

Cultural Intelligence as a Main Competency for Multinational Leadership and Global Management

Dan PAIUC

National University for Political Studies and Public Administration

30A Expozitiei Blvd. Sector 1, 012104 Bucharest, Romania

dan.paiuc@facultateademangement.ro

Abstract

The paper's purpose is to present a systematic literature review focusing on cultural intelligence (CQ) as one of the main competencies for multinational leadership (ML) and global management (GM). According to Earley and Ang, cultural intelligence refers to relating and working effectively and efficiently in culturally diverse situations. In the context in which strong leadership skills are widely considered a core competency for any effective project management, this paper aims to explore the correlation between cultural intelligence and multinational leadership. The paper results from qualitative research are based on a systematic literature review and a bibliographic analysis performed with VOSviewer. Our findings demonstrate that cultural intelligence is indeed a main competency for both multinational leadership and global management. Concretely, this research visually demonstrates a comprehensive direct link of the field relating to CQ on one side and the ones related to ML and GM on the other side. This bibliometric analysis provides a valuable reference for researchers and practitioners in multinational leadership's new needed competencies and also opens the gate for future academic research.

Keywords

Cultural intelligence; multinational leadership; inclusive leadership; digital leadership; global management; international business.

Introduction

We are living in a world with 1.35 million tech startups where every second, 127 new devices and equipment are connected to the internet and where the computing and processing capacity of computers hits double figures every 18 months (Bulao, 2021). Nevertheless, this is the same context in which 70% of the international ventures were fated to be unsuccessful because of cultural differences (Yan & Luo, 2001).

While the digital transformation and the booming AI - Artificial General Intelligence (AGI) having a 50% chance of rising to 90% by 2075 (Bulao, 2021) – are fueling an exponential growing technological progress, leaders have to develop new adapted skills to keep pace with the socio-economic and cultural change. This is the ground where inclusive and digital leadership are born and where, according to R uth and Netzer (2020), CQ is supposed to be the main competence driver. It is also supposed to facilitate an agile answer to the now permanent disruption phenomenon (Schwab, 2016).

Backed by Gray (2016) and in correlation with World Economic Forum's Global Agenda Council about the Future of Software and Society (World Economic Forum's

Global Agenda Council, 2016), we can 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 points out that cultural intelligence is a critical leadership competency in today's globalized world (Rockstuhl et al., 2011). CQ affects the performance enablers, and the higher CQ of leaders, the higher the performance of the organizations (Nosratabadi et al., 2020). In the above context, when our research aims to perform a systematic literature review and to identify the main competencies and features of multinational leadership and global management - the research question is:

RQ: Is cultural intelligence a main competency requested by multinational leadership and global management?

The qualitative research is interpretive and performed by utilizing VOSviewer, a specialized software program for such a literature review (van Eck & Waltman, 2014, 2020). In terms of structure, we will start with an introductory part followed by the specific literature review, continue with data sources and the applied methodology and conclude with results, conclusions, and study's limits.

Literature review

Today, May 26, 2021, the simple search of "*culture*" on Google returns 4,07 billion results, the modern term "culture" is based on an expression used by the Cicero 45 years BCE in his *Tusculanae Disputationes*, where he wrote of the cultivation of the soul or "*cultura animi*" employing an agricultural metaphor. Nevertheless, 500 years BCE, the Confucianism school has already tackled the concept by mentioning that all people are the same while only their habits are different.

In Dutch researcher's Geert Hofstede's survey from the late 1960s - early 1970s of over 100.000 IBM's employees spread across over 50 countries; his team identified 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, together with Edward T. Hall's findings, were published first in 1966 and mentioning that categories cultures vary according to context - communication, space - territoriality and time - mono/polychronic (Hall, 1990), are the basis of the modern studies regarding cultural intelligence. Both theories suffer from bi-polarization, over-generalization, and lack of the modeling impact of *time* but underline the major importance of the culture in what will be called later multicultural leadership and open the gate for cultural intelligence competence (Paiuc, 2021).

