THE RELATIONSHIP BETWEEN CONSTRUCTIVIST SCHOOL LEADERSHIP AND CULTURAL INTELLIGENCE: A STUDY ON INTERNATIONAL BACCALAUREATE SCHOOLS ACROSS THE EUROPEAN CONTINENT

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ABSTRACT
The study seeks to establish the relationship between cultural intelligence and constructivist school leadership in IB (International Baccalaureate) schools across Europe. It examined the responses of 42 school leaders who participated in the Cultural Intelligence Scale Survey and Constructive Leadership Survey designed specifically for the study. Multiple regression analysis was used to determine if the factors of cultural intelligence contribute to a constructivist style of leadership. Results indicate a correlation between cultural intelligence levels and determining elements in the constructivist style of leadership among IB college leaders in various European countries. The results provide scholarship into the selection, training, and professional development of school leaders at all levels within the educational system. Implications from the study make a compelling case towards including cultural aspects into more areas across the higher education curricula. This research makes a unique contribution to the role that cultural intelligence plays in identifying factors that best predict constructive leadership development in IB school environments.
Keywords: Constructive leadership, Cultural intelligence, International Baccalaureate (IB) Schools

Introduction

Globalization is an important concept for school leaders, educators, and students to understand and appreciate in today's world. Globalization calls for high interconnectedness of people, notably educators, across the world who are entrusted with the task of facilitating global cultural, political and economic changes. Fundamental to all this is the ability to develop communicative competence and meaningful relationships in an era of high scale technology and diversity in workplaces. These challenges place schools, notably their leaders, in a position to spur interdisciplinary groups capable of navigating effectively and collectively through educational processes that make these values central to their daily activities. Hence, the gathering and sharing of knowledge across disciplines to assist the creation of productive groups within a context of meaningful relationships become all too important (Fox & Hundley, 2011), and International Baccalaureate (IB) schools are a fertile ground on which such relationships can flourish.

The International Baccalaureate

The IB prepares students "for the evolving and increasingly global society as they develop physically, intellectually, emotionally, and ethically" (IBO, 2014, p. 9). IB schools focus on developing knowledge and understanding of cultures and concepts that situate students in a position where 'learning to learn' is vital, thus equipping them for higher education and employment (IBO, 2014). Programs within the IB structure require students to study at least two languages and are designed to enhance the understanding of culture, this being an essential prerequisite as we continue to experience an increasingly diversified workforce that transcends national boundaries (IBO, 2014).

Work performed in IB schools is consonant with modern theoretical concepts of learning and is consistent with the work of innovative educational thought leaders (Hill & Saxton, 2014). Studies conducted in China found that the IB educational curriculum and philosophy are ideal for developing the 21st-century skills needed to succeed in higher education and beyond (Wright & Moosung, 2014).

Culture and Cultural Intelligence

The impact of Culture and Cultural intelligence on leadership functions is also a factor that needs to be considered when studying the effectiveness of school leaders in multicultural contexts such as IB schools. Cultural intelligence (henceforward referred to as CQ, deriving from the term Intelligence Quotient (IQ)) is “a person’s adaptation to new cultural settings and capability to deal effectively with other people with whom the person does not share a common cultural background and understanding” (Earley & Ang, 2003, p. 34). It describes the ability of the individual to interact effectively with people who are culturally diverse within the cultural context of the individual. CQ refers to the ability to manage people from diverse cultural backgrounds (Morley et al., 2010) through the use of skills that enable individuals to interact effectively with people from diverse cultures (Charoensukmongkol, 2016). Earley and Ang (2003) divided CQ into four dimensions: cognitive, meta-cognitive, behavioural, and mo-

