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The Meta-leadership inventory: developing a valid and reliable instrument for international school leaders

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THE META-LEADERSHIP INVENTORY: DEVELOPING A VALID AND RELIABLE INSTRUMENT FOR INTERNATIONAL SCHOOL LEADERS

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by

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DEDICATION

This research is dedicated to my entire family, for their love and support throughout this journey.

To my mother and father, who are responsible for the man and scholar I am today. You are the most supportive and caring parents anyone could ask for. I love you dearly.

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VITA

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ABSTRACT

International school leaders must be prepared to steer their schools through ongoing crises and changes, regardless of the factors creating the crises and the need for swift change. To achieve the best possible outcomes from these dynamic situations, international school leaders must strategically deploy skills and abilities delineated by the meta-leadership framework developed by Marcus et al. (2015). This study aimed to develop a valid and reliable instrument that measures the meta-leadership competencies of international school leaders: the Meta-leadership Inventory for International School Leaders (MLI-ISL). This instrument development study involved a three-phase design. An initial set of items based on a theoretical blueprint derived from the scholarly literature was validated by a panel of subject matter experts followed with a reliability analysis to establish internal consistency of the inventory with a sample of 212 international school leaders. Utilizing Kalkbrenner's (2021) measure approach, phase one resulted in the development of over 100 total items divided into three dimensions and 11 subdimensions. Phase two established content validation of 79 items by a second panel of experts with expertise in meta-leadership, international school leadership, and survey design. Phase three reliability analysis procedures resulted in the MLI-ISL having excellent overall reliability (α = .95) and good reliability for the three main dimensions: The Person of the Meta-Leader (α = .87); The Situation (α = .85); and Connectivity (α = .89). Four subdimensions met the .70 reliability level with the eight remaining subdimensions just below acceptable levels. Analysis of variance showed that geographic region of the respondents significantly impacted the three main dimensions' scores. The study outcome provides strong evidence that the MLI-ISL is a valid and

reliable instrument measuring meta-leadership competencies of international school leaders. These leaders exhibit high intrapersonal and interpersonal skills, enabling them to strategically lead others through dynamic and complex events within their organizations. The behaviors and actions of international school leaders are influenced by the cultural context of the geographic location of the leader's school. Recommendations for future research include refining the MLI-ISL's length, revising demographic items, improving the reliability of the subdimensions, and expanding the instrument's target population.

Keywords: meta-leadership, international schools, crisis management, instrument construction, content validation, reliability analysis

Chapter 1: Study Introduction

International schools were singularly created to educate expatriate workers' children in the curriculum and language of their home countries (Hill, 2015). Expatriates have worked in developing countries on five continents where natural resources and other profitable industries emerged, requiring foreign workers' expertise (Hayden & Thompson, 2013). Brummitt and Keeling (2013) explain that companies or governments established these schools to ensure workers with young children could maintain a family life due to the remoteness of work locations. They also report that these schools were small, limited in resources, and did not operate for profit.

While it is impossible to pinpoint precisely when the first international school was founded, scholars agree that the industry of international schools emerged in the 1950s (Bunnell, 2007; Hayden & Thompson, 2013). Hill (2002) reports that the industry was legitimized in Geneva, Switzerland, with the formation of the International Schools Association (ISA) in 1951, a byproduct of the initial work of the United Nations Educational, Scientific and Cultural Organization (UNESCO). Guided by UNESCO's mission of building peace in the minds of men and women, ISA laid the pedagogical, cultural, and philosophical foundations for international education bodies (Bunnell, 2007; Sylvester, 2003; Walker, 2015). While ISA is the pioneer in the industry, many competitors have emerged with a targeted focus on a region or curriculum, creating both saturation and overlap with no unified governing body. For example, member schools of the International Baccalaureate Organization (IBO) must offer a globally-recognized, standardized diploma program (Tarc, 2009). Some IBO member schools may also be affiliated with a regional association such as the European Council of International

Schools. A typical scenario such as this dual membership contributes to a muddled understanding of the international school industry. As Sylvester reported in 2003, the group of international school organizations that currently exists is divided across curriculums and geographical regions, with a lack of unified membership, indicating that calculating the scale of the international school industry is challenging.

Over the last 75 years, the concept of international schooling has changed from exclusively non-profit, company, or government-sponsored programs into a vast, emerging industry of proprietary, for-profit education (Bunnell, 2021). Evidence supports the fact that non-profit international schools are dwindling in representation compared to proprietary schools' growth. According to International School Services, a non-profit search and consulting firm, an estimated 70% of all international schools are proprietary and run to make a profit (International School Services, 2021). The industry is profitable and continues to grow at a sustainable rate. Based on over 30,000 data points collected by ISC Research, current estimates indicate that 12,853 international schools serve 5.73 million students, employ 557,773 staff, and have collected $54 billion in fee income (ISC Research, 2022). Walker (2015) contends that the long-term growth of the international education business is proving to be sustainable, lucrative, and seemingly impervious to economic downturns. ISC Research confirms Walker's points as it projects that by 2030, 17,400 schools will educate 10 million students and employ 920,000 teachers. The industry is growing globally, with the largest markets being Asia and the Middle East.

International schools across Asia and the Middle East comprise most of the industry, with for-profit schools enrolling a blend of expatriate and local students

(Bunnell, 2021). India, China, and the United Arab Emirates are projected to be the fastest-growing markets in the next five years (ISC Research, 2022). In her 2019 article, Civinini reported that China had 884 English language schools, the most among all non-English speaking countries, while Dubai has the largest international school enrollment figure with 246,000 students. The Chinese and Emirati markets are already leaders in current enrollment and campuses. The data projections from ISC Research (2022) suggest that those markets cannot meet the future demand for international education. Relying on single-campus schools will not be able to keep pace with the growing demand.

International school networks are positioned to expand rapidly over the next decade with their established educational and operational models and pooled resources. An emerging number of global chains operate multiple campuses across international borders due to the overwhelming demand for international education. Nord Anglia Schools, GEMS Education, Cognita, Taaleem, and SABIS Group are for-profit global international school networks that operate on all five continents with market valuations ranging from hundreds of millions to one billion USD (Brummitt & Keeling, 2013; Nord Anglia Education, 2022). Bright Scholar is the leading international school network in China, with 107 campuses distributed across the country and accounting for 12.6% of the market share (Bright Scholar Education, 2022; Civinini, 2019). According to Brummitt and Keeling (2013), these networks are expanding aggressively by acquiring existing schools, expanding their current operation, and building new schools.

Bunnell (2021) posits that the industry shift from parent-cooperative towards for-profit, commercially-run networks adds to the complexity of defining an

international school. Whether a global network of schools, a small local school with a foreign curriculum, an embassy-sponsored school, and everything in between, the definition of international schooling has changed since the initial, limited use for expatriate education. As additional national and international curriculums are developed, government regulations are loosened for host country citizens, and the industry expands, so has the definition of an international school.

"Expatriate", "foreign", and "international" are terms used by Heyward (2002) to describe the experience of international education. His article attempts to define what international schools are and the purpose of their existence. As explained by Heyward (2002), the key distinguishing feature of international schools is that they offer an alternative to families concerned about local and nationally prescribed curriculums in host countries, thus attracting a mix of expatriate, foreign, and sometimes local students. Heyward's work is grounded in his framework of intercultural literacy, which is the opportunity to cross-cultural boundaries through competencies, attitudes, and identities. This framework is evidenced through the combination of students, faculty, and leadership from different countries, establishing a unique globally-minded culture within each international school.