While the subject was debated since early 2000, CQ has its roots in interpersonal intelligence (Gardner, 1983) and emotional intelligence (Goleman, 1995). The concept of cultural intelligence, as we know it today, was first introduced to the public by Professors Earley and Ang in their Stanford University Press book printed in 2003. Cultural intelligence refers to the skill and ability to relate and work effectively and

efficiently in culturally diverse situations. It is the capability to go across boundaries and prosper in multiple cultures that why, from this perspective, CQ is bearing similarities to cultural agility (Earley & Ang, 2003). Based on Sternberg and Detterman's framework theory of multi-loci of intelligence (Sternberg & Detterman, 1986), Earley and Ang emphasized that cultural intelligence can be conceptualized from four complementary ways: metacognitive, cognitive, motivational, and behavioral (Earley & Ang, 2003). The cognitive way or aspect is present to process and conceptualize new information, while the motivational way is needed to adapt to an unfamiliar environment. The behaviour way is requested to engage effectively in intercultural interactions, while the metacognition aspect refers to the processes individuals use to acquire knowledge (Earley & Ang, 2003; Tuleja, 2014). These characteristics play an important role in the decision making process (Bratianu et al., 2021).

In opposition with 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 refers mainly to a broad set of skills and capabilities with relevance to situations characterized by cultural diversity (Ang et al., 2011). The 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 organize and plan for multicultural interactions), and CQ Action (ability to adapt when relating interculturality) (Livermore, 2015). These are also the main dimensions of competence, which contains knowledge, skills, and attitude (Bratianu, Hadad, & Bejinaru, 2020; Bratianu, Stanescu, & Mocanu, 2021).

As summarized by Dan Paiuc, the main 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 norms and values in ten clusters that have as roots the geography, social conducts, spirituality, history, and cultural archetypes: Confucian Asia, South Asia, Anglo, German Europe, Eastern Europe, Latin Europe, Nordic Europe, Latin America, Arab and Sub-Saharan Africa. Lewis (2018) ranked all the world's countries having as base 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 re-grouped by country. All these territorial ranking classifications are making research easier; however, we should 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).

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

Table 1. Summary of the main leadership theories

Era	The first period of glory	Theory	Description
Trait	The 1840s	Great Man	Focus on natural-born leaders.
	The 1940s–1950s	Trait	Focus mainly on identifying traits and characteristics of effective leaders.
Behavioral	The 1940s–1950s	Behavioral	Focus on the actions and learnable skills of leaders.
Situational	The 1960s–1970s	Contingent and Situational	Focus on leaders adapting their style, taking into account the environment.
Modern leadership	The 1990s (first in 1950s)	Transactional	Focus on leadership as a cost-benefit exchange.
	The 1990s (first in 1980s)	Transformational	Focus on an inspirational style pushing followers to higher and higher levels of achievement.
	The 2000s	Shared	Focus on followers leading each other.
	The 2000s	Collaborative	Focus on engaging followers—person-centered style.
	The 2000s	Collective	Focus on the whole system of an organization.
	The 2000s (first in the 1970s)	Servant	Focus on individual interactions with others—to achieve authority rather than power.
	The 2015s–now	Inclusive	Focus on leading a heterogeneous group of people efficiently while respecting their uniqueness in an empathetic, bias-free way.
	The 2015s–now	Complexity	Focus on enabling the learning, creative, and adaptive capacity of complex adaptive systems (CAS).
Technology	The 2020s	Digital	Focus on navigating an organization towards digital transformation to stay competitive and agile.

Benmira, S., & Agboola, M. (2021). Evolution of leadership theory. BMJ Leader, 5(1), 3, p. 2, and Dan Paiuc's research and updates.

Craig Pearce classifies the leadership styles within four distinct categories: transactional, transformational, empowering, and directive (Pearce et al., 2003), while the findings of Solomon and Steyn stipulate that cultural intelligence has the most substantial relationship with empowering leadership that engages teams by giving them more responsibility and autonomy (Solomon & Steyn, 2017). Furthermore, this brings us to the fact that culturally intelligent people can use knowledge and cognitive strategies and develop a set of skills that are most needed today in global management and multinational leadership (Tuleja, 2014).