tivational. The cognitive dimension is one of the main aspects of CQ that discusses having an empirical and cognitive context about patterns existing in a new cultural situation, which helps the individual to process information better and more efficiently (Ramsey et al., 2011). Influenced by this dimension, one strives to objectively and mentally acquire sufficient information about customs and traditions in diverse cultures and new patterns of behaviour through learning or personal experience (Ramirez, 2010). Thomas (2015) argues that the cognitive dimension can be achieved by training one's own experience. The metacognitive dimension of CQ is related to the cognitive dimension in that one performs a mental process of the cognitive dimension obtained through personal experience or training, and then a particular understanding of cultural knowledge is created in one's mind (Ang et al., 2006). This includes strategic planning during professional activities, monitoring their accuracy of implementation, and modifying mental patterns as needed (Morley, 2010). The behavioural dimension is another major aspect of CQ that refers to the appropriate reactions and behaviours during interactions with different cultures (Ramsey et al., 2011). This aspect of CQ also encompasses the ability to express appropriate and effective verbal and nonverbal behaviours during intercultural interaction, on the basis of how the individual evaluates new cultural environments (Gregory et al., 2009). The behavioural dimension deals with the ability of individuals to respond to different customs, traditions, and lifestyles across various countries (Earley & Gardner, 2005). The motivational dimension of CQ relates to one's openness to learn new cultural patterns and their behaviour when encountering an unfamiliar culture (Charoensukmongkol, 2016). This dimension expresses one's ability to deal with psychological stress during interactions in new environments (Ramsey et al., 2011). Besides, the role of external and internal stimuli in motivating one to adapt to culturally heterogeneous contexts is an important part of this dimension.

Constructivism and Constructivist Leadership

Rooted in Kantian philosophy (Kant, 1787), the main aim of constructivism is making meaning and constructing social worlds through processes of individual cognition. Constructionism focuses on the notion that social worlds become a reality through social processes (Allen, 2017). It holds that individuals actively and continuously construct their own meanings and understandings of reality and the world they live in. Knowledge is assumed to be transferred from one individual to another through interaction, and therefore different experiences induce individuals to perceive the world differently. Constructivist theorists, therefore, hold that knowledge should not be judged in terms of its veracity but in terms of its practicality (Schafer, 2014). The only thing that matters is whether the knowledge that is constructed is appropriate for the context in which it arises (Brau, 2018). Constructivist leaders strive to enact ways to facilitate the learning process. Since they believe that knowledge originates from within the individual (Johnston, 2018), they facilitate learning by posing questions to learners that stimulate self-construction and interaction – involving both active listening and feedback from all involved. Constructivist leaders are therefore active promoters of inquiry-based processes (Walker & Shore, 2015), re-articulation and re-examining educational processes (Shapira-Lishchinsky, 2015) such that educators seek out consistency and meaning in various ideas (Yildirim & Kaya, 2019). This is further supported by research on leader-follower relationships (Lambert et al., 2002, Shrestha, 2020), who advocated for a rethinking into the roles of "leaders" and "followers" and instead started perceiving them in terms of sustainable and interconnected relationships within a context of common goals. Hence, within a constructivist leadership approach, activities such as inquiry, reflection, dialogue, and action within an ambience of profound respect, heighten the self-esteem of each stakeholder. These elements enhance communication processes and pave the way for stakeholders to speak openly on issues of concern (Johnston, 2018).

A main tenant of constructivist leadership is the insistence on the growth of followers within an institution. So learning is an active process that occurs naturally within a social setting, where educators share ideas, practices, face challenges and engage in deep enquiry within a social environment. These experiences also call for reflection and meta-cognitive processes that contribute positively to the construction of knowledge and the sense-making process.

