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Cultural Intelligence as a Core Competence of Inclusive Leadership

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Abstract: We live and work in a fast-paced multicultural world where change is becoming a new constant. In this context, in which racially and ethnically diverse companies are 35% more likely to perform better, inclusive leadership's role becomes crucial. Knowing to handle and fructify diversity and inclusion (DI) is now crucial for any multicultural businesses' expansion and development. On the other hand, cultural intelligence (CQ) refers to relating and working effectively and efficiently in culturally diverse situations. The purpose of this paper is to study and present a systematic bibliometric literature review focusing on cultural intelligence as a core enabler of inclusive leadership (IL). Our findings, rooted in the Web of Science Core Collection database and powered by VOSviewer bibliometric software, demonstrate that cultural intelligence is not only a main competence for both multinational leadership and global management but also a primary facilitator of inclusive leadership. Concretely, this research visually indicates a comprehensive direct link of the fields relating to CQ on one side and the ones related to multicultural and inclusive leadership on the other side. The bibliometric analysis is supposed to provide a solid reference for practitioners and researchers in multinational inclusive leadership's new needed competencies

Keywords: cultural intelligence; diversity and inclusion; inclusive leadership; multicultural leadership; global management; bibliometric study

Introduction

In our world, where the internet compressed time and distances, people with various multicultural and diverse backgrounds from all over the planet are just one "click" away from each other. With almost 5 billion internet users, 127 new devices connected to the network every second, and 1.35 million tech start-ups, there is no doubt that this trend will continue its expansion while the computing and processing capacity of computers hits double figures every 18 months (Bulao, 2021). However, this is the same context in which 70% of the international ventures which were fated to fail because of cultural differences, firstly revealed by researchers Aimin Yan and Yadong Luo at the beginning of this century (Yan & Luo, 2001), are reconfirmed, among others, by the Society for Human Resource Management in 2015 (Livermore & Van Dyne, 2015).

The digital transformation and the artificial intelligence experience have exponential growth and power the booming technological progress. Artificial General Intelligence (AGI) has a 50% chance of rising to 90% by 2075 when nine out of 10 companies are supposed to use AGI technology (Bulao, 2021). In these conditions, leaders are forced to develop new adapted skills to keep pace with the socio-economic, cultural, and technological changes. This is the foundation from where inclusive and digital leadership was born and where, according to Rütth & Netzer (2020), cultural intelligence is supposed to be the main competence driver. In addition, it is supposed to facilitate an agile answer to the now permanent disruption phenomenon that is impacting the actual business model and contribute to the management of the knowledge entropy (Bratianu, 2013; Bratianu, 2019; Schwab, 2016).

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Supported by Alex Gray (2016) and backed by the conclusions of the World Economic Forum's Global Agenda Council about the Future of Software and Society (World Economic Forum's Global Agenda Council, 2016), we are entitled to anticipate that Cultural and Emotional Intelligence will become two of the top skills needed by all to succeed in the Fourth Industrial Revolution.

Thomas Rockstuhl's research shows that cultural intelligence is a critical leadership competence in today's globalized world (Bratianu, Hadad, & Bejinaru, 2020; Rockstuhl et al., 2011). This translates to the fact that CQ affects the performance enablers, and the higher CQ of leaders, the higher the performance of the organizations (Nosratabadi et al., 2020). In addition, diverse companies enjoy 2.3 times higher cash flow per employee, according to Bailey Reiners. In this situation, even if diversity and inclusion are an important considered issue for nearly 70% of executives, 41% of managers are "too busy" to prioritize it (Reiners, 2021).

In this context, IL takes a human-centric view of the world, challenges perspectives, and helps foster change within organizations (Larsen, 2021); the present research aims to perform a systematic bibliometric study and to identify the main enabler of multinational inclusive leadership and – the research question is:

RQ: Is cultural intelligence a core competence of inclusive leadership?

The research is qualitative and interpretive and is performed by using VOSviewer, specialized bibliometric software for massive literature reviews (van Eck & Waltman, 2014; 2020). Concerning the structure, the introductory part will be followed by the specific literature reviews with a specific focus on cultural intelligence, diversity, and inclusion, and multicultural and inclusive leadership. Then, data sources and the applied methodology will be presented to conclude with results, study's limitations, and possible future research axes.