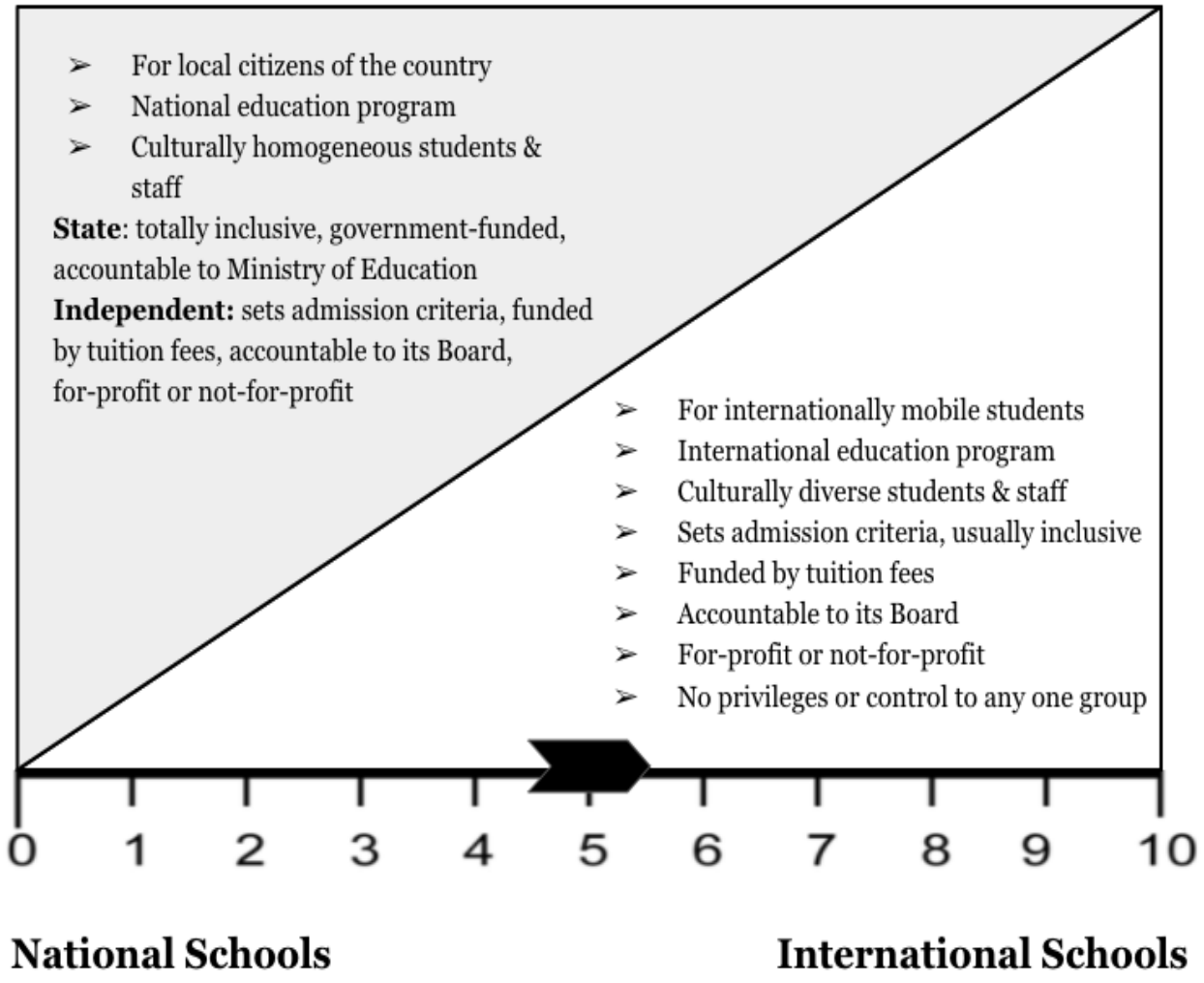
Hill (2015) proposes a typology scale to classify better where an institution falls between a purely national and purely international school. He uses five criteria to define how international a school is: (a) student tuition fees, (b) cultural diversity of the governing body, (c) nature of the student body, (d) educational program, and (e) reason why the school was established (see Figure 1). Considering the variations across the

educational models of tens of thousands of institutions, international school leaders face various challenges.

According to Bailey and Gibson (2020), international school leaders face the ongoing pressure of parental expectations, uncertain procedures within the governance model, and the constant struggle to meet national (in-country) procedures and

Figure 1

Typology Scale of Schools



Note. Adapted from "What is an international school? Part two" by Ian Hill, 2016, *International Schools Journal*, 35(2), p. 13. Copyright 2016 by International Schools Journal.

international expectations. In addition, considerations for educational processes and curriculum development further challenge the international school leader. Bunnell (2021) expands on the pressures experienced by international school leaders in that technology has led to a dramatic increase in criticism of their missteps. He posits that scrutiny from anonymous critics on social media, whether former or current stakeholders create a tense, unforgiving environment that exacerbates the possibility of leaders being outed from their posts.

A longitudinal study of over two decades reveals that 70% of international school leaders are fired, and the average stay of a headship is only 3.5 years (Littleford, 2021). Littleford (2021) explains that the high turnover rate is mainly due in part to four distinct phenomena: (a) the governing bodies of international schools often suffer from the loss of institutional memory due to the inherent nature of the short term service of school board members, (b) international school heads will move too quickly in implementing changes they were hired to make, leading from a revolt of stakeholders, (c) a critical incident occurs precipitating the leader's dismissal, and (d) the absence of a strategic transition process for a new leader, the supports the leader in forging connections with stakeholder groups while avoiding early pitfalls. These findings suggest that the effectiveness of how international school leaders can respond to crises, successfully implement change initiatives, and connect with stakeholders are key indicators of the tenures of international school leaders.

According to the Academy of International School Heads (2019), the foundational expectation of school leaders is to lead with a mission and vision that

centers on the results for student learning. Because the mission of every international school is to educate students, this demonstrates that the most crucial set of school stakeholders are children. While school leaders are responsible for academic growth, they are also accountable for the socioemotional learning of the students. This responsibility is why leaders must manage and mitigate the damaging effects of crises on students (Grissom & Condon, 2021). Children have a smaller window of life experience than adults and need to draw upon their school leaders for support, guidance, and direction to cope with crisis-induced trauma (MacNeil & Topping, 2007). Therefore, school leaders must be cognizant that crisis-inducing incidents can cause emotional and social distress, requiring that the leader take a trauma-informed approach (Liou, 2015; MacNeil & Topping, 2007).

Children are undoubtedly the most precious treasure to a more prominent and vociferous set of school stakeholders: parents. Parents place trust in school leaders to protect their children and manage circumstances within the classroom that prevent and mitigate harm. Moreover, parents expect school leaders to be prompt, accurate and use multiple platforms when communicating (Trump, 2012). Due to this dynamic, emotions are often connected to school crisis response and decision-making processes. Throughput and especially emotionally-charged input from parents can affect the crisis response process from school leaders in both the immediate and long-term (Liou, 2015). Additional legal and ethical implications are added to the responsibility of school administrators as students are almost entirely a population of minors and not legal adults. These layers further add to school crisis management challenges, as Liou (2015) indicates that crises should be framed under chaos and complexity theories.

Schools experience different types of crises, such as natural disasters, facilities damage, and reputation in the community (Coombs, 2010). However, international school leaders face unique crises of varying degrees across several domains and varied periodicity. Unfortunately, rare events such as natural disasters and school shootings make the news and are often devastating and wide-reaching. However, other crises such as power or internet outages, rumors or scandals, records tampering, bullying, teacher shortages, work strikes, student self-harm, and student/parent protests, to name a few, are what school leaders are faced with on an ongoing basis. Many of these crises occur without warning, while others may emerge slowly over time; the resolution of either kind of crisis can have a fast or drawn-out resolution (Smith & Reilly, 2012). School leaders must embrace complexity thinking as small systems changes can lead to significant problems elsewhere (Gilpin & Murphy, 2010). Due to the dynamic behavior of intertwined systems and actors and the notion that these components require some form of order, albeit unpredictable, chaos theory is complementary to complexity theory (Liou, 2015). While linear and sequential models typically inform the field of crisis management, a non-linear and flexible mentality is a prerequisite for any international school leader facing a crisis.

Leaders must view schools as dynamic and complex open systems routinely affected by external forces (Grissom & Condon, 2021). Research has shown that a K-12 international school involves complex systems that simultaneously face multiple crises and require immediate leadership action (Elbedour et al., 2022). Crises and change events occur in varied sizes and frequencies in international schools. In these settings, crises, big and small, sudden or smoldering, are a near-certainty, while continuous

change is a hallmark of these learning communities (Grissom & Condon, 2021). While seemingly inverse, the theoretical concepts of crisis and change are more similar when studying leadership and organizational behaviors. Crises are often a precursor to change, and change can lead to a crisis. In research conducted by Kovoor-Misra (2009) focused on international schools in the Asian and middle eastern regions, these phenomena were evidenced by organizational changes implemented to recover from a crisis caused by an organizational change such as downsizing. The research suggested that crisis and change can be viewed as both threats and opportunities, with either possibility framed as a high priority requiring urgency to act at the risk of winning or losing a great deal (Kovoor-Misra, 2009). Sutherland (2017) expands on Kovoor-Misra's research in his argument that because change and crises can have both positive and negative outcomes, international school leaders must effectively manage these catalysts for change in order for their schools to survive and thrive while students learn. Marcus and colleagues (2015) would argue that if a leader can manage a crisis on their campus, they can drive change within their school. Their research states that meta-leadership competencies and approaches are equally applicable in crisis and non-crisis environments.

Liou (2015) argues that schools, by nature, are prone to crises and change due to their inherent dynamism, complexity, and unexpectedness. The US military initially established the term VUCA to describe volatile, uncertain, complex, and ambiguous environments (Alkhaldi et al., 2017). Effective leaders in any field must be able to swiftly respond and adapt to VUCA incidents while mitigating the crisis, identifying interdependencies, and involving stakeholders. International schools can and should be

viewed as VUCA environments, and its leaders should possess the competencies required to be effective at their jobs. According to Gainey (2009), educational leaders must ensure their institutions are prepared to successfully address emerging and continuing challenges to preserve student learning. Being crisis-ready includes having formal plans, establishing two-way communication with stakeholder groups, and strategic leadership within the school's culture. In addition to establishing connectivity, culture, and strategic plans, international school leaders must possess specific competencies to effectively guide their institutions through complex situations in a VUCA environment.