Therefore, constructive leadership occurs in groups and is particularly concerned with influencing the group of individuals who have a common purpose. One of its assumptions is that humans possess the capacities to grow and change. Constructivist leadership separates leadership from leaders and situates it in the ability of participants to incorporate responsibilities arising from newly formed patterns of relationships. These relationships are evolving and seek the growth of both leaders and participants. Therefore, from the constructivists' point of view, learning is anchored in the community where the leader is energized by the curiosities of his/ her colleagues and the students. Together, they find fulfilment and stimulation in the daily impasses of teaching and are intrigued by the challenges posed by school improvement opportunities. Lambert et al. (2003) place the values of community at the very centre of constructivist leadership: "When we learn together as a community toward a shared purpose, we are creating an environment in which we feel congruence and worth" (p. 4). Therefore, constructivist leadership stretches learning beyond the four walls of the classroom and gives way to new experiences and opportunities for honing existing skills and exploring new ones. Constructivist leadership moves away from the notion of leadership traits, is something that can be learnt, and that everybody is capable of possessing (Lambert et., 2003). It therefore,

urges educators to build lessons around great ideas, revolving around the 'big picture' and not small pieces of pointless information. It values access to knowledge, research, technology and innovation while supporting programs and services that help students make wise choices towards lifelong learning. It proposes systems of assessment that values classroom investigations and not isolated events such as exams. Moreover, educators are assessed for their ability to navigate through the complexity of school organization rather than isolated events, and this is consonant with the ultimate purpose of leadership development, i.e. the creation of schools as vibrant learning communities led by confident, competent, and caring leaders.

Bonner et al. (2017) believe that constructivist leaders possess a critical ability to reflect, question, and challenge fossilized ways of thinking, acting, and leading. Those who profess constructivist leadership take pride in promoting change and in targeting their leadership behaviour towards ameliorating school practice, with particular emphasis being placed on fostering a more global or holistic view of education. We can summarise that constructivist leadership aims to

a) develop a shared vision towards effective engagement in educational processes (Yildirim & Kaya, 2019),
b) cultivate a heightened sense of purpose through the building of relationships within a framework of high ethical standards (Lynch, 2012),
c) encourage a culture of critical reflective practice (de Souza Sant'Anna et al., 2011),
d) facilitate the creation of knowledge and skills that equip educators to engage in mutual, deep and critical discussion about teaching and learning processes, in order to construct meaning (Lambert, 2009),
e) promote action research (Angelle & DeHart, 2011),
f) build a solid understanding of constructivist learning among educators (Shapira-Lishchinsky, 2015),
g) initiate new ways of approaching challenges through sustained processes of change and transition (Lambert, 2009),
h) seek deeper critical understanding of past educational experiences to assist in the creation of new meanings (Shapira-Lishchinsky, 2015),
i) project and transform emerging ideas into real educational opportunities (Aljohani, 2017).

The link between Cultural Intelligence and Constructivist Leadership

The interaction between individuals within a learning community is largely responsible for the transmission of cultural elements with its environment. Within his/her school, the leader is required to create, transform, maintain and manage the culture, thus providing sense and meaning to the cultural environment (Bettini et al., 2016). This approach to leadership assumes particular importance when aligned with the mission of the school. Hence, leadership across cultures aims to establish and develop a strong sense of purpose whilst keeping a flexible cultural structure within the school.

Hence within a school context, constructivist leaders interpret the tasks and the cultural norms and values of the school. Hence it is vital for school leaders to cultivate intercultural competencies on the conceptual, social, the practical level (author, 2016). Conceptual competence is the ability to work with ideas and concepts, while social competence resides in the ability to work with individuals and increase knowledge in this regard. Şahin (2011) discovered that CQ is an essential element of cultural competence and is critical for intercultural leadership to be effective. Furthermore, Şahin and Gurbuz (2014) discovered that cultural intelligence contributed to individual performance more than their demographic characteristics and general cognitive competencies. This finding shows that cultural intelligence is a strong positive predictor of individuals' performance in intercultural settings. CQ focuses on the necessary elements that build fruitful interpersonal relationships and promote effectiveness across different cultural contexts, also allowing educators to "look through different lenses" (author, 2016, p.73) and respond differently to different behavioural patterns. Therefore, CQ allows individuals to function efficiently and be successful in multicultural environments, reduces intercultural communication barriers and empowers educators to manage cultural diversity. The behavioural dimension of CQ includes the relationships a school forges with internal and external stakeholders, an essential aspect given that cultural diversity within a networking society is so ubiquitous. Identifying, valuing, and supporting cultural differences maximizes educators' cultural responsiveness to their students' backgrounds and differing abilities (Orosco & O'Connor, 2011). The aim of this study is to examine if cultural intelligence is a predictor of constructive leadership in IB international schools. Consequently, the research questions for the present study are: Is there is a relationship between cultural intelligence and constructivist leadership in IB schools? If so, what factor(s) of cultural intelligence best predict(s) constructivist leadership in IB school leaders?