Literature review

Cultural intelligence

On July 19, 2021, the search of the word "culture" on Google revealed almost 4 billion results. The term has its roots in an expression used by Cicero 45 years BCE in his *Tusculanae Disputationes*, where he mentioned the cultivation of the soul or "*cultura animi*" employing the above *agricultural metaphor*. The word "culture", as known today, is supposed to derive from a French term, which in turn also derives from the Latin "*colere*", which signifies to tend to the earth and grow, or cultivation and nurture (Zimmermann, 2017). However, in 500 BCE, the Confucianism school had already tackled in its way the concept by stating that all people are the same while only their habits are different. Nowadays, the Center for Advanced Research on Language Acquisitions synthesizes *culture* as shared patterns of behaviors and interactions, cognitive constructs, and understandings learned by socialization (Zimmermann, 2017).

Having in mind the idea that culture is mainly the characteristics and knowledge of a particular group of people, encompassing language, beliefs, religions, and social habits, the Dutch researcher Geert Hofstede made one of the first thematic surveys from the late 1960s – early 1970s of over 100.000 IBM's employees spread across over 50 countries. He identified and structured six significant culture variations: individualism-collectivism, power distance (strength of social hierarchy), uncertainty avoidance (high vs low), masculinity-femininity (task orientation vs person-orientation), orientation (pragmatic

long term vs normative short term), and indulgence vs self-restraint (Peterson, 2018). Hofstede's survey's results, jointly with Edward T. Hall's academic discoveries, published firstly in 1966 and stating that cultural categories vary according to 3 factors: context - communication, space - territoriality and time - mono/polychronic (Hall, 1990), represent the very first roots of the modern studies regarding cultural intelligence. Both concepts suffer from over-generalization, bi-polarization, and lack of the modeling impact of time but underline the crucial importance of the culture in what will be called later multicultural leadership and opened the door for cultural intelligence competence (Paiuc, 2021).

Even if the subject was firstly tangentially discussed in early 2000, CQ has its origins in interpersonal intelligence (Gardner, 1983) and emotional intelligence (Goleman, 1995). As known today, the concept of cultural intelligence was first introduced to the public by Professors Christopher Earley and Soon Ang in their Stanford University Press book published in 2003. The CQ theory was then quickly accepted on a world scale, leading in 2004 to the first Symposium on Cultural Intelligence at the annual meeting of the Academy of Management (de Mello e Souza & Tomei, 2021). Cultural intelligence refers to the skills and abilities to relate and work efficiently and effectively in a cultural context different from one's own, and of a nonlinear field of knowledge, especially in a learning organization (Bratianu, Prelipcean & Bejinaru, 2020; Bratianu & Vasilache, 2009). From the perspective of representing the capability to go across boundaries and succeed in multiple cultures, CQ also has similarities to cultural agility (Earley & Ang, 2003). Having as base Sternberg and Detterman's framework theory of multi-loci of intelligence (Sternberg & Detterman, 1986), Earley and Ang (2003) demonstrate that CQ can be conceptualized from four complementary ways: metacognitive, cognitive, motivational, and behavioral. The cognitive aspect or way is present to conceptualize any new information, while the motivational way is needed to adapt to an unfamiliar environment. The behavior way is requested to engage effectively in intercultural interactions, while the metacognition aspect refers to the processes individuals employ to acquire knowledge (Earley & Ang, 2003; Tuleja, 2014).

Contrary to the emotional intelligence (EQ), conceptualized, as mentioned, by Daniel Goleman in 1995 (Goleman, 1995), which is the ability to deal with personal emotions, CQ is not culture-specific and treats mainly to a broad set of capabilities and skills with relevance to situations characterized by cultural diversity (Ang et al., 2011). The four skills a culturally intelligent person should have are: CQ Drive (driving the adaptation to multicultural contexts), CQ Knowledge (understanding about the similarities and differences of various cultures), CQ Strategy (ability to plan and organize multicultural interactions), and CQ Action (ability to adapt when relating interculturality) (Livermore, 2015).