Effective *digital leadership* helps an organization create business processes that allow the new technologies to be rolled out quickly while also ensuring competitiveness, agility, and market differentiators are being maintained. Nevertheless, all this is happening in our global and circular economy where, since the World Health Organization declared on March 11, 2020, the COVID-19 pandemic, the work from anywhere phenomenon had exponential growth and pushed the limits of cultural intelligence (Paiuc, 2021). In this new context, one of the conclusions anticipated by the World Economic Forum's Global Agenda Council about the Future of Software and Society from 2016 (World Economic Forum's Global Agenda Council, 2016) and that serves as a new base for multicultural leadership and global management, was that we are living a shift of competencies and needed skills to perform in our professional life. While active learning will disappear from the top 10 skills, cultural and emotional intelligence will take over the podium as a change catalyst (Gray, 2016).

Data sources and methodology

The data was retrieved from the Web of Science (WoS) core collection on May 28, 2021, the world's leading scientific citation search and analytical information platform (Li et al., 2018). The retrieval model was thru an advanced search, while the retrieval period was: 1980-2021. We used the default values of WoS on all the rest of the retrieval settings besides selecting publications that have titles and abstracts in English - as unique writing idiom. In terms of the document type, we have not excluded any.

Labels like CQ, multinational leadership, and global management were primarily searched in the topic fields, and results showed that first publications appeared in 1993 for "cultural intelligence" - the years 2019 and 2020 being the ones that re-grouped more than 28% of all-time publications with this topic; 1996 for "multicultural leadership" or "multinational leadership" (15% in 2019 and 2020); 1997 for "global management" (15% in 2019 and 2020).

Table 2. Main concepts frequencies and weight on WoS

Researched labels	First-year of appearance on WoS	Total number of publications till date - on WoS	Weight of 2019 and 2020 publications with the selected theme within all years - on WoS
"cultural intelligence"	1993	787	28%
"multicultural leadership" or "multi-cultural leadership" or "multinational leadership" or "multi-national leadership"	1996	21	15%
"global management"	1997	687	15%

Author's own research

We took into account the scarcity of publications linked to "*multicultural leadership*" or "*multinational leadership*" and also the too generic and vast 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 needed correlations.

As the literature type for *cultural intelligence* was defined as "all type", a total of 787 documents met the selection criteria. The most frequent document type is the article (612), accounting for 78% of total publications. At the second position, we found the proceeding's paper (86) with a proportion of 11% - other significant document types being book chapters (46) and reviews (37). The bellow table below lists the numbers and proportions of various documents types. All documents were downloaded on May 28, 2021, in tab separator format.

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

Type of Document	Frequency	Share in total
Article	612	77.76%
Proceeding's paper	86	10.93%
Book chapter	46	5.84%
Review	38	4.82%
Others	5	0.65%
Total	787	100.00%

Authors' own research

Exported records from WoS contained abundant and rich information (full record and cited references exported to Other Reference Software) such as publication year, authors, title, abstract, source, subject, references. Thus, comprehensive data derived from our WoS research is used to carry out the systematic literature review.

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

Results and discussion

Keyword's co-occurrence can effectively reflect the research hotspots in the discipline fields, providing additional support for scientific research. In all the 787 CQ-related publications, we obtained 2865 keywords altogether. Among them, 247 keywords appeared a minimum of 5 times and met the threshold, accounting for 8.62%. 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. A shorter distance typically reveals a stronger relation. The line between two keywords means that they have appeared together. The thicker the line is, the more co-occurrence they have. The nodes with the same color are re-grouped and belong to a cluster. VOSviewer divided the keywords of CQ-related publications into six clusters. Specifically, the red cluster (Figure 1, cluster 1, upper right, 79 items) focuses on the concept of "cultural intelligence" and its "experiences"

and "competencies". Table 4 illustrates this first cluster to present and acknowledge the structure and the relevant information provided by the software at this stage.