One approach to leadership gaining increasing attention for school leaders is meta-leadership, which was first developed in the United States in the early 2000s by the National Preparedness Leadership Institute (NPLI) to solidify leadership and cooperation between government and private agencies during a crisis (Marcus et al., 2006). Marcus and his colleagues (2015) have since expanded and refined the meta-leadership framework based on established leadership principles with the primary objective of helping leaders navigate dynamic situations in VUCA environments. Meta-leadership centers around the leader, situational context, and ability to connect to various constituencies. Through research, meta-leadership competencies are shown to be effective in routine and change-based leadership contexts (Marcus et al., 2020). While meta-leadership was designed for large-scale crisis-response such as natural disasters and terrorist attacks, its core tenets can be applied across many fields, including international education.

Problem Statement

Although the onset of COVID-19 arguably led to the most significant crisis in the history of modern education, crises continue to appear in most international schools today. There is certainty behind these types of transformational events happening, as evidence from Daughtry's (2015) study suggests. International school leaders must be prepared to steer their schools through ongoing crises and changes, regardless of the factors creating the crises and the need for swift change. Specific competencies are required to enable effective leadership while managing crises and implementing change initiatives. Yet, reliable instruments that measure school leadership competencies at the local, national, and international levels are non-existent. The reason being that most districts or organizations use internal boards or committees to render proprietary instruments that fit with their adopted framework. A need exists for a tool specifically designed to measure the competencies of international school leaders.

The competencies outlined by the meta-leadership framework (Marcus et al., 2015) apply to international school leaders. The NPLI group did not develop a meta-leadership competency assessment in the early 2000s due to disagreement among the many agencies creating the framework. Each entity involved in developing meta-leaders had its proprietary methods to evaluate competence. Because there was a lack of agreement and out of respect for each contributing agency, a competency instrument was never developed, nor were there plans to develop one (E.J. McNulty, personal communication, June 29, 2021).

There is a two-fold need in the fields of international school leadership and meta-leadership for competency assessments. This void presents an opportunity to develop a

valid and reliable instrument measuring meta-leadership competencies for international school leaders faced with the challenges of leading within environments regularly facing crises and the need for rapid change. An instrument that measures the meta-leadership deftness of school leaders could provide valuable feedback in identifying areas needing improvement for those already tasked with crisis management and change initiatives. Such an instrument could also help identify the potential of the leadership candidates of today and tomorrow.

Research Purpose and Objectives

The purpose of this research is to develop a valid and reliable self-assessment instrument for meta-leadership competencies of international school leaders. The Meta-leadership Inventory for International School Leaders (MLI-ISL) will be designed for international school leaders, measuring the dimensions for The Person of the Meta-leader, The Situation in crisis, and Connectivity with followers, boss(es), peers, and stakeholders outside of their organization. The MLI-ISL will be based on the curated theories and concepts of meta-leadership and draw from the research of established and validated surveys.

The methodological approach and design involve three phases. Phase one focuses on the development of the initial content and overall structure of meta-leadership competencies for international school leaders, considering existing literature and tools. Phase two focuses on validating the MLI-ISL, relying on meta-leadership content experts' insights and recommendations for modifications to the self-assessment inventory. The third phase involves collecting data from an abstract population of

international school leaders and conducting a reliability analysis to support the psychometric properties of internal consistency and reliability of the MLI-ISL.

Research Objectives

The following research objectives were addressed:

1. To develop a self-report instrument (MLI-ISL) derived from the scholarly literature on meta-leadership competencies for international school leaders.
2. To validate the MLI-ISL with a panel of experts to ensure the content validity of the instrument.
3. To establish internal consistency reliability of the MLI-ISL using an independent sample of international school leaders.

Theoretical Framework

The theoretical framework for the study is meta-leadership—a relatively new concept built from other scholarly leadership theories. Meta-leadership organizes and integrates several strands of leadership analysis, experience, and scholarship to give leaders the concepts and tools to successfully resolve crises, drive change, and navigate other complex and dynamic challenges (McNulty et al., 2019). The meta-leadership framework identifies three dimensions, The Person of the Meta-Leader, The Situation, and Connectivity, each of which addresses distinct bodies of research and scholarship (Marcus et al., 2015).

The Person of the Meta-leader represents the individual's leadership capacity, *The Situation* constitutes leadership context, and *Connectivity* is tantamount to organizational/ interpersonal capability. The Person of the Meta-leader draws from emotional intelligence studies (see Boyatzis et al., 2000; Goleman, 1998; Harms &

Credé, 2010) and transformative learning theory (see Illeris, 2009; Mezirow, 1996; E.W. Taylor, 2008). One additional component of The Person of the Meta-leader is a global mindset, which is informed by global leadership studies (see A. Bird, 2018; Cohen, 2010; J. Kim & McLean, 2015; Osland, 2018).

The Situation is represented by the fields of research in crisis management and decision science. Several scholars anchor the general body of research (see Boin, 2004; Coombs, 2010; Fink, 1986; Mitroff et al., 2004; Wooten & James, 2008) with several specialized studies on crises within schools (see Bundy et al., 2017; Grissom & Condon, 2021; MacNeil & Topping, 2007). The environment within any situation in an international school setting is framed as VUCA and draws from that body of literature (see Alkhaldi et al., 2017, Abidi, 2018; Rodriguez & Rodriguez, 2015; Kovoor-Misra, 2009). Lawrence (2013) argues that the VUCA world has been the new normal since the convergent onset of the global financial crisis of 2008 with the boom of social media and technological innovation.

The dimension of *Connectivity* is the most complex dimension of meta-leadership. *Connectivity* and its four directions of leading are supported through several empirically supported leadership theories and methods. These seminal works include Burns' (1978) Transformational Leadership, B. George's (2004) authentic leadership, Kelley's (1988) work on followership, and Pielstick's (2000) definition of informal leadership. When using the principles of meta-leadership, international school leaders must integrate and adapt these leadership styles to influence stakeholders and build consensus through trust, communication, and authenticity.

Definitions

Definitions are organized into logical categories starting with the international school environment, followed by definitions associated with leadership and meta-leadership and its supporting dimensions.

- International school: a school that offers an alternative to locally and nationally prescribed curriculums and attracts a mix of expatriate, foreign, and local students and staff (Heyward, 2002).
- International school leader: one at or near the apex of the organizational structure of an international school.
- Leadership: "People follow you" (Marcus et al., 2020).
- Meta-leadership: A theory and evidence-based framework for generating widespread influence and cohesive action that expands a leader's domain of engagement, leverage, and efficacy (Marcus et al., 2015).
- MLI-ISL: Meta-leadership Inventory for International School Leaders
- The Person of the Meta-Leader: the characteristics, competencies, and behaviors of the leader (McNulty, 2021).
- Emotional intelligence: how a person applies the competencies of self-awareness, social awareness, self-management, and social skills at the appropriate times, ways, and frequency of use with others to be situationally effective (Boyatzis et al., 2000).
- Systems thinking: a comprehensive understanding of a system that allows leaders to identify gaps in structures and identify the needs of diverse sets of stakeholders (Senge, 2006; Gharajedaghi, 2011).

- Transformative learning: the act of transforming specific frames of reference, including mindsets, habits of mind, meaning perspectives, and sets of assumptions and expectations, making these frames more open, reflective, inclusive, discriminating, and emotionally able to change (Illeris, 2009).
- Global mindset: a highly complex cognitive structure characterized by an openness to and articulation of multiple cultural and strategic realities on both global and local levels and the cognitive ability to mediate and integrate across this multiplicity (Osland, 2018).
- The Situation: an evolving, complex circumstance that continues to be defined with additional information, the passage of time, and hindsight (Marcus et al., 2007).
- VUCA: Volatile, Uncertain, Complex, Ambiguous environment or situation. (Alkhaldi et al., 2017).
- Sensemaking: The process of social construction occurring when discrepant cues interrupt individuals' ongoing activity and involves the retrospective development of plausible meanings that rationalize what people are doing (Weick, 1988; Maitlis & Sonenshein, 2010).
- Crisis: an ill-structured mess, meaning a highly interdependent set of problems that are complex systems themselves, each of which is ill-structured (Mitroff et al., 2004).
- Crisis management: the actions and communication of leaders that attempt to reduce the likelihood of a crisis, work to minimize harm from a crisis, and endeavor to reestablish order following a crisis (Bundy et al., 2017).