As amended by Dan Paiuc, the principal practical and operational classifications of cultural intelligence were done by David Livermore, Erin Meyer, and Richard D. Lewis (Paiuc, 2021). David Livermore (Livermore, 2015) classified the cultural values and norms within ten clusters that are rooted in the geography, social conducts, spirituality, history, and cultural archetypes: South Asia, Confucian Asia, Anglo, German Europe, Latin Europe, Nordic Europe, Eastern Europe, Latin America, Sub-Saharan Africa, and Arab. Lewis (2018) ranked all the world's countries having as foundation his cultural type diagnoses classified in multi-active - sociable; linear-active - factual; and reactive - compromiser, while Meyer (2016) identified eight features that, through fundamental scalar analysis, help us understand the multicultural efficiency: management style, communication, evaluation, persuasion, trust level, disagreement, and planning; all also regrouped by country. All these territorial ranking classifications are making research easier; nevertheless, it is important to consider that the online working conditions and the

professional purpose migration, both facilitated by the pandemic times, are re-shaping the *geography of thoughts* every day (Paiuc, 2021; Nisbett, 2004).

In this world where 15% of the total population is composed of migrants, with about 70% of them moving within countries and 30% relocating internationally (Bradley, 2020), and where deterritorialization and transnational circulation are becoming the norm, executives from 68 countries, in a proportion of 90%, identified cross-cultural management as the greatest experienced challenge when working across borders (de Mello e Souza & Tomei, 2021), while 82% of multinational firms are losing money in China (Livermore & Van Dyne, 2015). In 2012, Home Depot closed its Chinese operation (Paiuc, 2021), followed two years later by his competitor and the author's company he worked for in the past, Kingfisher (Rankin, 2014), both missing the mark on local consumer needs and culture according to their annual reports (Cornell, 2015). This is the reason why CQ expansion should not be based on disparities and biases linked to race, ethnicity, gender, age, religion, class structures, physical abilities, and other demographics, but instead, extract its strengths from it.

Diversity and Inclusion

The fact that in 2021 36% of Millennials and 39% of Gen Zs confirm they are discriminated “all the time” or frequently in the workplace reflects on the situation that systemic racism is widespread and suggests that much work remains to be done to ensure that all groups, regardless of their backgrounds, are treated fairly and with the proper respect (Deloitte Touche Tohmatsu Limited (“DTTL”), 2021).

The study performed by Stacey Jones (2017) within Fortune 500 companies supports the above concerns and concludes that white men account for 72% of corporate leadership. Early 2021, 56% of the managers of Amazon United States identify as white and 71% as men (Amazon website, 2021), while in Saudi Arabia 2019, the women share in the total working population was, unfortunately, in 2019, less than 7% (Gibbon, 2019), even though women might be better qualified to develop CQ and to succeed in a multicultural environment (Furrer et al., 2015).

While Brooks Peterson states that race, ethnicity, gender, and class structure are still crucial to be addressed and reflected by multinational leadership and CQ (Peterson, 2018), the Millennial generation believes that profits alone do not make a successful business and that an emphasis on diversity and inclusion in the workplace should be an additional priority (Deloitte Touche Tohmatsu Limited (“DTTL”), 2018).

Based on his research's results that diverse groups will be more likely to find the right solution than homogenous groups, Scott Page concludes that our collective wisdom exceeds the sum of its parts (Page, 2008) and reveals that innovation and progress may depend less on lone thinkers with very high IQs than on diverse people working together and capitalizing on their individuality. This is the reason why diverse organizations are setting the standard as performant industry leaders while being more adaptable and showing consistent revenue growth (Mondal, 2021).

Workplace diversity can be structured, according to Somen Mondal, into four main categories: internal - related to what a person is born into (ethnicity, race, age,...), external - associated to characteristics a person is heavily influenced by (spirituality, education, geographic location,...), organizational - linked the professional work done (management status, job function, seniority, ...) and world view – impacted by past experiences (political beliefs, cultural events, ...) (Mondal, 2021).

While it is demonstrated that diversity is key to organizational success, since it generates larger talent pool, better employee performance, more innovation, and in the end, higher revenue, there are, however, conservatives theories that state that diversity and business excellence might be in competition and favoring diversity too often might put the competitive edge at risk (Mac Donald, 2018). On the same side, Professor Anthony Kronman can also be found, who mentions that the system should not be focused on sympathy at the expense of rigor and that it should values excellence above all (Kronman, 2020). Nevertheless, and also backed by (Bradley, 2020), it can be concluded that diversity alone is not a game-changer and does not automatically predict performance; it is essential to engage and manage diversity to increase and thrive the group performance. In response to this threat, *inclusion* ensures the needed culture in which everyone feels comfortable, confident, and appreciated, adds value, and delivers the business needs.