Methodology

Participants

The participants in the study were a volunteer sample of 42 IB school leaders. IB school leaders in this study were defined as individuals who are in leadership positions such as director, principal, Head of School, Head of Section, year coordinator, or similar positions within the leadership structure of the school. The participants were recruited from a large number of websites that advertised IB schools across the European continent. Contact emails were sent directly to the school director requesting their voluntary participation in the study. A total of 89 IB school leaders were invited to participate in the study, of which a total of 42 leaders responded, amounting to a response rate of 47%. The IB school leaders who completed the survey were based in 16 different countries. In total, 29 (69%) of the participants were male, 11(26%) were female, and 2(5%) responded other.

Instrumentation

The variable of CL was measured using the Constructivist Leadership survey, an instrument constructed for the purpose of the study and the variable of cultural intelligence was measured using the Cultural Intelligence Scale (Ang et al., 2007). The model derives from theories and frameworks as outlined in the literature review. It measures the six factors (labelled A-F) of constructivist leadership (see appendix), which include a) Strategic planning, b) Teaching and learning processes, c) Shared leadership, d) Communication and interaction, e) A safe school climate, f) Encouraging stakeholders.

In turn, each factor contains a number of items described by a series of 'I' statements that describe a behaviour associated with constructivist leadership style and asks the responder to assess the frequency of their use of that behaviour. The advantage of 'I' statements is that they provide 'ownership' of the behaviour in question as well as clear communication of the ideas being presented. A seven-point Likert scale from 1 to 7 was used to denote the frequency at which the behaviour occurs (1 being the lowest and 7 being the highest). The higher the registered score on the statement, the higher the level of constructivist leadership functioning. The minimum and maximum Constructivist Leadership scores for each factor vary according to the number of statements linked to each factor. The Cronbach α coefficient for the CL survey was 0.76, which indicated that the scale was internally reliable.

The CQ survey (Ang et al., 2007) consists of 20 items to measure a four-factor model. Each item on the scale describes an individual's competence to be culturally intelligent in one of the four factors (metacognitive, cognitive, motivational, and behavioural cultural intelligence. The scale "includes four items for metacognitive cultural intelligence (α=0.76), six for cognitive cultural intelligence (α=0.84), five for motivational cultural intelligence (α=0.76), and five for behavioural cultural intelligence (α =0.83)" (Ang et al., 2006, p.110). The scale has been used in a variety of studies (Ang et al., 2007; Moon, 2010; Ward et al., 2009), yielding a Cronbach alpha of 0.93, implying high internal consistency and reliability.

Individuals were asked to respond to each statement using a seven-point Likert scale, in which a response of '1' meant "strongly disagree" and '7' meant "strongly agree." A higher score on the item indicated a higher level of cultural intelligence. A separate score is derived for each factor of cultural intelligence by summing the item scores and dividing by the number of items in the respective section. The minimum score for each factor is 1, and the maximum score is 7. Procedures The email sent to identified participants requested that they complete the two online surveys together with an informed consent form, questions regarding demographics, the CL survey and the CQ survey.

