DESIGN THINKING AS A COMPETENCY FOR EDUCATIONAL LEADERSHIP PERFORMANCE IN A NEW NORMAL WORLD

Rita Lawarty
Central Global University, Georgia

Abstract

COVID-19 offers a great opportunity to rethink the most important elements of education. The post-pandemic universe offers two possibilities: a return to traditional education as usual or a change to new education. When we emerge, we need not go as usual, but to think carefully about what we've experienced and to turn sharply towards better education and society. Design Thinking has received increasing attention from practitioners and academics from many sectors and disciplines over the past decade for its capacity to promote innovation and address complex challenges. However, there is little evidence that schools have adopted the approach to the same extent as many other organizations in the public, private and third sectors. Therefore, this paper aims to clarify the relationship between design thinking and the performance of educational leaders. The importance of design thinking as a capacity in the context of the leadership in education in the new, normal world has been shown. This paper aims to answer the question as to how conceptual principles help leaders achieve better quality in their activities and find new ways and means of managing their organization effectively. This study is therefore structured. In the first part, this paper provided extensive insights into the conceptual approach and the importance of design thinking competency in platform development. In the second part, a conceptual model was developed to link design thinking to the performance of education management.

Keywords: Design Thinking; Educational Leadership; Design Thinking Competency; Leadership Performance; Covid 19; New Normal

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1. Introduction

COVID-19 offers a great opportunity to rethink the most important elements of education. The current crisis involves an adaptive response, but the hybrid (virtual and physical) class remains the subject of a transition. Whether a pedagogical renewal was possible or if education was simply to return to the square at the end of the de-escalation phase. This paper examines the current situation and reflects on the optimism of the will (Shirley, 2020) in the months, years and probably decades, the will to change education, to question whether further education beyond the pandemic is feasible.

On the other hand, Design Thinking has received increasing attention from practitioners and academics from many sectors and disciplines over the past decade for its capacity to promote innovation and address complex challenges. Design thinking was described as a 'human-centred approach to innovation that places the observation and discovery of human needs, which are often very nuanced, even tacit, at the forefront of innovation' (Gruber et al., 2015). While there is growing evidence that design thinking provides value to companies seeking to innovate and societies seeking to make change happen (Liedtka, 2018), there is little evidence that schools have adopted the approach to the same extent as many other organizations in public, private and third sectors.

In this article, we argue that design thinking could offer an inclusive approach to innovation and transformation, one that educational leaders can utilise to address these complex challenges, improve stagnant processes and ensure sustainability over time. Change can only happen if educational leaders can motivate, build creative confidence and give permission and support staff and students to take action. We argue that they need to empower leaders with the capabilities - tools, attitudes and abilities necessary to identify and tackle challenges and move into an uncertain space where the core skills and mindsets of design thinking: empathy, humility, creativity, experimentation and a bias towards action offer the opportunity to design that change. We put forward a set of design principles that could help catalyse and support this process.

The paper aims to clarify the relationship between design thinking and the performance of educational leaders. The importance of design thinking as competency in leadership in education in the new, normal world has been shown. This paper aims to answer how conceptual principles help leaders achieve better quality in their activities and find new ways and means of managing their organization effectively. This study is therefore structured. The first part provided extensive insights into the conceptual approach and the importance of design in platform development. In the second part, a conceptual model was developed to link design thinking to the performance of education management.

2. Literature Reviews

2.1 Educational Leadership Performance in A New Normal World

As Healy et al. (2020) noted, the challenges facing educational institutions due to COVID-19 are highly diverse, ranging from student experience issues, student intake, school management, financial issues and staff issues.

Although many welcome the unique opportunity to develop new education policies and practices, some worry about the urgency of this situation leading to hasty, technical-deterministic solutions to "panic mode" (Teräs et al., 2020). This is a concern that we also share because, at this critical time, we must ensure that we are identifying and tackling "*the right problems*" and not hastily implementing the wrong things well (Vaugh & Ryan, 2015). As we are not even a year into this pandemic, little research has been published on the true impact of COVID-19 on educational institutions.