Table 4. Cluster 1: top 25 items by VOSviewer

Cultural intelligence (top 25 from 79 items)			
Term	Links	Total link strength	Occurrences
cultural intelligence	243	2476	498
Intelligence	129	270	46
Acculturation	109	299	35
Validity	96	192	33
4-factor model	91	198	26
competence; cross-cultural competence; intercultural competence; cultural competence	84; 56; 69; 32	176; 89; 138; 42	26; 13; 30; 9
cultural awareness; cultural shock; cultural intelligence scale	9; 30; 22	11; 32; 31	5; 5; 9
intercultural adjustment; intercultural communication; intercultural contact; intercultural training;	34; 38; 53; 28	44; 49; 72; 35	6; 10; 10; 7
education; higher education	67; 21	138; 30	34; 6
experience; experiences; experimental learning	129; 54; 23	300; 80; 28	46; 13; 8
Adaptation	70	105	17
Globalization	48	73	15
Attitude	50	74	13
cross-cultural	36	52	9

Authors' own research

In the green cluster (Figure 1, cluster 2, mid-left, 51 items), keywords such as "individual differences", "personality traits", "predictors" focus on the importance of the cultural adjustments. Coming next, in the blue cluster (Figure 1, cluster 3, center-right, 33 items), expressions like "social intelligence", "communication", "cooperation" concentrate on the social aspects of CQ. In the yellow cluster (Figure 1, cluster 4, down left, 31 items), words such as "adaptability", "capabilities", "absorptive-capacity", "knowledge", "moderating-role" are associated with knowledge transfer. Another central cluster in purple (Figure 1, cluster 5, center-down, 30 items) comprises terms like "global leadership", "global mindset", "leadership", "global teams" and "transactional leadership", which are representative for *multicultural leadership* and *global management* and point a direct answer to our research question. The last sapphire blue cluster (Figure 1, cluster 6, down-right, 23 items) gather keywords like "anxiety", "stress", "trust", and "job satisfaction" that are mainly describing the possible challenges and outcomes of CQ at work.

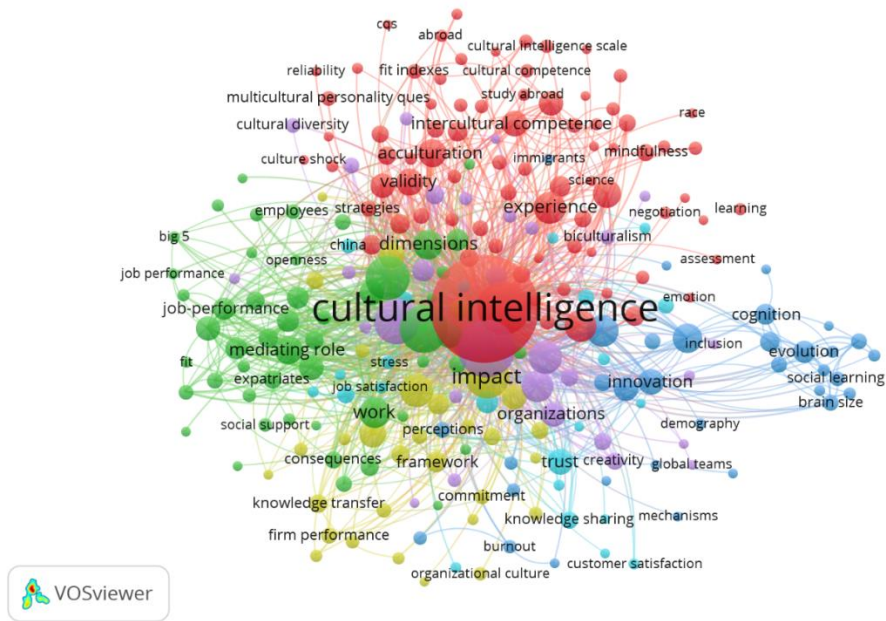


Figure 1. Keyword's co-occurrence network of CQ-related publications - by VOSviewer (authors' own research)

Taking a deep dive into the above figure's composition and in direct link with our research question, we find that CQ has primary direct connections with concepts like "management", "leadership", and "performance". The keyword "performance" has the highest frequency of 105. Other keywords with a high frequency and relevance are "leadership" (38), "management" (37), and "emotional intelligence" (69). 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.