Research design and analysis

The multivariate correlational research design employed in the study allowed the researcher to look at relationships between cultural intelligence and constructivist leadership in an all-encompassing way, allowing the researcher to measure the relationship between them and to look for significance. The non-experimental design was considered appropriate since both variables (cultural intelligence and constructivist leadership) exist naturally and are not deliberately controlled or manipulated (Salkind, 2010). A standard multiple regression was used for data analysis as the researcher sought to understand the relationship between sets of multiple predictor variables, the four factors of cultural intelligence, and the criterion variable (constructivist leadership).

Results

Descriptive statistics

The mean and standard deviation for Constructivist Leadership were M_{CL}= 108.45 and SD= 1.21, X_{max}= 175, X_{min} =25) shows that the IB school leaders had a medium to high level of Constructivist Leadership skills. Table 1 gives the descriptive statistics for the cultural intelligence factors under investigation.

Examination of the means indicates that the participants overall had a high level of Metacognitive CQ (M=21.33, SD=0.55, n=4) and Behavioural CQ (M=23.83, SD= 1.29, n=5). Also, participants exhibited moderate levels of Cognitive CQ (M=22.87, SD=1.23, n=6 and Motivational CQ (M=18.68, SD=1.34, n=5).

The participants also had moderately high cognitive and behavioural cultural intelligence. It must be noted that the standard deviation score for Metacognitive Cultural Intelligence is low (SD=0.55), which implies that the vast majority of the participants rated their Metacognitive Cultural Intelligence very close to the mean of 12.33. The largest standard deviation is noticed in the Behavioural Cultural Intelligence (SD=2.29), which also had the largest mean of all (M=23.83).

Variables	M	SD
Metacognitive Cultural Intelligence X_{max}=28, X_{min}=4, n=4	21.33	0.75
Cognitive Cultural Intelligence X_{max}=42, X_{min}=6, n=6	22.87	1.23
Motivational Cultural Intelligence X_{max}=35, X_{min}=5, n=5	18.68	1.34
Behavioural Cultural Intelligence X_{max}=35, X_{min}=5, n=5	23.83	2.29

Table 1: Cultural intelligence variables: M=mean score, SD=Standard Deviation, X_{max}=maximum score, X_{min} =minimum score, n=number of items

Table 2 shows the correlations between the predictor variables of the Cultural Intelligence Components namely: Metacognitive CQ, Cognitive CQ, Motivational CQ, Behavioural CQ with the Constructivist Leadership (the criterion variable). The intercorrelations resulted in low to moderate scores and these underline the significance of results.

Further tests were conducted to determine the possibility of mild and extreme outliers. The results produced only mild outliers which were deemed of little significance to the regression analysis. The linearity and the homogeneity of variance were also recorded and the results were found to be satisfactory. The use of R^2 as a statistical measure of fit indicated how much variation of a criterion variable (constructivist leadership) is explained by the predictor variables (Cultural intelligence variables) in the regression model. The standard multiple regression performed resulted in R^2=0.19, F (3, 41) = 4.5 (at F_{crit}= 2.83, p<0.01) indicated that the linear combination of Metacognitive CQ, Cognitive CQ, Motivational CQ, and Behavioural CQ, were strong predictors of Constructivist Leadership.

Variables	Constructivist Leadership	Metacognitive Cultural Intelligence	Cognitive Cultural Intelligence	Motivational Cultural Intelligence	Behavioural Cultural Intelligence
Constructivist Leadership (CL)	1	0.38*	0.36*	0.29*	0.34*
Metacognitive Cultural Intelligence (MCI)	0.38*	1	0.55*	0.59*	0.61*
Cognitive Cultural Intelligence (CCI)	0.36*	0.55*	1	0.44*	0.45*
Motivational Cultural Intelligence (MCI)	0.29*	0.59*	0.44*	1	0.64*
Behavioural Cultural Intelligence (BCI)	0.34*	0.61*	0.45*	0.64*	1

Table 2: Intercorrelation among variables, *p <0.05

Also, the multiple correlation coefficient of 0.44 indicated that 19% of the variance in constructivist leadership can be accounted for by the linear combination of the four factors of cultural intelligence. While R^2 is statistically significant, its low value constitutes little practical significance to the study.