Despite considerable leadership research, the skills of an efficient leader and how conception is linked to leadership performance are uncertain (Kets de Vries, 2001, 2004; Drucker, 2004; Finkelstein, 2004; Rosete and Ciarrochi, 2005). The capacity to think or analyze information or situations leading to or leading to efficient or higher performance means the capacity to think or analyze information and conditions leading to or leading to better performance. In general, competencies defined by Boyatzis (2007) as 'Boyatzis (2007)' are based on a theory of performance. Maximum efficiency should be achieved if the skills and talents of the individual meet the working and business conditions (Boyatzis, 2007). Competency in this paper is viewed as the universal quality that allows people to work irrespective of their field or organization (Delahoussaye, 1999; Nickols,

2000; Sokol, 2001). Different authors or studies are generally inclusive of three competency clusters that lead or can predict excellent leadership (Spencer and Spencer, 1993; Jokinen, 2005; Goleman, 1998, 2000; Boyatzis, 2007):

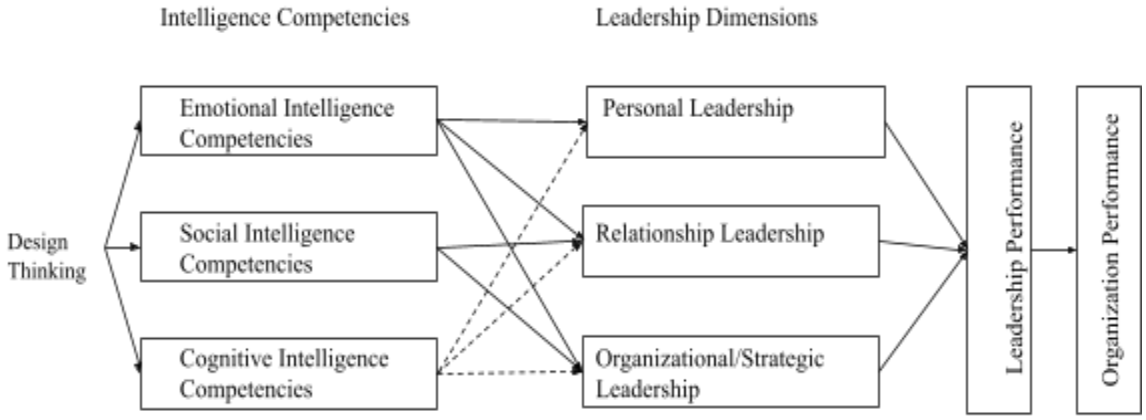
(1) Cognition skills.

(2) Emotional intelligence skills.

(3) Social intelligence skills.

Skills are a mental, social and intellectual intelligence attitude (Boyatzis, 2007). The theoretical frame of development of a new theoretical model that combines intelligence with management performance is an integrated intelligence concept (Figure 1). For example, enhanced interaction between a leader and a leader affects leadership performance and management, which affects the company's performance. Competencies indirectly affect organizational performance by building leadership performance.

Figure 1: The impact of intelligence competencies on leadership performance



2.2 Design Thinking as competence in Educational Leadership

Design Thinking is described as Gruber, DeLeon, George and Thompson's (2015) human-centric approach to innovation, often very nuanced and even tacit, placing human needs in the foreground of innovation for observation and discovery."It is seen as "*intentional, creative and supercharged*" thinking (Costa, 2017:6). While there are many design thinking frameworks, they all focus on four key elements: deep stakeholder engagement to understand and define the challenge; creativity to develop choices and discover new ways of tackling challenges; engineering and business skills to build,

experiment and implement solutions of value, and; engaged stakeholders, working across silos to inspire and co-create solutions into existence.

Design Thinking is now a well-respected and validated means of tackling complex challenges, such as those facing educational institutions today (Liedtka, 2018). It is also a proven methodology for delivering innovation and positive experience outcomes across products, services and processes in a range of situations (Liedtka, 2018). A global study by PwC demonstrated that Design Thinking is now being used by almost 59% of organisations as their operating model for driving innovation (Staack and Cole, 2017). Schiedgen et. al. (2015), in a study of 181 public and private organisations in Germany, found that 71% of respondents found design thinking improved working culture and 69% found it made their innovation processes more efficient.

We must now shift to a new way of operating, one which is more empathetic, more innovative and less reliant on what sufficed in the past. In this article, we propose that design thinking offers a new, accessible and effective approach, one which can enable the community to combine empathy and creativity to not only tackle the challenges that exist but to get ahead of them and propose new and better ways of doing and experiencing traditional education.

The new theoretical model (Figure 1) is based on a concept of leadership that includes the dimension of leadership defined by modern function theory (Fry, 2003; Zohar and Marshall, 2004; Csikszentmihalyi, 2003; Stout, 2001; Ketz de Vries, 2004; Depree, 2004).