- Connectivity: the capacity, strategy, and effort used to communicate, inspire, and persuade broader participation across different constituencies (Marcus et al., 2006).
- Leading Down: dynamic where the leader has formal authority over subordinates in the organization hierarchy (Marcus et al., 2015).
- Leading Up: the act of leading one's boss or the boss following the meta-leader (Marcus et al., 2007).
- Leading Across: informally leading those in charge of other divisions or departments (Marcus et al., 2020).
- Leading Beyond: influencing external stakeholders and actors outside of one's organization (Marcus et al., 2015).

Significance

In order to achieve the best possible outcomes from dynamic situations, international school leaders must deploy skills and abilities delineated by the meta-leadership framework. They must be in tune with all the stakeholder sets involved to understand the situational context clearly and work towards a common purpose. (McNulty et al., 2019). International school leaders ultimately have a single and unifying reason to utilize meta-leadership theory and work in tandem with surrounding stakeholders, which is student success. Every outcome of a crisis, change, or other complex events should be grounded in a student-centered approach, which is the prescribed theory and practice for international school leaders (Academy of International School Heads, 2019). Through consistent interactions with those they lead and intentional focus on the students, international school leaders establish a climate of

connectivity and support needed to navigate crises and change and proven improvement in student achievement (Tharp, 2006).

Schools are unique in that they are learning institutions at their core. Many school leaders began their careers as educators and value learning for all stakeholder groups. According to Liou (2015), he posits that the school leader views the process of crisis management and self-organization for most international schools as a learning experience. Other scholars would agree with this notion (see Grissom & Condon, 2021; Sutherland, 2017; MacNeil & Topping, 2007). Most schools adopt a communities of practice framework or culture because every school is a learning community, as evidenced by the three dimensions of domain, practice, and community (Wenger et al., 2009). Thus, school-based crisis management must also include learning, which occurs during the post-crisis phase and should be intentional by leaders and decision-makers (Grissom & Condon, 2021). It is only by the learning and reflection process that school leaders can reframe a crisis into an opportunity (Kovoor-Misra, 2009).

Meta-leadership has received limited research attention, which might be due to a lack of a valid and easily applicable measurement instrument. Studies of meta-leadership in education are in the nascent stages (see S.D. Hayes et al., 2021; Srinivasan, 2012; Growe, 2011). However, the COVID-19 global pandemic has highlighted the need for meta-leadership in international schools, as evidenced by the challenges presented by the shift to online learning for K12 students and educators (Huck & Zhang, 2021).

A two-fold gap exists in the literature about the assessment of meta-leadership and international school leadership. Psychometrically sound and empirically-grounded

measurement tools do not exist for international school leadership nor meta-leadership. Thus, there is a need to develop a valid and reliable assessment for each.

Both fields of interest would mutually benefit from a research-backed instrument that measures the meta-leadership competencies of international school leaders. International school leaders could potentially benefit from meta-leadership competencies to support them in addressing crises, promoting learning, and connecting across numerous stakeholder groups. Additionally, these competencies may reduce the frequent turnover of international leadership posts, as Littleford (2021) reported. The meta-leadership framework, on the other hand, would gain additional validity by having its first measurement tool for its theoretical and practical applications.

This research offers a significant contribution by developing and validating an instrument for measuring the meta-leadership competencies of international school leaders. By developing the MLI-ISL, a foundation can be laid for assessing the meta-leadership competencies of international school leaders. This instrument adds particular value for school leaders looking to become more effective in demanding roles. It would also be a helpful instrument during exhaustive leadership searches by schools, human resource departments, and search firms. The MLI-ISL may also serve a purpose in identifying aspiring leaders or educators who are ready to progress to the next level of school leadership. Since valid and reliable instrumentation and assessment of meta-leadership presently does not exist for any profession, the MLI-ISL could also pave the way for future inventories and surveys in fields outside of international school leadership.

Delimitations

The development of the MLI-ISL is focused on assessing international school leaders. During phase two, a panel of experts in the fields of international education, meta-leadership, or crisis management will be assembled to validate the content of the instrument. The group of leaders to be surveyed in phase three will hold leadership positions at their campus, either leading a single department, large division of grade levels, or the entire school. The nomenclature of leadership titles varies from principal, head of school, director, president, superintendent, division head, headmaster/headmistress, department chair, subject coordinator, dean of students, etc. Generally, these positions report to a school board of trustees, corporate governance board, school owner, or school head. These leadership positions were selected as the target population to survey because they are ultimately responsible for the school's performance and liaise with the most significant number of stakeholder groups. These leaders also yield the most individual decision-making power within their organization, with those decisions impacting the greatest number of stakeholders.

Due to national curricula differences and schemas of grade levels, student age within the leaders' schools will be the determining factor for leader participant selection. The student will target participants who hold a significant leadership position in schools that serve students ages 4 to 19. It is noted that some schools serve a particular segment or segments within this age range, and not all schools will offer education for the entire range of students.

Geographical boundaries are purposefully absent from the study, as international school leaders may work anywhere in the world where an international school exists.

Because participants are located all over the globe and widely dispersed across numerous time zones, the MLI-ISL will be facilitated asynchronously online. The MLI-ISL items and instructions will be rendered in English, which is the operational language of the majority of international schools. Therefore, the targeted group of participants must be fluent in English.

Assumptions

As the researcher, I assume that the panel of professionals I select for content validation are experts in their respective fields. It is assumed that during the second phase of the research, the panelists will provide feedback to the best of their ability and subject knowledge to expand the field of study. As I will be recruiting and interacting personally with this group of participants, it is expected that the interactions and communications will be respectful, unbiased, and focused on the research.

It is an assumption that participants in the third phase of the research are sincerely interested in completing the survey and furthering the research through authentic responses. The participants are expected to be fluent in English, regardless of the country they presently work in, or the curriculum taught in their school. It is assumed that the participants will read and understand the survey instructions and take the appropriate amount of time and thought to complete the survey.

It is assumed that the participants are members of some networking organizations for international school leaders, including but not limited to LinkedIn professional groups, Principals Training Center (PTC), Academy of International School Heads (AISH), International Schools Association (ISA), and Near East South Asia Council of Overseas Schools (NESA). These organizations have active online forums for

members to post surveys to contribute to scholarly research and advance the profession. The researcher is an active member of many of these organizations and has access to this large pool of qualified and interested participants.

Methodological assumptions include the post-positivist approach to quantitative research. According to Giraldo (2020), a post-positivist researcher views reality as amenable to a diverse set of interpretations where probabilities are identified and synthesized. The researcher assumes a worldview that seeks an objective reality paired with the belief that evidence established in research is always imperfect and fallible (Petersen & Gencel, 2013). Moreover, the researcher assumes the theoretical and conceptual foundations of meta-leadership are valid and can be confirmed by the proposed methods of this study.

Chapter Summary

More than ever, international school leaders face a continuous flow of crises and change in a VUCA world. Meta-leadership is a paradigm that can assist leaders in strategically influencing and leading others through dynamic and complex events. This chapter provided an overview of the meta-leadership theoretical framework and the methodological framework of instrument development. Moreover, the argument has been made that a valid and reliable instrument to measure meta-leadership competencies in international school leaders would contribute to the scholarly body of research.

The literature on meta-leadership and its supporting theories and fields is examined in the next chapter. The discussion takes a deep dive into each of the three dimensions of meta-leadership with the support of accepted theories and leadership

approaches. The first two dimensions, The Person of the Meta-leader and The Situation, literature will include studies on emotional intelligence, systems thinking, transformative learning theory, global mindset, VUCA environments, sensemaking, and crisis management. The third dimension, Connectivity, will be supported by leadership theory and styles, including followership, transformational leadership, leadership emergence, informal leadership, and boundary spanning. Chapter 3 presents the research methodology of the study. Research objectives are reiterated, and methods for each study phase are explained in detail. Chapter 4 displays the findings from each of the three research phases and Chapter 5 offers conclusions from the findings and recommendations for future scholarship.

Chapter 2: Review of Literature

This chapter first briefly summarizes the existing instruments that measure the competencies of global leaders. Next, it examines the relevant and supporting literature surrounding the theoretical framework of meta-leadership. The meta-leadership research provides a historical and conceptual overview and is then divided into three dimensions, with each dimension containing two to four subsections. A small group of authors has developed the seminal texts on meta-leadership (See Marcus et al., 2007; Marcus et al., 2015; McNulty et al., 2021). This body of research is grounded in empirical research studies and leadership theory, which are detailed in the subsections. Throughout the chapter, the meta-leadership theoretical framework is further supported by empirical studies and scholarly literature of international school leadership.

Existing Instruments

The field of educational leadership–both at the national and international levels–has a void in research-backed and psychometrically sound tools that measure the performance of the leaders themselves. Leadership self-assessment instruments from large organizations are often designed in-house and not backed by empirical studies. Los Angeles Unified School District (2022) in the United States, Australian Institute for Teaching and School Leadership (2017), and the Institute for Educational Leadership of Ontario (2014) in Canada are example of large organizations who use their own frameworks developed by internal boards and committees rather than external, peer-reviewed research.