Powered by CQ, the cultural diversity of board members has constantly increased for the last five years and nowadays is rated to be around 30% (Refinitiv report, 2020). The Deloitte Global 2021 Millennial and Gen Z survey, based on the views of 14655 millennials and 8273 Gen Z questioned across 45 countries, from North America, Latin America, Western Europe, Eastern Europe, Middle East, Asia Pacific, and Africa. Deloitte Touche Tohmatsu Limited ("DTTL", 2021) states that the digital natives' ability to connect and create disruption by using intelligent devices has a global impact and is compelling changes in society and business. This is also supported by the resulted conclusion that 60% of respondents agreed that their generation had done more than any other to address and fight discrimination and inequity.

Towards and beyond Inclusive Leadership

More than 180 years of leadership studies, researches, and practices have shaped the world of management - since the 1840's *Great Man* theory that focused on natural-born leaders and until 2020's *digital leadership* that is concentrated on navigating an organization towards digital transformation to stay agile and competitive.

Table 1. Main leadership theories

Age	Theory	The first glory period	Interpretation/ Description
Trait	Great Man	The 1840s	Concentrates on natural-born leaders.
	Trait	The 1940s -1950s	Concentrates mainly on identifying traits and characteristics of effective leaders.
Behavioral	Behavioral	The 1940s -1950s	Focus on the actions and learnable skills of leaders.
Situational	Situational and Contingent	The 1960s -1970s	Concentrates on leaders adapting their style, taking into account the environment and organizations choosing the appropriate leader
Modern (leadership)	Transactional	The 1980s (first in 1950s)	Concentrates on leadership as a cost-benefit exchange (quid pro quo approach).
	Transformational	The 1990s (first in 1980s)	Concentrates on an inspirational style pushing followers to higher and higher levels of achievement. Gain the commitment of others by

			inspiring, encouraging & caring for them.
	Shared	The 2000s	Concentrates on followers leading each other.
	Collaborative	The 2000s	Concentrates on engaging followers—person-centered style.
	Collective	The 2000s	Concentrates on the whole system of an organization.
	Servant	The 2000s (first in the 1970s)	Concentrates on individual interactions with others to achieve authority rather than power.
	Complexity	The 2015s - now	Concentrates on enabling the learning, creative, and adaptive capacity of complex adaptive systems (CAS).
	Inclusive	The 2015s – now (first in the 1990s)	Concentrates on leading a heterogeneous group of people efficiently while respecting their uniqueness in an empathetic, bias-free way.
Technology	Digital	The 2020s –now	Concentrates on navigating an organization towards digital transformation to stay competitive and agile.

Source: Benmira, & Agboola, 2021, and Dan Paiuc's research and updates

Despite the succession of the above leadership theories, Gallup, the giant multinational analytics and advisory company, shows that 85% of employees are not engaged or are actively disengaged at the workplace (Kuknor & Bhattacharya, 2020), while a manager's quality accounts for 70% of the variance in team engagement (Pendell, 2019). If we add in the equation the fact that 56% of millennials see systematic racism as very or fairly widespread in general society (Deloitte Touche Tohmatsu Limited ("DTTL"), 2021), the need to build an inclusive culture supported by inclusive leadership is more and more urgent.

In the early 1990s, social psychologists were starting to be more and more concentrated on the internal definitions of the person at the expense of the importance of social identity that used to monopolize their attention till then (Brewer, 1991). Professors Herb Thompson and Gina Matkin re-state the classification of inclusive leadership within almost three research decades: nascent (1990-1999) dominated by Marilynn Brewer and focused on social identity; formative (2000-2009) concentrated on defining the problems triggered by diversity; and contemporary (2010-now) immersed on managerial practices that lead to inclusion (Thompson & Matkin, 2020).

Inclusive leadership is, therefore, composed of behaviors that facilitate group members perceiving belongingness in their workforce while maintaining their uniqueness within the group as they fully contribute to the company's processes and outcomes (Randel et al., 2017). In other words, inclusive leadership is about fair treatment of people and groups based on their unique characteristics instead of acting on biases derived from stereotypes (Uthayasuriyan & Murugesan, 2020).

Inclusive leadership is critical for making sure diverse thinking is heard, respected, managed, and applied. The present bibliometric research will demonstrate that inclusive

leaders relate to CQ to understand how different thinkers react to change and how to maximize their diversity potential.