(1) Size of staff:

(2) Dimension of relationship:

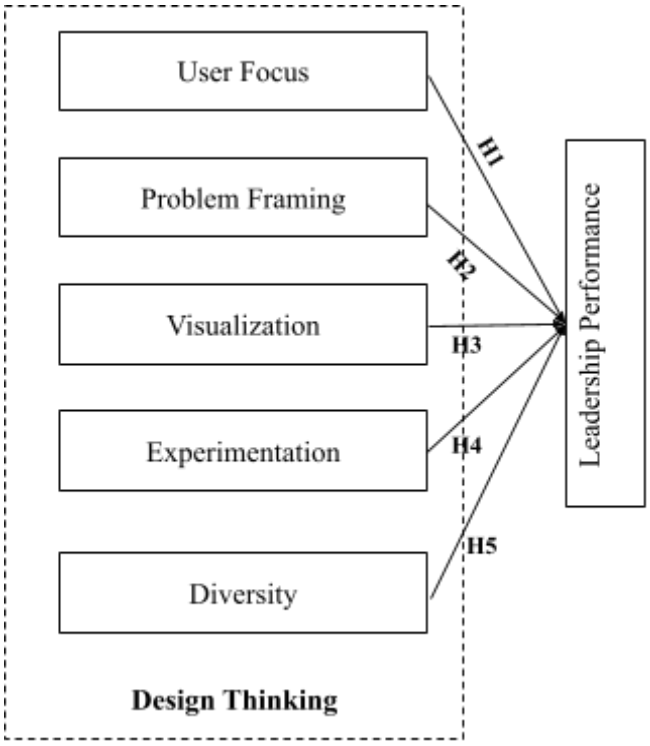
(3) Dimension of organization/strategy:

Kets de Vries (2004) outlined the different leadership theories and described the importance of intelligence leadership in all theories.

Many scholars have studied and empirically demonstrated the link between intelligence and leadership (Fesit and Barron, 1996; Prati, 2004; Goleman, 2000; Prewitt, 2004). Emerging intelligence concepts have shown the relationship between disposition and management results (Bono and Judge, 2004; Cherniss, 2000). The link between change leadership and desirable outcomes is well established (Lowe, 1990). Research into the

design as a competence, on the other hand, is very distinct. Design thinking has not been sufficiently explored as an intellectual skill. The leadership role of design thinking was not empirically revealed while design thinking was considered a valuable skill of a leader (Ellis et al. 1995). Leadership has not been adequately investigated (Figure 1). Only a few empirical studies have shown that leadership is the outcome of design thinking. Another literary gap is that no methods and means for assessing, measuring and developing design thinking are suggested. There is little empirical study of design thinking, while theoretical and educational considerations can hardly be found to develop design thinking in general (Ossmitz, 2000). Simply put, design can be concluded as an underexplored competence. The effect of design thinking on leadership performance has not been tested empirically, so the study focuses on how design thinking is intelligence and leadership performance. This paper shows the link between design thinking and performance in leadership. Conceptual Research Framework (Figure 2). In this model, there are five sub constructions: user focus, problem structure, visualization, experimentation and diversity (Carlgren and her colleagues, 2016a, 2016b). Relationships have been empirically tested between these buildings.

Figure 2: Conceptual Research Framework



3. Proposition Development

3.1 User Focus

Innovation and user focus are considered key variables behind the implementation of design thinking. The integration of design skills into business is influential and can bring competitive advantages (Brown, 2008; Johansson-Sköldberg et al, 2013; Carlgren et al., 2016b; Prud'homme van Reine, 2017). Martin (2009, p.38) submitted that it "allows leaders to innovate along the path of the funnel of knowledge (mystery, heuristic, algorithm) and companies that master it can gain long-term business benefits" (2018). Therefore, human centrality is a major problem. This is reflected in the concept of human design, which has gradually become an expertise field (van der Bijl-Brouwer and Dorst, 2017, p.1).

The key variables behind the implementation of design thinking are innovation and customer focus. By introducing business design expertise, innovation can contribute to competitive advantages (Brown, 2008; Johansson-Sköldberg et al., 2013; Carlgren et al. 2016b; Prud'homme van Reine, 2017). Martin (2009, page 38) argued that design "allows leaders to innovate along the path of the knowledge funnel (mystery, heuristic, algorithm) and companies that master it can gain long-term business benefits" (2018). Approaches such as user-centred or person-centred design are addressed in this context; they are close to design thinking. Norman and Verganti discussed the potential of human-centred innovation design critically (2014). They need to think of fundamental technological changes (e.g. by motivating design teams to work in many ways) when companies want to create radical and not only gradual innovation (Norman and Verganti, 2014). Van der Bijl-Brouwer et Dorst (2017) stressed the importance of human-centred design in response to this criticism. Leadership failures have been attributed to how leaders have developed and the lack of a human-centred approach in their work (Petriglieri & Petriglieri 2015).