Table 3 shows the extent to which each predictor variable (Metacognitive CQ, Cognitive CQ, Motivational CQ and Behavioural CQ) contributed to the prediction of the criterion variable (CL). The results show that Cognitive CQ and Behavioural CQ had a p level <0.05 and this shows that there is a significant positive relationship between Cognitive CQ, Behavioural CQ and CL with these variables mostly responsible for its prediction. The regression coefficient of Metacognitive CQ (p=0.06) and Motivational CQ (p=0.45) were not significant at p<0.05 level, which means that these variables were least responsible in predicting constructivist leadership.

Variables	*r*	*t*	*p*
Metacognitive CQ	0.38	1.63	0.06
Cognitive CQ	0.36	2.22	0.02*
Motivational CQ	0.29	-0.12	0.45
Behavioural CQ	0.34	2.01	0.03*

Table 3: Contribution of Metacognitive CQ, Cognitive CQ, Motivational CQ, Behavioural CQ, N=42, df=41, *p<0.05

Discussion

The results of the study show that there is a significant positive relationship between cultural intelligence and constructivist leadership. This means that IB school leaders who demonstrate higher levels of cultural intelligence also exhibit more elements of CL and consequently increased levels of effectivity and efficiency in managing multicultural environments. This finding is consistent with other studies focusing on different work environments (Ahmad & Saidalavi, 2019; Nosratabadi, 2020).

The study also shows that the Cognitive CQ and Behavioural CQ variables were the best predictors of CL for leaders in IB schools. School leaders who were proactive towards adapting to the multicultural environments present in their schools are more equipped to lead in a more constructivist style, whereas leaders who are finding it difficult to adapt may have to resort to deep reflective processes towards adaptive mechanisms prior to engaging in constructivist leadership. This is supported by research from Afsar et al. (2021), who found that behavioural and cognitive cultural intelligence were positively correlated to heightened innovation and effectiveness in multicultural team compositions.

Behavioural cultural intelligence has also been linked to increased intercultural negotiation effectiveness and task performance (Imai & Gelfand, 2010; Groves, Feyerherm & Gu, 2014), while Cognitive cultural intelligence has a positive relationship with cultural judgment and decision making (Ang et al., 2007; Schlaegel, Richter & Taras, 2017). In fact, the four variables that compose cultural intelligence suggest that leaders who promote creativity and innovation are also effective in decision making and also exhibit more constructivist leadership behaviours.

The findings contribute to the existing research on cultural intelligence by identifying which factors of cultural intelligence best predict constructivist leadership. The study also links the importance of research in cultural intelligence in IB schools, placing particular focus on constructivist leadership as linked to behavioural and cognitive processes as enacted by school leaders. The results make a strong case in favour of infusing cultural intelligence scholarship and constructivist leadership propositions in the selection processes of school leaders, not only in IB schools but also in elementary and higher educational institutions. The inclusion of assessments that include leadership competence, cultural intelligence, intercultural skills, and interpersonal competence in an all-inclusive package should be encouraged. The importance of continuous development courses in each of the mentioned areas under study should also be strengthened.

Cultural intelligence is about harnessing high levels of understanding, skills and behaviours that are needed to be able to function effectively in a culturally diverse world. It moves away from the notion of targeting specific knowledge, attitudes and behaviours that are frequently attributed to particular countries or cultures (Byran et al., 2002; Earley & Ang, 2003; Livermore, 2011, 2015, 2016).

Metacognitive cultural intelligence can be increased by developing processes that enrich stakeholders' knowledge and experience and how this is impacting the culture of the surrounding school environment. Such knowledge includes, for example, familiarity with different educational systems, parenting roles in education, views on disabilities, lifelong learning and career choice.