International schools and their leadership practices are assessed with external accreditation self-study every 2-5 years, by independent organizations such as the

International Baccalaureate (IB), Council for International Schools (CIS), and Cognia. However, the competencies of international school leaders are never formally measured or evaluated. Their leadership performance is typically a meta-analysis of enrollment numbers, stakeholder surveys, staff development, and student achievement data. Thus, it can be argued that very little exists in empirically-based instruments that measure the leadership competencies of international school leaders.

There are, however, instruments that exist to measure the competencies of global leaders. Bird and Stevens (2018) classify the assessments used to develop global leaders into three categories: cultural difference assessments, intercultural adaptability assessments, and global leadership competency assessments. Although there are many commercially available global leadership assessments, four have been identified as valid and reliable in their psychometric properties (Bird & Stevens, 2018). The Global Mindset Inventory (GMI), Global Competencies Inventory (GCI), Global Executive Leadership Inventory (GELI), and Global Leadership Online (GLI) are assessments that measure global leadership characteristics and competencies. However, these instruments fall short in identifying superior performance of global leaders due to the still-developing field of global leadership.

Project GLOBE

The Global Leadership and Organizational Behavior Effectiveness (GLOBE) project is a multi-phase, multi-method initiative which studied the interrelationships between societal culture, societal achievements, organizational culture, and leadership (Javidan & Dastmalchian, 2009). A team of 170 scholars from 62 societies representing all major regions of the world were engaged in this long-term programmatic series of

cross-cultural leadership studies of approximately 17 000 managers (Osland, 2018). Scholars agree that the GLOBE project is the single most extensive comparative leadership contribution in the study of global leadership (see Cho et al., 2019; Kabasakal et al., 2012; Osland, 2018).

The GLOBE project conceptualized and developed measures of nine dimensions of culture and six dimensions of leadership. The cultural dimensions help distinguish one country from another and contextualize the meaning of leadership across different cultures. The six dimensions of culturally-endorsed leadership are: Charismatic/ Value-based; Team-oriented; Participative; Humane-oriented; Autonomous; and Self-protective. The study quantified culture with nine dimensions: Assertiveness, Future Orientation, Gender Egalitarianism, Humane Orientation, Institutional Collectivism, In-Group Collectivism, Performance Orientation, Power Distance, and Uncertainty Avoidance. The major findings of this study were that global leaders require a global mindset, tolerance of ambiguity, and cultural adaptability and flexibility to be effective in their roles (House et al., 1999). These competencies align with the theoretical and practical implications of the meta-leadership framework.

Meta-leadership

The term *meta leadership* was coined by scholar John Nicholls (1988a) and defined as the influencing of individuals by relating them to their environment without using power or authority by utilizing the leadership attributes of perception, articulation, conviction, and empathy. This definition is based upon Burn's (1978) seminal work on transforming leadership, where leaders and followers have high engagement levels (Nicholls, 1988b). According to Nicholls (1990), leadership holds a

single meaning with the descriptors of *micro*, *macro*, and *meta*; micro and macro leadership occur within the organization, while meta leadership extends beyond the organizational power structure.

Meta-leadership, on the other hand, is the result of work by NPLI (Marcus et al., 2020). The prefix "meta" is applied similarly to "meta-analysis". The intention is to combine findings from multiple sources to gain a complete and impartial understanding of various questions to arrive at an informed conclusion (Crombie & Davies, 2009). It further refers to an overarching leader-ship that connects the purposes and the work of different organizations or organizational units (Marcus et al., 2006). Meta-leadership is also influenced by the term “metamorphosis”, as leaders must actively evolve as they drive change and manage crises (Marcus et al., 2015). These events and situations also continue to transform over time, requiring agility and a proactive leadership approach.

It is worth noting that Nicholls' definition of "meta leadership" was developed over 15 years prior to the term "meta-leadership". While they are nearly identical, meta leadership as developed by Nicholls and meta-leadership proposed by Marcus and colleagues are different by definition, basis, and completely non-related (E.J. McNulty, personal communication, June 29, 2021). This research acknowledges Nicholls' work; however, it will focus and expand on the meta-leadership framework developed by NPLI.

Formed at the request of the United States government after the 9/11 terrorist attacks, the NPLI is a joint program of Harvard’s Kennedy School of Public Leadership and the T.H. Chan School of Public Health (Marcus et al., 2020). Meta-leadership was designed to equip leaders to direct and steer others during crises and emergencies

(Marcus et al., 2015). A practice to theory approach was applied by studying leaders in the field experiencing high-pressure situations that required inter-organizational cooperation and adept problem-solving skills. Its initial research was an after-the-fact study of the 9/11 events and then put to practice during the 2009 H1N1 flu outbreak, Deepwater Horizon oil spill of 2010, Super Storm Sandy in 2012, and the 2013 Boston Marathon bombings (Marcus et al., 2020).

Since its inception, over 650 C-suite leaders and executives have trained in meta-leadership, with the impact of their work studied over several years (Marcus et al., 2015). In 2013, a meta-leadership Summit connected over 5,000 private, non-profit, and governmental leaders across 36 cities (Marcus et al., 2015; Sobelson et al., 2013). The exit surveys from these trainings are qualitative for two reasons. First, meta-leadership is relatively nascent, and research is qualitative and experiential by nature. Second, the meta-leadership framework was developed across several institutions and agencies, thus creating a disagreement on quantitative measurement tools (E.J. McNulty, personal communication, June 29, 2021). The onset of the COVID-19 pandemic catapulted the demand for meta-leadership training as leaders worldwide became crisis leaders in a condensed period.

Initially, the framework contained five dimensions: (a) the person of the meta-leader, (b) the situation, (c) leading the silo, (d) leading up, and (e) leading connectivity (Marcus et al., 2007). After several iterations and revisions, the model was simplified to three dimensions: (a) The Person of the Meta-leader, (b) The Situation, and (C) Connectivity (E.J. McNulty, personnel communication, June 29, 2021). *Connectivity* is a broader dimension describing the relationships and associations between a leader and

various stakeholders. This dimension includes four facets that correspond to leadership in four distinct directions: Leading Up, Leading Down, Leading Across, and Leading Beyond (Marcus et al., 2015). Leading Up, Leading Down, and Leading Across involve leading intra-organizational actors, including bosses, subordinates, and departments outside of one's silo. Leading Beyond describes the informal leadership and cooperation between the Meta-leader and other organizations, individuals, or entities in which no formal authority exists.

The meta-leadership model has evolved, but its basic tenets and arguments have remained consistent. In its most distilled version, meta-leadership is defined by its creators in three words: "people follow you" (Marcus et al., 2020). Although it was developed through the frame of crisis leadership, meta-leadership has shown to be invaluable to everyday leadership and transformational change leadership. As humankind enters the COVID-19 era, meta-leadership highlights the pathways for leaders to follow to be effective and successful in their respective fields.

Meta-leadership focuses on outcomes via throughput and collaboration from individuals and entities across different sectors with multiple layers of hierarchy (McNulty et al., 2021). Generally, international school leaders work with a wide and varied range of stakeholder groups, including students, staff, parents, governance boards/ownership, accreditation bodies, governmental education oversight bodies, public services, vendors of goods and services, law enforcement, independent contractors, charitable organizations, and more. The COVID-19 era has made leading international schools more challenging than ever, but meta-leadership helps leaders

reframe adversity to build long-lasting and transformational change (Ellis, 2020). As stated by Marcus et al. (2010), meta-leadership yields three important advantages:

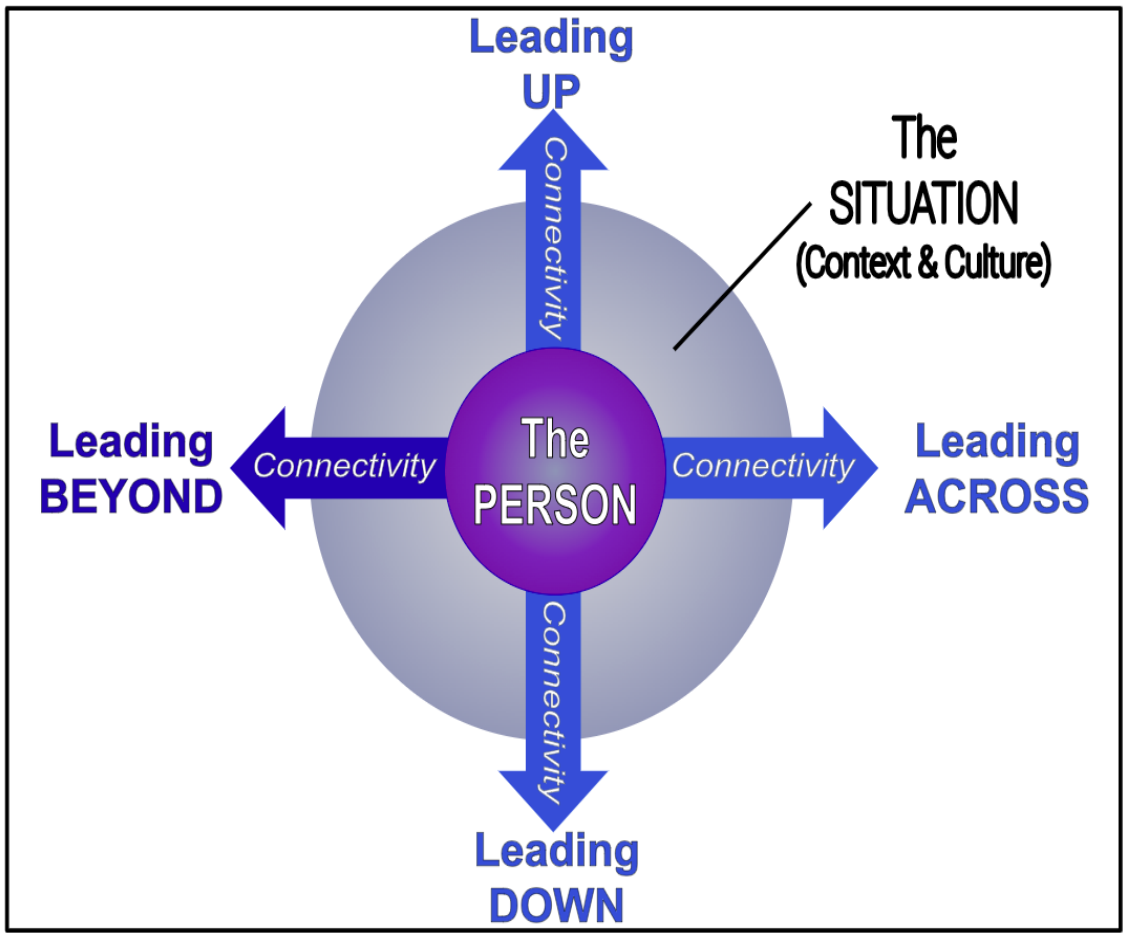
1. A strategy of action designed to advance coordinated planning and response to crises and change.
2. A conceptual framework and vocabulary that scaffolds intentional networking and cohesion to connect the purposes and work of different public and private stakeholders.
3. A methodical approach to multi-dimensional problem-solving.

An updated graphical representation of the meta-leadership framework synthesizes and expands upon Marcus and colleagues' (2007) original design (see Figure 2). This updated model displays the three dimensions of The Person, The Situation, Connectivity, and the relationship between each. A subtle yet essential change distinguishes internal and external Connectivity, as Leading Beyond is a different color than Leading Up, Leading Down, or Leading Across one's organization. This distinction is worth identifying as leaders have no formal authority or leverage when working with governments, outside agencies, and actors not employed by their firms.

Meta-leadership is not a novel leadership theory; instead, it is a framework that draws from and synthesizes established best practices from the existing canon of leadership. This framework's intended vision is to assist leaders in navigating incredibly complex situations during uncertain times (Marcus et al., 2015). Through this holistic lens, Meta-leaders can galvanize Connectivity by intentionally linking and leveraging the efforts between a wide range of stakeholders to achieve singularity in purpose and action (Marcus et al., 2020). This leadership model acknowledges that no leader has all the

Figure 2

Meta-leadership Framework



Note. Adapted from "The Five Dimensions of Meta-leadership" by L. J Marcus, I. Ashkenazi, B. C Dorn, and J. Henderson, 2007, (p. 1). National Preparedness Leadership Initiative. Harvard School of Public Health and the Kennedy School of Government at Harvard University. (https://www.graduateinstitute.ch/sites/internet/files/2019-02/Symposium%202010%20Meta-Leadership.pdf). Copyright 2007, Leonard J. Marcus, Ph.D.; Isaac Ashkenazi, M.D.; Barry Dorn, M.D.; and Joseph Henderson, M.A. Adapted with permission.

answers and depends on collaboration and communication. Thus, success is measured on collective rather than individual achievement (McNulty, 2011). Studies suggest that successful leaders generate Connectivity during times of change or crisis; leaders who 2007). Meta-leadership informs a leader's effectiveness through three dimensions: The

Person of the Meta-leader, The Situation, and Connectivity–Leading Down, Leading Up, Leading Across, and Leading Beyond (Marcus et al., 2015).

The Person of the Meta-Leader

First and foremost, a leader is a human being. Each human has unique qualities, behaviors, and personality traits, with significant variance amongst leaders. Regardless of personality type, it is believed that any leader can embody the influential qualities of a meta-leader (Marcus et al., 2007). To lead others, leaders must possess a high degree of social skills, curiosity, self-awareness, emotional intelligence, and a willingness to lead (Harms & Creed, 2010; Marcus et al., 2015; Marcus et al., 2020). In addition to inter and intrapersonal skills, meta-leaders must apply systems thinking to see the more significant, complex, and interconnected picture and work through possibilities and solutions to strategize a way forward (Marcus et al., 2007). Mezirow's (1996) transformative learning theory supports the meta-leadership outlook that systems thinking and folding in multiple perspectives and experiences requires the ability of the leaders to learn and sense-make as objectively as possible. Furthermore, given the various internal and external constituents across multiple national cultures with geographical diversity through significant task and relationship complexity levels within international schools, leaders must embrace a global mindset, a construct of global leadership theory (Osland, 2018).

Emotional Intelligence

A dedicated field of study that emerged in the 1990s, emotional intelligence (EQ), emphasizes how a person applies the competencies of self-awareness, social awareness, self-management, and social skills at the appropriate times, ways, and frequency of use

with others to be situationally effective (Boyatzis et al., 2000). EQ is an applicable term to describe human talent through the complexity of a person's capabilities. Goleman (1998) views EQ as the potential for learning a set of 25 Framework identifies two domains housing five clusters of 25 competencies (see Table 1). These competencies

Table 1

Emotional Competence Framework

Personal Skills	Self-Awareness Emotional awareness Accurate self-assessment Self-confidence	Knowing one's internal states, preferences, resources, and intuitions *Recognizing one's emotions and their effects* *Knowing one's strengths and limits* *A strong sense of one's self-worth and capabilities*
	Self-Regulation Self-control Trustworthiness Conscientiousness Adaptability Innovation	Managing one's internal impulses and resources *Keeping disruptive emotions and impulses in check* *Maintaining standards of honesty and integrity* *Taking the responsibility for personal performance* *Flexibility in handling change* *Being comfortable with novel ideas, approaches, and new information*
	Motivation Achievement drive Commitment Initiative Optimism	Emotional tendencies that guide or facilitate reaching goals *Striving to improve or meet a standard of excellence* *Aligning with goals of the group or organization* *Readiness to act on opportunities* *Persistence in pursing goals despite obstacles and setbacks*
Social Skills	Empathy Understanding others Developing others Service orientation Leveraging diversity Political awareness	Awareness of others' feelings, needs, and concerns *Sensing others' feelings and perspectives, and taking interest in their concerns* *Sensing others' development needs and bolstering their abilities* *Anticipating, recognizing, and meeting customers' needs* *Cultivating opportunities through different kinds of people* *Reading a group's emotional currents and power relationships*
	Social Skills Influence Communication Conflict management Leadership Change catalyst Team capabilities Collaboration & cooperation	Adeptness and inducing desirable responses in others *Wielding effective tactics for persuasion* *Listening openly and sending convincing messages* *Negotiating and resolving disagreements* *Inspiring and guiding individuals and groups* *Initiating or managing change* *Creating group synergy in pursuing collective goals* *Working with others towards shared goals*

Note. Adapted from *Working with Emotional* Intelligence (pp. 26-27) by D. Goleman, 1998, Bantam Books. Copyright 1998 by Daniel Goleman.

align with those required for an effective and successful meta-leader in international education.

According to Ackerman (2004), a leader's most profound obligation is to trust their influence on others and the school through continuous reflection and to make sense of their leadership. Monitoring self-awareness is a crucial leadership process for leading through fast-changing, emotionally-charged situations. The human brain is wired to respond to a stressful stimulus by retreating, freezing, or fighting (Donahue, 2020). The meta-leader must be self-aware while experiencing stressful situations to consciously move away from the "Emotional Basement" and regulate their brain to make rational decisions through complex thinking (Marcus et al., 2015). The emotional basement is the part of the brain, the amygdala, involved with emotion, and it is the brain's trigger for responding to threats (Goleman, 1998). Overreaction, impulsivity, and sloppy data perception are common responses to what is commonly referred to as the *amygdala hijack*. This part of the brain overrides all other rational thought as a way to regulate threat response (Goleman, 2011). In H. Thompson's (2007) study, impairment of leaders' EQ leads to catastrophic decisions due to diminished cognitive ability, confirming that those who can manage stressful situations can make good decisions.