Professional development is a function to create knowledge to increase the performance of an individual within organizational systems with no direct connection to individual development (Noble, 2002, 2013). A limited amount of contextual focus in leadership development restricts the ability of future and current leaders to implement successful and sustainable leadership practices (Shamir & Howell, 1999).

In association with these, the following proposition has been formulated.

Proposition 1: User Focus has a positive significant relationship with Leadership Performance.

3.2 Problem Framing

Design thinking can be tremendously helpful when working with undefined or "wicked" problems (Cross, 2006). This approach allows for undefined problems and outcomes to be explored while engaging across the organization, with a variety of teams, with diverse mindsets, thought processes, and experiences (Cross, 2006).

Design theory is the ability to make sense of problems and organization issues while using a creative process (Cross, 2001). Design theory has been researched and implemented as both a philosophical and practical approach to addressing the specific needs of organizations (Cross, 2001). Many have viewed design as an epistemological process that is reflective in its practice. Design theory considers how people learn and develop knowledge while concurrently teaching these abilities to participants who are open to potential growth (Feast & Melles, 2010). Using both convergent and divergent methods, a multitude of possibilities are explored without making assumptions about which outcomes are best instead it simply drives towards a solution to the problem (Drews, 2009).

To be considered successful, leaders are expected to lead others to achieve positive organizational results, develop strategies, solve organizational problems, and manage organizational change (Menaker, 2016).

Thus the following propositions have been formulated.

Proposition 2: Problem Framing has a positive significant relationship with Leadership Performance.

3.3 Visualization

Visualization allows people to transform immaterial ideas into tangible results. Another aspect of intelligence (Clark and Smith, 2010). Data, stories, physical tests of prototypes and other manifestations of ideas and data should be visually presented in the DT

literature. The aim is to rationalize awareness, express significance or test and encourage feedback.

In Boland and Collopy (2004, p.13, for example), hands, heart and materials are intimately integrated cognitive and creative instruments.' They include fast prototypes, tangible work and considered esthetics, beauty and taste to create life (Kimbell, 2009). Brown (2008) talks about "artefacts" that can be used to better test or explain the nature and working conditions of the idea in contexts.

The visualization of ideas, ideas and problems through drawings, verbalizations and the written expression of the narration connects artefacts, prototypes and other physical manifestations (Michlewski, 2008) (Cooper, Junginger and Lockwood, 2009; Matthews, Bucolo and Wrigley, 2011). Kelley and Kelley (2013, p. 97) recommend that they view experiences to overlook how people think and prioritize their work with a drawing or graph. Storytelling and visualization can also be seen as excellent tools to communicate, approve or forward new ideas to new audiences. Many DT authors talk about this process as "visual thinking" or use mental photos to think about design issues and turn ideas into visual stories (Kelley and Kelley, 2013). Visualization is an internal process of thinking that can lead to ideas being solved, while an outsourced process of thinking examines better ways of communicating.

Based on these facts, the following propositions have been proposed.

Proposition 3: Visualization has a positive significant relationship with Leadership Performance.

3.4 Experimentation

Experts have extensive, well-organized knowledge and greater expertise taking into account the requirements for certification performance. Expert studies usually assume that knowledge is experienced and reflected on it while people work in this area (Ericsson, 2009). Therefore, the question arises whether the knowledge or experience acquired is indeed related positively to the leader's performance. Goodall and Pogrebna have recently examined the performance in first, second or third place of Formula One teams (2015). The leaders' expertise was evaluated based on their driving experience. Teams whose leaders have been the Formula One drivers with the highest success for five or more years. Further studies on Andrews and Farris (1967), Barnowe (1975), and

Goodall, McDowell and Singell (2014) team achievements also highlight the importance of expertise and leadership.

The impact of leadership expertise does not directly address whether leadership skills are vital for leadership, partly because experiences give additional leadership roles such as stronger, denser and networks (Vessey, Barrett, Mumford, Johnson, & Litwiller, 2014). As Hunter et al. (2008) showed, all three types of knowledge can be used to solve complex problems. Although it has a limited or non-conceptual value, combined knowledge offers fast, intuitive solutions (Hunter et al., 2008). Conceptual knowledge and abstract principles are important in the resolution of complex problems because they allow genetically flexible solutions to be developed (Scott, Lonergan, & Mumford, 2005). Abstract from past experiments, case knowledge makes it easier to develop and recall context-specific actions or plans than conceptual knowledge (Mumford, Schultz, & Van Doorn, 2001).