These are mediated by the leader's cultural values, system beliefs and understanding of cultural differences. Livermore (2010) believes that Metacognitive cultural intelligence can also be developed by the meticulous preparation of activities that precede cross-cultural interactions and activities. Cognitive cultural intelligence can be enhanced through the use of interventions that focus specifically on the scholarship of culture-specific knowledge.

Motivational cultural intelligence can be enhanced by encouraging individuals to focus on cultural experiences that are particularly relevant to them. Livermore (2010) suggests that motivational cultural intelligence can be improved by balancing the financial cost of not being culturally intelligent with that of being culturally intelligent. The use of role play and simulations in dramaturgical exercises can be used to develop behavioural cultural intelligence (Ng, Van Dyne, & Soon, 2009). These help to develop a "holistic focus toward learning the nuances of behaviour and actions and utilizing cognitive, sensory, emotional, and physical processes" (Keung & Rockinson-Szapkiw, 2013). To assist in increasing behavioural cultural intelligence Tan and Chua (2003) suggest the use of behaviour modification methods that aim to reward target cultural behaviours and sanction culturally inappropriate ones.

As the world becomes more globalized, it is becoming increasingly beneficial to infuse cultural intelligence training into all levels of education, particularly in leadership education programs. This will make school leaders more self-confident and accepting to change and innovation. Given their extensive experience and targeted school setups to accommodate multicultural students, leaders in IB schools may also assume a more advisory role. The findings of this study show that cultural intelligence is positively related to constructivist leadership for IB school leaders, and this makes a strong case in favour of scholarship that combines cultural intelligence with other aspects of leadership practices. It also makes a strong case in favour of targeting European funds towards integrating cultural intelligence into higher education curriculum for educational leaders.

Limitations of the study

The study presented the interrelations between two consecutive surveys. This consecutiveness might have presented a limitation to the validity of the study. To mitigate against this limitation, half the participants were handed the CL survey first and then the CQ survey. The other half were administered the CQS first and then the CL survey. High non-response rates are also a concern in survey research. Therefore, the researcher chased the respondents by numerous phone calls and emails over the period over the period of the study, also taking note of the time zone.

Notwithstanding the advantages that online surveys offer over physically administered ones, self-scoring statements still present the challenge of having to rely on the fidelity of participants. Ongoing surveys in different educational settings will help cater for this. The online surveys were administered during September/ October 2021, and this could be viewed as a limitation since schools were still in the settling down period and school leaders were still completing their preliminary yearly preparations.

The study used data from participants completing two questionnaires. Some items from both questionnaires were left unanswered, and consequently, statistical computations and inferences could have influenced the results. It must be noted that, notwithstanding the encouraging participant response rate of 47%, a total of 53 % ignored participation in the study and this needs to be considered when making inferences from the results. The generalisability of results is limited to IB schools across European countries, and this also suggests the need to expand research on constructivist leadership and Cultural CQ to other geographical areas, taking into account cultural aspects pertaining to that particular country. Research also needs to be inclusive of both quantitative and qualitative paradigms on the constructs of cultural intelligence and constructivist leadership in IB school leaders. Besides broadening the aims and validity of research, mixed methodology would be helpful towards triangulation of data. This study could be replicated with different sample populations such as school boards, business school managers, directors of English as foreign language schools, managers within educational directorates as this would further enhance the generalizability of results.

Moreover, the author recognizes that factors such as gender, nationality, educational experience of school leader, student demographics and student population may have an influence on the overall results. Adding these factors would certainly be beneficial for future research.

The limitation of the use of self-report assessments can be addressed through 360^0 reviews of international school leaders with objective feedback from multiple sources, including educators, researchers, parents, boards of directors, local councils, community members and other educational stakeholders. In addition to the use of CQ and CL surveys, research needs to be augmented with interviews, observational methods and artefact analysis to help gain a deeper understanding of cultural intelligence and constructivist leadership in IB school leaders. Besides, the use of international student assessment tests such as PISA (OECD, 2022), TIMSS (IEA, 2021) and PIRLS (IEA, 2021) can be used as supporting measures to correlate results obtained from the CQ and CL surveys to help determine school leaders' effectiveness in managing in multicultural environments.