Last arrived on the leadership theory saga, the *digital leadership* embeds the inclusive one and helps multinational and diverse organizations create business processes that allow new technologies to be rolled out quickly, while also ensuring the maintenance of agility, competitiveness, and market differentiators. In our global and circular economy, where, since the World Health Organization declared the COVID-19 pandemic on March 11, 2020, the work from anywhere phenomenon has had exponential growth and has pushed the limits of cultural intelligence (Paiuc, 2021). In this changing context, we are living a shift of competencies and needed skills to perform in our professional lives. While active learning will disappear from the top 10 skills (World Economic Forum's Global Agenda Council, 2016), cultural, emotional, and the new added diverse intelligence will take over the podium as a change stimulant and motivation (Gray, 2016).

Even though nowadays the leadership styles can be classified in more than ten categories - depending on researchers - such as Democratic, Autocratic, Laissez-Faire, Strategic, Transformational, Transactional, Coach-Style, and Bureaucratic (Becker, 2021), the most popular classification is the one structured by Craig Pearce with four distinct groups: transactional, transformational, directive and empowering (Pearce et al., 2003). Solomon and Steyn stipulate that cultural intelligence has the most meaningful relationship with empowering leadership that engages teams by giving them more autonomy and responsibility (Solomon & Steyn, 2017). Furthermore, this brings us to the fact that culturally intelligent people can use cognitive and knowledge strategies and develop a set of skills that are most needed today in multinational inclusive leadership (Tuleja, 2014).

Data sources and methodology

The present work relies on bibliometric research or *statistical bibliography*, as first called in 1922 by Wyndham Hulme (2015), to answer the research question: Is cultural intelligence a core competence of inclusive leadership?

The data was retrieved on July 23, 2021, from the Web of Science (WoS) Core Collection, the world's leading scientific citation search and analytical information platform (Li et al., 2018). The retrieval model was thru an advanced search function, while the retrieval period was: 1975-2021. The default values provided by WoS were used on all the rest of the retrieval settings, besides selecting publications that have titles and abstracts in English - as unique writing language. In terms of the document type, we have not excluded any.

The concepts: *CQ*, *multinational leadership*, *global management*, and *inclusive leadership* were primarily searched in the topic fields, and results showed that first publications appeared in the WoS in 1993 for "cultural intelligence" - the years 2019 and 2020 being the ones that regrouped more than 28% of all-time WoS publications dealing with this subject; 1992 for *multicultural leadership* or *multinational leadership* (4% in 2019 and 2020); 1996 for *global management* (13.6% in 2019 and 2020); 1998 for *inclusive leadership* (31.3% in 2019 and 2020).

Table 2. Main concepts frequencies and weight on WoS

Researched labels	First publication year - on WoS	Total number of publications till date - on WoS	Weight of 2019 and 2020 publications of selected searches within all years - on WoS
"cultural intelligence"	1993	832	28.4%
"multicultural leadership" or "multi-cultural leadership" or "multinational leadership" or "multi-national leadership"	1992	25	4.0%
"global management"	1996	2098	13.6%
"inclusive leadership"	1998	246	31.3%

Source: author's own research

Taking into account the shortage of publications on WoS linked to *multicultural leadership* or *multinational leadership* and the too generic and vast revealed research areas for *global management*, and after testing different Boolean logic models with our key mentioned concepts, we have refocused on *cultural intelligence* as the main driver in obtaining the answer to the research question.

The literature type for *cultural intelligence* being defined as "all type", a total of 832 documents met the selection criteria. The most recurrent document type is the article (653), accounting for 78.5% of total WoS publications. The proceedings paper (89) was found at the second position with a proportion of 10.7% - other significant document types being book chapters (61). The bellow table reflects the numbers and proportions of the various mentioned documents types that were all downloaded on July 23, 2021, in tab separator format, and re-emphasis on the novelty and increasing importance of the theme.

Table 3. Types of retrieved documents for "cultural intelligence" on WoS

Type of Document	Frequency	Share in total
Articles	653	78.5%
Proceedings Papers	89	10.7%
Book Chapters	61	7.3%
Main Others	29	3.5%
Total	832	100.0%

Source: authors' own research

Exported records from WoS contained abundant and rich information (full record and cited references exported to Plain Text File) such as authors, title, abstract, source, subject, publication year, references. Consequently, comprehensive data derived from the WoS research is directly used to perform the systematic literature review.

