external labour markets to supply key strategic positions endorses a “recruiting ahead of the curve” proactive approach to filling critical positions that may emerge. This should be supported by commitment, development and motivation of individuals in the talent pool (Bidwell & Keller, 2014) ((Figure 1)(Source: Adapted from Bersin by Deloitte (2015)).

FIGURE 1
NEW TALENT MANAGEMENT MATURITY MODEL

In relation to digitalization and talent management, any organization needs a comprehensive insight into the total system impact of such talent. Talent management in a highly digitalized environment requires much more than comparing the costs of focusing resources on a smaller group of talent, with a larger non talent workforce (Sparrow & Makram, 2015). The talent management maturity approach draws attention to the valuation of talent claims based on intellectual capital rather than merely on reputational capital. This implies focusing on talent management practices which incorporate knowledgement management that is greatly influenced by digitalization. Ultimately, talent management has to shift away from the traditional human capital perspective which has ignored the issue of talent risk management. In protecting talent as intellectual property, Dries (2013) asserted that the value of talent should be seen through the lens of a life cycle approach, in which organizational effectiveness interfaces with different levels of talent management throughout the organization. This addresses the need to understand talent management as just one mechanism for enhancing and distributing wider capabilities throughout the organization.

CONCLUSION

Individual talent in organizations is generally assumed to be unique. Talented individuals have a diverse and complex mix of knowledge, skills, competencies, cognitive capability and behavioral attitudes which places their achievements above their co- workers (Tansley, 2011). The paper highlighted various benefits and challenges associated with incorporating digitalization into talent management processes. It is recognized that a multi pronged approach is needed to successfully manage the complexities of integrating digitalization and talent management. Therefore, with technology augmenting the work of employees, it is imperative that talent management has to be supported by enablers that focus on augmenting the technological capabilities of employees. Further, the „internet of things" revolution, underpinned by digital data and means, has impacted working differently with new models of data analytics.

This has necessitated the development of soft and hard skills needed for employees to work with technology.

The subsequent transformative nature of work has resulted in work being undertaken with a reduced focus on a constrained physical work environment. Since organizations need to adapt talent management to the transformational technological changes requiring learning agility, retraining and producing talent with technical skills, talent management must be driven by training and development that is forward looking. This draws attention to the need for building investments in processes and technology which will enhance talent management experiences throughout the organization.

According to Tansley (2011), talented individuals display both high potential and high performance. Talented individuals have the potential to aspire and succeed in critical positions, while they have the expertise, behaviours, creativity and initiative associated with successful performance. For example in the public sector, talented individuals with high potential and performance are needed due to the new public management agenda.

In considering technological advancement, organizations have to manage talent in an integrated manner throughout the organization. The marriage between digitalization and talent management is an imperative in a complex and uncertain human resource environment. Talent management relating to digital labour, not only makes it easy to attract employees, but it has also become difficult to retain them. In view of this, organizations have to find innovative ways through digital strategies to manage talent that adds value in their day to day activities (Sivakami, 2018). Relatedly, Aguinis & Lawal (2013) suggest that a heterogeneous and complex digital environment is better managed when organizations are better able to blend organizational and employee goals.

Organizations have to adapt to innovative approaches in technology, if they expect human resource management to play a significant role in organizational performance. The emergence of a more holistic human resource management approach, steered by technology, offers total quality to how talent is sourced, developed and engaged. Reskilling of talent in the public sector brings forward learning practices that focus on high levels of adaptability and personal competencies.

Finally, attracting, recruiting and retaining talented employees with the necessary qualifications and innovative skills will ensure that any organization has the right people, at the right time to do the right job in a digitally driven environment. This implies continuous organizational improvement and innovation to ensure available talent at all levels within the organization. Through active engagement with talent, organizations can widen their pool of talent needed to inject excellence and competiveness into their image.

Thus, it is critical to observe that digitalization has to be integrated into all talent management processes, thereby necessitating new technologies; methods of digital innovation and development of skills are incorporated into systematic processes which organizations can use to optimize talent management. It is clear that digital initiatives impact talent management and how organizations cope in a competitive global environment which is continuously evolving.

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