Conclusion

This study examined if there is a relationship between cultural intelligence and constructivist leadership in IB school leaders. The results of the study demonstrate that cultural intelligence factors correlate positively with constructivist leadership in IB school leaders. This makes a strong case in favour of including CQ as an important factor in the recruitment, training, and professional development of IB school leaders and also to include the study of cultural intelligence into further and higher education curricula. The author advocates for more efforts to be channelled at sustaining empirical studies focusing on CQ and CL. As factors in both constructs evolve, more relationships can be further established, thus contributing to much-needed development in this area of study.

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Appendix
The 20-item, Four Factor Cultural Intelligence Scale (CQS)
Instructions:
Please select the answer that BEST describes you AS YOU REALLY ARE (1=strongly disagree; 7=strongly agree).

CQ Factor	Questionnaire Items
CQ-Strategy: cultural	
MC1	I am conscious of the cultural knowledge I use when interacting with people with different. backgrounds
MC2	I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.
MC3	I am conscious of the cultural knowledge I apply to cross-cultural interactions.
MC4	I check the accuracy of my cultural knowledge as I interact with people from different cultures.
CQ-Knowledge:	
COG1	I know the legal and economic systems of other cultures.
COG2	I know the rules (e.g., vocabulary, grammar) of other languages.
COG3	I know the cultural values and religious beliefs of other cultures.
COG4	I know the marriage systems of other cultures.
COG5	I know the arts and crafts of other cultures.
COG6	I know the rules for expressing non-verbal behaviors in other cultures.
CQ-Motivation:	
MOT1	I enjoy interacting with people from different cultures.
MOT2	I am confident that I can socialize with locals in a culture that is unfamiliar to me.
MOT3	I am sure I can deal with the stresses of adjusting to a culture that is new to me.
MOT4	I enjoy living in cultures that are unfamiliar to me.
MOT5	I am confident that I can get accustomed to the shopping conditions in a different culture.
CQ-Behavior:	
BEH1	I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.
BEH2	I use pause and silence differently to suit different cross-cultural situations.
BEH3	I vary the rate of my speaking when a cross-cultural situation requires it.
BEH4	I change my non-verbal behaviour, when a cross-cultural interaction requires it.
BEH5	I alter my facial expressions when a cross-cultural interaction requires it.

Dear participant,
Thank you for accepting to participate in this study.
Please select the answer that BEST describes you AS YOU REALLY ARE (1=strongly disagree; 7=strongly agree).
Constructivist Leadership Questionnaire

	Strongly Disagree						**Strongly Agree**
Factor A: Strategic Planning							
1) I build on a shared vision and mission.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2) I build on shared goals.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3) I build on shared beliefs.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Factor B: Teaching and learning processes							
4) I support teachers in their professional development.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5) I construct knowledge around critical discussions.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
6) I promote critical reflective practices.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Factor C: Shared leadership							
7) I involve all stakeholders in decision making.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
8) I delegate authority.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
9) I share responsibility with stakeholders.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
10) I build a sense of responsibility.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
11) I communicate and interact with stakeholders.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Factor C: Communication and interaction							
12) I establish clear communication.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
13) I provide place for dialogue and discussion.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
14) I build interactive processes.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Factor D: A safe school climate							
15) I establish a climate of trust among stakeholders.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
16) I accept stakeholders as partners in education.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
17) I respect stakeholders.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
18) I construct an environment based on high ethical standards.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Factor E: Encouraging stakeholders							
19) I initiate change in educational processes.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
20) I encourage change in educational processes.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
21) I accept change in educational processes.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
22) I am flexible in my approach to leadership tasks.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
22) I motivate stakeholders.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
23) I act as a facilitator.	**1**	**2**	**3**	**4**	**5**	**6**	**7**