The bibliometric software VOSviewer (Visualization of Similarities) (van Eck & Waltman, 2014, 2020) was used to analyze and visualize the co-occurrence of keywords by generating a map based on the above mentioned bibliographic data and using a full counting method.

Results and discussion

Using keyword's co-occurrence can constructively reflect the research hotspots in the discipline fields, providing additional support for scientific and academic research. In all the 832 CQ-related publications, we obtained 2953 keywords altogether. Among them,

253 keywords appeared a minimum of 5 times and met the threshold, accounting for a weight of 8.6%. The keyword co-occurrence network of CQ (see below map: figure 1) was processed and constructed, as mentioned, by the VOSviewer software. The size of the nodes and words in the bellow table reflects their weights. The bigger the node and word frequency are, the larger the weight is. The distance between two nodes shows the strength of the relation between them, so a shorter distance typically reveals a stronger relation. The line between two keywords means that they have appeared together, and the thicker the line is, the more co-occurrence they have. The nodes with the same color are regrouped and belong to a cluster. VOSviewer divided the keywords of CQ-related publications into seven clusters. Specifically, the dark blue cluster (Figure 1, cluster 3, down right, 38 items) focuses on the concept of “diversity and inclusion”, its “*experiences*”, and the correlations, thru the CQ perspective, with the “*leadership*” “*performances*”. Table 4 illustrates this third cluster with the specific purpose to present and acknowledge both the structure and the relevant information provided by the software at this stage, and a first direct link of CQ with diversity and inclusion: marks of inclusive leadership.

Table 4. CQ: Cluster 3: top 30 items by VOSviewer

Diversity and inclusion (top 30 from 38 items)			
Terms	Links	Total link strength	Occurrences
diversity; cultural diversity; work group diversity;	133; 42; 21	317; 55; 34	45; 11; 5
inclusion	24	40	6
multicultural experience; multicultural teams; multiculturalism; biculturalism; cultural distance	42; 28; 49; 44; 44	63; 41; 62; 66; 71	9; 5; 9; 10; 12
leadership; global leadership; transactional leadership; leader; leader-member exchange	125; 37; 23; 47; 29	351; 55; 34; 71; 35	51; 9; 6; 8; 5
international business; organizations	93; 100	184; 205	24; 28
global teams; teams; virtual teams	28; 60; 25	37; 101; 35	5; 14; 6
performance; team performance; capability	218; 37; 49	1156; 60; 74	158; 8; 10
motivational cultural intelligence	33	41	6
work	124	330	45
conflict	88	154	21
creativity; employee creativity	71; 40	138; 52	17; 7
social identity	53	83	13
demography	31	36	6
innovation	95	193	31

The red cluster (Figure 1, cluster 1, center-up right, 62 items) gravitates around “*cultural intelligence’s*” “*experiences*”, “*competencies*”, and “*perspectives*”. In the green cluster (Figure 1, cluster 2, center left, 40 items); the focus is on the “*mediating role*” of CQ as well as on the links between “*personality traits*” and “*cultural adjustments*”. Next, the yellow cluster (Figure 1, cluster 4, center right, 31 items) is concentrated around the “*cultural behaviors mechanisms*” and CQ “*communication*”. The purple cluster (Figure 1, cluster 5, center up, 31 items) regroups “*emotional intelligence*” as well as the validity approach of the CQ and EQ “*models*”, “*scales*”, and “*indexes*”. In the sapphire blue cluster (Figure 1, cluster 6, center-down left, 28 items), words as “*adaptability*”, “*absorptive-capacity*”, “*capabilities*”, “*knowledge*”, “*moderating-role*” are associated with the “*impact*” of CQ on

"knowledge transfer". The last orange cluster (Figure 1, cluster 7, center down, 23 items) put together keywords like "anxiety", "stress", "trust", and "job satisfaction" that are mainly describing the possible challenges but also outcomes of CQ within multinational leadership.