Vessey et al. (2011) and Barrett et al. (2011) studies show very strongly that leadership skills are case-based and how people work with their knowledge in these cases affects leadership performance. The study, which contrasts the use of conceptual and case-based knowledge in creative problem solving, should take account of the results obtained by Scott et al. (2005).

Thus the following propositions have been formulated.

Proposition 4: Experimentation has a positive significant relationship with Leadership Performance.

3.5 Diversity

In developing concepts of leadership development theory, Day, Fleenor, Atwater, Sturm, and McKee (2014) argue recent leader development practice focuses more on building skills and technical abilities than on the leader's impact on organizational performance and team effectiveness. Additionally, Mabey (2013) states that leadership development practices that fail to incorporate approaches to impact behavioural changes do not assist in leading in complex environments and relational approaches. Mabey (2013) continues, that critical conversations and interpretive practices are limited in leader development literature. Additional research suggests that leaders should be developed through a

holistic approach by developing the whole person through ongoing practices (Davey, 2013; Grondin, 2011). Day et al. (2014) argue that leaders' development could be improved by merging outside theories, such as design thinking, to incorporate reflective practices.

The individual development approach does not take into account that organizations have diverse elements comprising personalities, cultural backgrounds, roles, and relationships (Beer, Finnstrom, and Schrader, 2016). Additionally, it does not recognize when those elements collide it informs organizational behaviour, any attempt to change behaviour must align with the cultural system or it will undoubtedly fail (Beer, Finnstrom, and Schrader, 2016).

Current research suggests that leaders have newly formed expectations in today's workforce and the approach to leadership requires a new perspective and approach for leaders and the teams they lead (Parry & Kempster, 2014; Petriglieri & Petriglieri, 2015). Day (2012) argues that social interaction and pursuing common goals is how leadership is achieved, moving leadership to a collective aspect and not relying solely on assumed successful leadership characteristics of individual leaders. Koomans and Hilders (2017) discussed developing a shared leadership culture by using a model created by Peter Senge, the four key behaviours of leaders: sense-making, relating, visioning, and inventing. Koomans and Hilders (2017) shared five abilities to activate these behaviours, including creativity, agility, global understanding, emotional intelligence, and diverse workforce management (Bersin, 2013).

In association with these, the following proposition has been formulated.

Proposition 5: Diversity has a positive significant relationship with Leadership Performance.

4. Implications

- The results of empirical research show that design thinking is important because of the strong causal link between conception and leadership. Engaging in the design process means starting to deal with problems like organizational design problems and starting to find integrated solutions.
- The integration of a working system with new ideas is a holistic approach.

- Understanding the skills of design thinking helps to define integrated goals and plans in a system.
- Design skills lead to a change in the organization, help identify sources of opposition to change, identify the leverage of change, and see change as an ongoing process.

5. Conclusion and Future Study

The revolution in design thinking and the emergence of leadership performance have led to an urgent need to understand the drive of leaders to accept design ideas in educational organizations. The study proposed a new research framework in combining the design thinking competencies to study the impact of leadership performance in the educational setting since this study is a neglected field of research. The integrated framework not only provides useful decision-making for educational organisations but also for government agencies and other education services professionals. Moreover, the information will help improve the acquisition, retention and development of existing and current leaders, giving the organization a competitive edge on the market. Several limitations have been identified in this study and can be considered for future studies. Initially, only design-thinking skills are taken into account in the research model. Since leadership performance may, however, be affected by different adoption factors including social influence, government support, risk, trust, and culture, future researchers may consider integrating these factors to facilitate leadership understanding. Second, this study was restricted from the point of view of an educational organization and there could be restrictions on generalizability. Other similar organizations may expand future studies. Besides, researchers are strongly encouraged to explore the framework in a broader geographic context or to undertake a comparative cross-country study to overcome the constraint, so that educational organizations across countries have a more efficient understanding of leadership performance in developing thought skills in design. Thirdly, this study focuses specifically on the educational organization and cannot, therefore, be regarded as a complete representation of management performance. Future scientists may repeat studies in other industries to examine if the model is appropriate, such as

manufacturing, services and finance. This study is conceptual and the current model will be subject to empirical testing by the authors using structural equation modelling.

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