Bellow, we present the biggest relevant link strengths to CQ as extracted from VOSviewer:

Table 5. Keyword's co-occurrence network of CQ-related publications / Direct links to CQ - by VOSviewer

Item 1	Item 2	Field	Link strength
CQ	▪ performance	performance	105
	▪ job-performance; job performance; firm performance; team performance; task performance; expatriate performance		49

Strategica. Shaping the Future of Business and Economy

▪ leadership	leadership and management	38
▪ transformational leadership; transactional leadership; global leadership; global leaders; leader; leader-member exchange;		45
▪ management		37
▪ cross-cultural management / managers		17
▪ knowledge	knowledge transfer	18
▪ knowledge transfer		13
▪ knowledge sharing		12
▪ emotional intelligence	multicultural digital leadership's competencies	69
▪ communication + intercultural communication		27
▪ innovation		17
▪ creativity; employee creativity		14
▪ global mindset		12
▪ entrepreneurship		6
▪ technology		4
▪ empathy		4
▪ adaptability		3
▪ diversity / cultural diversity	multicultural inclusive leadership's competences	36
▪ inclusion		4

Authors' own research

With a cumulated link strength of 154, the *performance*, which results from efficient multicultural leadership and global management, is by far the strongest link to CQ. In this case, we can talk about cultural intelligence as a performance enabler.

Nevertheless, the table is also reconfirming in direct mode the fact that cultural intelligence is a crucial competence for efficient multinational leadership (cumulated link strength 83) and global management (cumulated link strength 54). All this is backed by the context in which CQ is a facilitator for knowledge transfer (cumulated link strength 43).

However, the most exciting fact is that all the other multicultural digital leadership's competencies are directly linked to CQ with thick nodes and high strengths: "emotional intelligence" (link strength 69), "communication and intercultural communication" (cumulated link strength 27), "innovation" (17), "creativity and employee creativity" (14), "global mindset" (12), "entrepreneurship" (6), "technology" (4), "empathy" (4) and "adaptability" (3). Using VoSviewer, we have also demonstrated the theory launched by Ang, Dyne, and Tan (2007) and developed by Baltaci (2017) that managers with cultural intelligence show their talents better in entrepreneurial activities, the core professional ground for *multinational leadership*. Amazon's motto also supports our finding that "it will always be day one in the company", meaning that the world's largest retailer will always act as an early-stage startup when an entrepreneurship mindset is essential (Amazon website, 2021).

The bibliometric findings also emphasize that in the more recent years, the CQ studies focus more on moderating and mediating roles of CQ within diversity (link strength 36) and inclusion (link strength 4), which are also multicultural inclusive leadership's predictors.

Conclusions and limitations

With the application and help of the bibliometric analysis software VOSviewer – cultural intelligence was identified as the main competency for multinational leadership and global management via 787 publications between 1980 and 2021 from the core collection of Web of Science. Concretely, these research 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 leadership and global management's* main competencies and skills.

This bibliometric analysis of the current work provides a valuable reference for researchers and practitioners in *multinational leadership and global management* new needed competencies; even though, by selecting English, to facilitate the analysis, as a unique writing language, we have underestimated the total literature reviews.

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

References

- Amazon website (2021). *Our workforce data*.
<https://www.aboutamazon.com/news/workplace/our-workforce-data>
- Ang, S., Van Dyne, L., & Tan, M. L. (2011) Cultural intelligence. In *Cambridge Handbook on Intelligence* (pp.582–602), Cambridge University Press.
- Baltaci, A. (2017). Relations between Prejudice, Cultural Intelligence and Level of Entrepreneurship: A Study of School Principals. *International Electronic Journal of Elementary Education*, 9(3), 645-666.
- Bratianu, C., Hadad, S., & Bejinaru, R. (2020). Paradigm shift in business education: a competence-based approach. *Sustainability*, 12(4), 1348-1365.
<https://doi.org/10.3390/su12041348>
- Bratianu, C., Stanescu, D. F., & Mocanu, R. (2021). Exploring the knowledge management impact on business education. *Sustainability*, 13(4), 2313.
<https://doi.org/10.3390/su13042313>
- Bratianu, C., Vatamanescu, E. M., Anagnoste, S., & Dominici, G. (2021). Untangling knowledge fields and knowledge dynamics within the decision-making process. *Management Decision*, 59(2), 306-323. <https://doi.org/10.1108/MD-05-2019-0559>
- Bulao, J. (2021). *How Fast Is Technology Advancing in 2020 ?*. <https://techjury.net/blog/how-fast-is-technology-growing/>
- Earley, P. C., & Ang, S. (2003). *Cultural Intelligence - Individual Interactions Across Cultures*, Stanford University Press.
- Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. Basic Books.