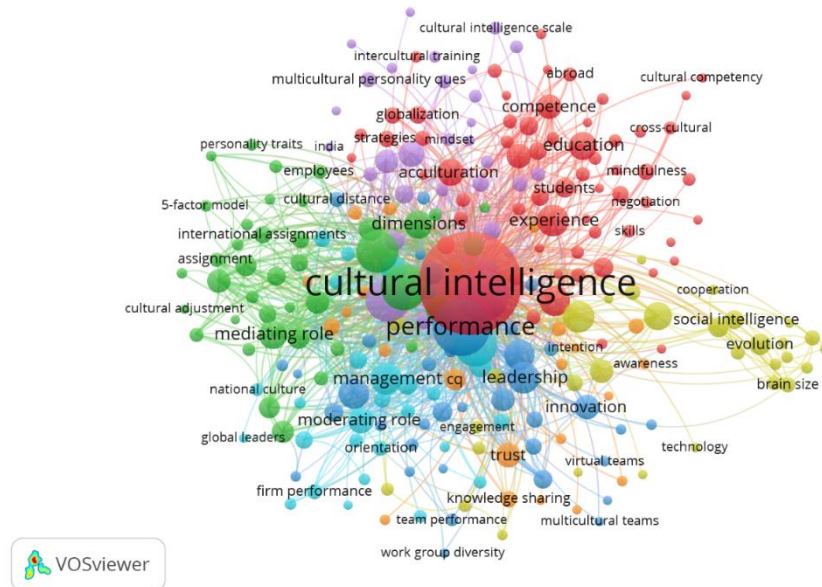


Figure 1. Keyword's co-occurrence network of WoS CQ-related publications - by VOSviewer

Source: authors' own research

Considering the above table 5 composition, and, in direct link with the research question, we evidence first by using occurrences that CQ has primary direct strong connections with concepts like "performance" (frequency 158), "leadership" (frequency 51), "management" (frequency 51), or "diversity" (frequency 45).

Table 5. CQ: top 15 items by occurrences by VOSviewer

Position	Keywords	Frequency / Occurrences
1	cultural intelligence	517
2	performance	158
3	model	128
4	personality	101
5	impact	92
6	emotional intelligence	96
7	adjustment	87
8	management	51
9	leadership	51
10	work	45
11	mediating role	38
12	diversity	45
13	experience	48
14	behavior	48
15	dimensions	39

Source: authors' own research

Also, in direct relation to CQ, and as presented below table, column 2, the keyword "performance" has the highest link strength of (112), followed by "emotional intelligence" (73). Other keywords with high CQ link strength are "leadership" (39), "management" (37), and "diversity" (31) in the context in which the link strength between two nodes refers to the frequency of co-occurrence. It can be utilized as a quantitative index to depict the relationship between two nodes. The total link strength of a node is, in this case, the sum of link strengths of this node over all the other nodes.

Table 6, presents, via *regrouped concepts*, the biggest relevant direct CQ link strengths as extracted from VOSviewer:

Table 6. Keyword's co-occurrence network of CQ-related publications / Direct links to CQ - by VOSviewer

Item 1	Item 2		Direct CQ Link strength (sum of)	
	Name/s	Category		
Cultural Intelligence	<ul style="list-style-type: none"> performance (112) job performance; job-performance; firm performance; team performance; task performance; expatriate performance 	<i>Performance</i>	162	
	<ul style="list-style-type: none"> leadership (39) global leadership; transformational leadership; transactional leadership; global leaders; leader; leader-member exchange; management (37) cross-cultural management / managers 	<i>Leadership and Management</i>	136	
	<ul style="list-style-type: none"> cultural adjustment; cross-cultural adjustment; intercultural adjustment; international adjustment; expatriate adjustment; adjustment 	<i>Cultural adjustment</i>	<i>Inclusive Leadership (395)</i>	129
	<ul style="list-style-type: none"> diversity (31) individual differences (15) cultural diversity work group diversity discrimination (fighting) race; women inclusion (5) 	<i>Diversity and Inclusion</i>		76
	<ul style="list-style-type: none"> emotional intelligence (73) communication; intercultural communication (28) innovation (17) global mindset; mindset (17) perspective; perspectives; perspective-taking creativity; employee creativity (16) adaptability; adaptation empathy cultural awareness 	<i>Other inclusive leadership's competencies</i>		190

	<ul style="list-style-type: none"> ▪ entrepreneurship ▪ technology 	<i>Extra competencies for Digital Leadership</i>	11
	<ul style="list-style-type: none"> ▪ mindfulness; life satisfaction 	<i>Mindful cognitive strategy</i>	10

Source: authors' own research

With a cumulated CQ link strength of 162, the “*performance*” resulting from efficient multicultural leadership and global management (Livermore, 2015) is the second strongest group link strength to CQ. In this case, we can talk about cultural intelligence as a performance facilitator.