In addition to being aware of their emotions, international school leaders must be able to self-regulate their emotions. Alon and Higgins (2005) confirm that for a leader to succeed in interpersonal activities, they must be aware of their own emotions and manage them while simultaneously having an awareness of the emotions of others to manage the interaction. Leading followers out of the emotional basement and elevating

their team's consciousness requires self-regulation, mental stamina, and substantial discipline (Marcus et al., 2015). Tai and Kareem (2018) report that international school leaders who were able to manage their emotions cognitively were able to establish a safe, emotional climate where teachers positively responded to change and challenges. The research further suggests that followers are looking for empathetic leaders who can resonate with them, especially during crisis or transformation.

Under Goleman's (1998) emotional competence framework, empathy is a construct of social skills that leaders utilize to manage their relationships. For de Waal (2008), empathy means a capacity to be affected by and share the emotional state of another, assess the reasons for the other's state, and identify with the other by adopting that person's perspective. Siebens (2018) expands on de Waal's work by describing four distinct types of empathy: (a) affective (emotive) empathy is the ability to subjectively experience and share in another's psychological state or intrinsic feeling; (b) cognitive empathy is the intellectual ability to identify and understand another person's feelings and viewpoints objectively; (c) behavioral empathy is viewed as the communicative response to convey an understanding of another's viewpoint, to be compassionate, caring, and altruistic; and (d) ethical meaning is guided by an internal altruistic phenomenon that motivates the practice of empathy. Empathy is a social skill leaders must utilize in international schools to serve their constituents. The Winburn (2020) group's study supports empathy's use, concluding that empathy positively affects student and community advocacy. The research also concluded that increased empathy enhances school leaders' ability to work within their communities and better advocate for their stakeholders (Winburn et al., 2020). Salari and Nastiezaie’s (2020) study

points to another significant element of empathy, intimacy, which is verbal and nonverbal behavior in face-to-face interactions that contribute to the closeness between individuals. The research findings support a positive correlation between empathy and transformational leadership style, suggesting that promoting relationships and communication with others will help leaders achieve the goals and programs of their schools (Salari & Nastiezaie, 2020).

Developing and establishing trusting relations is a relational element of the EQ framework that Marcus and colleagues (2015) state is needed for leaders to connect with multiple stakeholder groups. International school leaders are responsible for developing trust with students, parents, teachers, the board/owner, government education offices, and outside organizations. It is imperative that meta-leaders create, manage, and maintain trust through their personal interactions; otherwise, organizational and relational cohesion will collapse (Kolditz, 2007). Psychometric analyses and neuroscience have contributed to identifying successful leaders' traits and tendencies who forge connective relationships (Marcus et al., 2007). According to Brinia and her colleagues (2014), school leaders must strategically select an appropriate leadership style, depending upon the stakeholder group, while incorporating the elements of sensitivity, empathy, and modesty to establish trust.

In the quest to creatively seek solutions while caring for others, the meta-leader motivates the performance of those around them by establishing an enjoyable and synergistic environment. Christensen (2010) contends that building people up should be the primary goal for any leader or manager. Meta-leaders are distinct in that they search for meaning in their roles through their commitment and passion for motivating and

engaging others (Marcus et al., 2020). They attract followers by demonstrating a commitment to something larger than themselves (Ellis, 2020). These actions are supported through Burns' (1978) conceptualization of "transforming" and "transactional" leadership theory, where followers are acknowledged as integral members of a leadership act (Baker, 2007). Crippen (2012) contends that in successful schools, leadership–followership is mutually reinforced by interconnected relationships. The argument that the dimensions of transformational leadership are positively linked to EQ is confirmed by Harms & Crede's (2010) study, further supporting the notion that EQ contributes to successful leadership in crisis and stasis.

In a systematic review, Gomez-Leal and colleagues (2021) confirmed that EQ is vital for effective school leadership through self-awareness, empathy, and self-management competencies. Moreover, teacher satisfaction and performance are linked to school leaders who build trusting relationships. Of the 35 empirical studies reviewed, each concluded that intrapersonal and interpersonal skills identified correlate to the Goleman (1998) model of EQ and fall into the domains of self-awareness, social awareness, self-management, and relationship management (Gomez-Leal, 2021). Through their values, behaviors, and mindsets, international school leaders directly impact the school's culture, student achievement, student well-being, teacher work commitment, and teacher job satisfaction (Leithwood et al., 2004; Russo-Netzer & Shoshani, 2019; Tan, 2018).

Systems Thinking

When reviewing The Person of the Meta-leader competencies, systems thinking (ST) is a complementary component to EQ. Boyatzis and Goleman (2007) built upon

their 2000 study of emotional intelligence competencies by framing ST as cognitive intelligence. Cognitive intelligence is defined as synthesizing information and analyzing situations to render effective or superior performance (Boyatzis & Goleman, 2007). Palaima and Skarz˘auskiene˙'s (2010) study identifies six distinct ST competencies:

- Dynamic thinking: evaluation of the feedback loop to the system, identification of the delay effect and growth barriers, etc.
- Interactivity: Constant critical assessment that involves defining a problem, gathering information for problem-solving, formulating hypotheses, checking presumptions and correctness of findings, and making a solution.
- Systems logic: The possibilities provided by paying attention to regularities such as interrelations, system forces that form changes, sources of resistance, emerging perspectives, influences, and changes.
- Process orientation: viewing of interrelations but not linear cause-effect relations to see change processes instead of static states.
- Continuous learning: the ability to think critically and creatively through individual learning and the shift from traditional organizational thinking to learning organizations (Senge, 2006).
- Understanding of mental models: the opportunity to freely experiment within the system due to a broad thinking area and developed openness of mind; achieved when the leader understands them self and the surrounding world (Argyris & Schon, 1996; Senge, 2006).

Thinking systemically requires international school leaders to possess the ST competencies mentioned above as a foundation to make responsible decisions for the

benefit of the school (Patti et al., 2015). Under systems thinking theory (see Gharajedaghi, 2011; Senge, 2006), international school leaders must have a comprehensive understanding of the system to identify gaps in structures and identify the needs of the diverse sets of stakeholders. Yukl and Mahsud (2010) contend that cognitive complexity and ST require top-level leaders to grasp complex causal relationships, identify solutions to problems, and strategically manage the system through an adaptive and flexible lens.

According to Shaked and Schecter (2019), school leaders exhibit ST in the following ways: (a) expanding the number of choices, (b) identifying possible consequences of various alternatives, and (c) seeking and analyzing relevant information. Due to the dynamic behavior of intertwined systems and actors and the notion that these components require some form of order, albeit unpredictable, chaos theory is complementary to complexity theory (Liou, 2015). Wheatley (2006) believes that leaders seek order beyond control, knowing that they cannot regulate all elements of the relevant systems and their functions. Through understanding systems behavior, leaders can filter large, complex problems through a wide range of possible solutions (Giuliani, 2002; Marcus et al., 2015). International school leaders embrace complexity thinking as tiny changes to systems can lead to significant problems elsewhere (Gilpin & Murphy, 2010).

Several empirical studies confirm that school leaders who employ ST with greater complexity are perceived as more effective leaders (See Palaima & Skarzˇauskiene, 2010; Pang & Pisapia, 2012; Pisapia et al., 2006; Zsiga, 2008). Pang and Pisapia's (2012) findings are supported by Senge's (2006) proposition that ST is a crucial

discipline for leadership effectiveness and organizational performance. As indicated earlier in this section, continuous learning and understanding mental models are ST competencies that have been found to contribute to leadership effectiveness (Palaima & Skarzˇauskiene, 2010). In the next section, individual learning by international school leaders will be discussed.

Transformative Learning Theory

Being able to lead means being able to learn. McNulty and his team (2019) believe that international school leaders can learn to develop their leadership competencies to meet any challenge. Transformative learning theory was initially conceptualized by Jack Mezirow and applied to the field of andragogy (Illeris, 2009). The driving force behind transformative learning theory is to explain how adults continue to change how they interpret their world through experience and communication (E.W. Taylor, 2008). According to Mezirow (1996), learning incorporates prior interpretations to construct a new or revised understanding of the learner's experience to inform and shape future actions and decisions. To expand further, learners transform specific frames of reference, including mindsets, habits of mind, meaning perspectives, and sets of assumptions and expectations, making these frames more open, reflective, inclusive, discriminating, and emotionally able to change (Illeris, 2009). Such structures are likely to generate beliefs and opinions that prove more true or justified to guide action. Marcus et al. (2015) would view The Person of the Meta-leader as someone who uses their self-insight in constructing a bigger picture in their decision making.