- Goleman, D. (1995). *Emotional Intelligence - Why It Can Matter More Than IQ*. Bantam Books.
- Gray, A. (2016, January 19). The ten skills you need to thrive in the 4th Industrial Revolution. *World Economic Forum*. <https://www.weforum.org/>
- Hall, E. T. (1990). *The Hidden Dimension*, Anchor.
- Lewis, R. D. (2018). *When Cultures Collide - Leading Across Cultures*, 4th Edition, Nicholas Brealey Publications.
- Li, K., Rollins, J., & Erjia, Y. (2018). Web of Science use in published research and review papers 1997–2017: A selective, dynamic, cross-domain, content-based analysis, *Scientometrics*, *115*, 1-20.
- Livermore, D. A. (2015). *Leading with Cultural Intelligence - The Real Secret to Success*, American Management Association.
- Meyer, E. (2016). *The Culture Map - Decoding How People Think, Lead, and Get Things Done Across Cultures*, PublicAffairs.
- Nisbett, R. (2004). *The geography of thought - how Asians and Westerners think differently...and why*. New York, Free Press.
- Nosratabadi, S., Bahrami, P., Palouzian, K., & Mosavi, A. (2020). Leader cultural intelligence and organizational performance. *Cogent Business & Management*, *7*(1).
- Paiuc, D. (2021). The Impact of Cultural Intelligence on Multinational Leadership: A Semantic Review. *Management Dynamics in the Knowledge Economy*, *9*(1), 81–93. <https://doi.org/10.2478/mdke-2021-0006>
- Pearce, C., Sims, H., Cox, J., Ball, G., Schnell, E., Smith, K., & Trevino, L. (2003). Transactors, transformers and beyond: A multi-method development of a theoretical typology of leadership. *Journal of Management Development*, *22*, 273–307.
- Peterson, B. (2018). *Cultural Intelligence - A Guide to Working with People from Other Cultures*. Across Cultures.
- Rockstuhl, T., Seiler, S., Ang, S., Van Dyne, L., & Annen, H. (2011). Beyond General Intelligence (IQ) and Emotional Intelligence (EQ): The Role of Cultural Intelligence (CQ) on Cross-Border Leadership Effectiveness in a Globalized World. *Journal of Social Issues*, *67*.
- Rüth, R. & Netzer, T. (2020). The key elements of cultural intelligence as a driver for digital leadership success. *Leadership, Education, Personality: An Interdisciplinary Journal*, *2*.
- Schwab, K. (2016). The Fourth Industrial Revolution - What it means, how to respond. *World Economic Forum*.
- Solomon, A. & Steyn, R. (2017). Leadership styles: The role of cultural intelligence. *SA Journal of Industrial Psychology*, *43*, 1–12.
- Sternberg, R. J., and Detterman, D. K. (1986). *What is Intelligence? Contemporary Viewpoints on Its Nature and Definition*, Ablex Publishing Corporation.
- Tuleja, E. A. (2014). Developing Cultural Intelligence for Global Leadership Through Mindfulness, *Journal of Teaching in International Business*, *25*(1), 5–24.
- van Eck, N. J. & Waltman, L. (2014). *VOSviewer Manual*, Leiden.
- World Economic Forum's Global Agenda Council (2016). *The Future of Software and Society*. <https://www.weforum.org>
- Yan, A. & Luo, Y. (2001). *International Joint Ventures: Theory and Practice* (1st ed.), Routledge.