However, table 6 is also reconfirming in direct mode the fact that cultural intelligence is a crucial competence for efficient multinational “*leadership*” and global “*management*”, with cumulated third strongest link strength to CQ of 136.

Having in mind that inclusive leadership refers to leaders who are aware of their own biases and preferences and who actively seek out and consider different views and perspectives to inform better decision-making while maximizing the advantages of diversity – we have split the analysis for IL and presented it in table 6, in 3 sections: *cultural adjustment, diversity and inclusion*, and *other IL's competencies*. While the *cultural adjustment* unit is responsible for a group link strength to CQ of 129, *DI* section; significantly represented by “*diversity*” (31), “*individual differences*” (15), and latest arrived “*inclusion*” (5), accounts for group link strength to CQ of 76. However, the most encouraging fact is that all the *other inclusive leadership's competencies* that are responsible for the highest group link strength to CQ of 190 are directly linked to cultural intelligence with thick nodes and high strengths, such as: “*emotional intelligence*” (73), “*communication and intercultural communication*” (28), “*innovation*” (17), “*global mindset*” (17) or “*creativity and employee creativity*” (16). Adding the above three sections, we arrive at a direct CQ link strength of 395, which answers the research question and states that cultural intelligence is indeed the main competence of inclusive leadership.

Testing another approach to the research question, and taking into account just the ten characteristics of inclusive leaders as described by (Ninan & Essandoh, 2020), and adding their total CQ link strengths from VoSViewer: *exercise self-awareness* (30 link strength to CQ), *mindful of gatekeepers* (8), *weave DI into larger messages* (56), *commitment to DI* (5), *acknowledge inclusion happens every day* (5), *seek missing perspectives* (17), *comfortable communicating about DI* (28), *encourage people to speak up* (22), *support employee resource groups* (3), and *reward courageous leadership* (7), brings us to a cumulated CQ link strength of 181; a number that reconfirms the precedent obtained results and also position CQ as the main trigger of inclusive leadership.

According to (Amazon website, 2021), on December 31, 2020, Amazon's global workforce, taking into account all their levels, was composed of 32.1% White people, 13.6% Asians, 26.5% Black, 22.8% Latins, 3.6% Multi-races, 1.5% Native Americans, and divided into 44.6% women and 55.4 men. Even still a long road ahead, while conscient about the importance of DI and trying to be a change vector, Amazon never renounced at his motto “it will always be day one in the company”, meaning that the world's largest retailer will always act as an early-stage start-up when an entrepreneurship mindset is crucial. Tracking down also in the bibliometric analysis the word “*entrepreneurship*” with link strength to CQ of 7 reconfirms the findings. Also, it demonstrates the theory launched by

(Ang et al., 2011) and developed by (Baltaci, 2017), according to which managers with cultural intelligence show their talents better in entrepreneurial activities, the core professional ground for *multinational DI focused leadership*.

The research also points out the direct correlation between CQ and *mindful cognitive strategies* (link strength to CQ of 10), which, according to (Thomas & Inkson, 2017), and backed by (Tuleja, 2014) are among the most needed skills within multicultural, inclusive leadership today.

Conclusions, limitations, and future research areas

Supported by the bibliometric analysis software VOSviewer – CQ was identified as the core competence of multinational inclusive leadership via 832 studied publications, between 1975 and 2021, from the Core Collection of Web of Science. Specifically, the researched clusters help us visualize the connection between the keywords used in the mentioned sources and visually demonstrate a comprehensive overview of the fields relating to the CQ in terms of *multinational inclusive leadership* main skills and competencies.

This bibliometric analysis comes up with a significant reference for both practitioners and researchers in *multinational inclusive leadership* and *diversity and inclusion's* new needed competencies; even though by selecting English as a unique writing language to facilitate the study, we have underestimated the total literature reviews.

Despite the above limitations and the fact that cultural intelligence, as a meta-competence, has pushed us to search for its expanded components to answer the research question, the presented findings could also be presented to students as part of their multicultural, inclusive leadership academic curriculum.

Being aware of the fact that, forthcoming, DI will climb more and more into the popular consciousness, future research areas are identified. It will be relevant to study the correlations between CQ, EQ, and diversity intelligence and their impact on multinational leadership outcomes alongside the analysis of how we can best leverage our differences for the benefit of all? Other research axes are: how to develop DI without menacing business excellence and how technology impacts both inclusive and digital leadership results.

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