When applied to complex and dynamic organizational events, transformative learning theory informs the international school leader as they incorporate new information and experience into their well-developed symbolic frame of reference (Mezirow, 1997). This active process requires thought, feelings, and disposition while navigating through uncertainty and ambiguity to gain the most accurate, most real perspectives to make informed decisions. School leaders must identify and minimize the likely reality-belief gap by integrating supplemental information, the passage of time, and the perspective of hindsight (Marcus et al., 2015). Perspective transformations often occur during a crisis or other high-stakes situation and are often associated with individual stress, pain, and trauma (E.W. Taylor, 2008).

As outlined by transformative learning theory, cathartic events lead to a more integrative worldview by the individual. Hedlund-de Witt (2014) defines an integrative worldview as one that attempts to reconcile rational thought and science with a spiritual awareness of the greater cosmos, thus including the largest number of perspectives possible despite conflicts amongst these varying viewpoints. In short, the reality is an interconnected whole based on spiritual and physical domains. This holistic paradigm considers other worldviews to be mutually exclusive, where the individual seeks synthesis on a deeper level while developing one's full potential through outward existential thinking. When applied to learning theory, the integrative worldview reinforces the idea that leaders should replace "either/or" thinking with a "both/and" mindset as they continuously validate contested beliefs through discourse, taking action on thoughtful insight, and critically assessing it (de Witt et al. 2016; Mezirow, 1997). Under the meta-leadership principles, The Person of the Meta-leader must have the

aptitude and cognitive ability to learn in real-time while applying new data and knowledge in real-time (Marcus et al., 2015).

Transformative learning is beneficial to international school leaders who operate in a work environment with various stakeholder groups communicating across many different channels and simultaneously leading to an ever-changing picture of reality. Nicolaides and McCallum (2013) argue that leaders should build their adaptive leadership capacity through transformative learning, as this skill is required to address accelerated change and growing complexities across all industries. Their research suggests that triple-loop learning–the alignment of being, knowing, and doing at the self, group, and organizational levels– expands creativity, deepens innovation, and enhances self and collective transformation (Nicolaides and McCallum, 2013). It is valuable for international school leaders to possess the capacity to reflect and act with agility, as their decisions are essential to their systems and stakeholders. T. Kim's (2020) study posits that transformative learning is of value to school leaders as this meaningful process leads to qualitative learning that improves their leadership practices. Through transformative learning experiences, international school leaders build upon their leadership fundamental assumptions while expanding their views of themselves and others (T. Kim, 2020).

Global Mindset

One theme of The Person of the Meta-leader that must be addressed involves the subconscious biases, blind spots, and cultural misperceptions that can potentially impact the effectiveness of international school leaders. There is a gap in the literature regarding meta-leadership competencies that identify a person's ability to recognize

cultural differences and establish an objective reality through a global mindset. Aside from Marcus and colleagues (2015) prescribing a broad outlook and insatiable curiosity, the supporting literature in intercultural relations for the meta-leader is non-existent. While meta-leadership lacks the explicit viewpoint of global leadership, the authors have established that the framework draws from multiple sources and fields of leadership (McNulty et al., 2021). Therefore, the opportunity to integrate the theoretical lens of Global Leadership Theory, emphasizing the global mindset competency, is presented.

According to Adler (1997), global leadership theory is concerned with the interaction of people and ideas among cultures. Understanding cross-cultural exchange is helpful for international school leaders in communicating and influencing a culturally diverse set of stakeholders. International schools typically embody cultural diversity and transnational influences, requiring leaders to work with a broad range of stakeholders (Baily & Gibson, 2020). Global leadership is conceptualized as reflecting how leaders engage in and fulfill their global roles and responsibilities (Mendenhall et al., 2012). These duties include the mechanisms used by international school leaders to exert influence while cultivating relationships with people around them in a global context. Mendenhall (2018) argues that in today's interconnected world of technology and economy, global leadership competencies are needed to operate across geopolitical boundaries and culturally heterogeneous workgroups, especially in international education. Global mindset is one foundational competency of global leadership that describes an individual's knowledge, perspective, and attitude (A. Bird, 2018).

Levy and his group (2007) define global mindset as “a highly complex cognitive structure characterized by an openness to and articulation of multiple cultural and

strategic realities on both global and local levels, and the cognitive ability to mediate and integrate across this multiplicity" (p. 20). The two facets embedded within the global mindset competency are *cognitive complexity* and *cosmopolitanism* (A. Bird, 2018). Cognitive complexity is characterized by the assumption that any situation is dynamic and interdependent on systems. As stated previously in the chapter, the researcher notes that cognitive complexity is exemplified in systems thinking, which indicates some overlap. However, the duality of global and local thinking required of international school leaders is a concept that is absent from systems thinking and meta-leadership literature.

Cosmopolitanism is the interest in and knowledge of the world–its nations, cultures, institutions, and people (Levy et al., 2007). Clapp-Smith and Lester (2014) expand on this definition by stating that cosmopolitanism allows the international school leader to switch mindsets between global integration and local responsiveness. This facet is unique because it requires leaders to synthesize the simultaneous demands of recognizing both global and local elements while combining openness to and awareness of diversity across cultures to promote diversity. (Cohen, 2010)

A global mindset has been identified as a critical leadership competency in several global leadership studies (See A. Bird, 2018; Cohen, 2010; House et al., 1999; Javidan & Bowen, 2013; J. Kim & McLean, 2015; Osland, 2018). According to Osland's (2018) research, international school leaders must influence various internal and external constituents across multiple national cultures with geographical diversity through significant task and relationship complexity levels. Cohen's (2010) study explains that leaders with a global mindset can cross cultures and change contexts by

recognizing when it is beneficial to create a consistent global standard by understanding local and cultural differences.

Global mindset is a competency that would benefit The Person of the Meta-leader, regardless of the industry or geographic region in which they operate. The Global Mindset Project at Thunderbird, spearheaded by researchers Javidan and Bowen (2013), was a longitudinal study of a globally-diverse group of executives and managers. It was conducted to determine competencies that would assist leaders in working with others who are unlike them. The results concluded that leaders with a high degree of global mindset were more likely to succeed in roles working with others from dissimilar backgrounds (Javidan & Bowen, 2013). Conversely, leaders with a low level of competence in global mindset were more likely to find their roles frustrating and stressful and less likely to succeed in their posts. This research suggests that for international school leaders, a global mindset is a critical element to measure when evaluating the effectiveness of The Person of the Meta-leader.

The Situation

The second dimension of meta-leadership, The Situation, involves identifying and addressing the context surrounding a time of rapid change and crisis. The meta-leader shows mastery in this dimension by distinguishing between the perceived and actual reality of The Situation (Marcus et al., 2015). In addition to situational awareness through the sensemaking process, meta-leaders must have a grasp on the environment they command. Moreover, the field of crisis management informs the meta-leader on addressing The Situation effectively.

VUCA

Before addressing the research on understanding and managing The Situation, the environment must first be defined and understood. Meta-leaders face volatile, uncertain, complex, and ambiguous (VUCA) situations at some point or another. Alkhaldi and his associates (2017) suggest that the United States military was the first to use the term *VUCA* environment to describe situations containing threats or challenges. Volatility requires anticipatory and reactionary thinking in line with the nature and speed of change. With uncertainty, leaders must be decisive and transparent in their decisions. Complexity requires leaders to navigate chaos and confusion through an open systems-thinking approach. Furthermore, meta-leaders are effective despite the constant surprises and lack of predictability (Kingsinge, 2016, as cited in Alkhaldi et al., 2017).

Since the onset of COVID-19, international schools have operated in a VUCA environment, accepting it as the new normal. The volatility in global economic conditions has led to a shift in the type of applicants and widespread attrition and movement of students. Uncertainty has been witnessed through the crests and troughs of online and face-to-face learning, as driven by government agencies. The complexity of educating students (and training teachers to do so) in the digital world has challenged all schools to keep up with the innovation of video conferencing, student information systems, learning management systems, and digital learning resources (Senin, 2019). Finally, a generational handover in the workplace is the key contributing factor to ambiguity within school leadership (Rodriguez & Rodriguez, 2015). As baby boomers retire and millennials enter the workforce, generation X rises to take more senior roles.

The inevitable events, both big and small, in a VUCA world can be viewed through the crisis management lens. The theoretical concepts of crisis and change are similar when studying leadership and organizational behaviors. Crises are often a precursor to change, and change can lead to a crisis. These phenomena are evidenced by organizational changes implemented to recover from a crisis caused by an organizational change, such as downsizing (Kovoor-Misra, 2009). Because change and crises can have positive and negative outcomes, meta-leaders must effectively manage these catalysts for their organizations to survive, learn, and thrive (Sutherland, 2017).

Sensemaking

During ever-evolving times of crisis, change, and challenge, leadership aims to arrive at the closest picture of objective reality and accurately convey it to all those concerned (Marcus et al., 2015). The concept of sensemaking during crises was first introduced in Weick's (1988) seminal article. Maitlis and Sonenshein's (2010) review and synthesis of Weick's larger body of work defines sensemaking as a process of social construction occurring when discrepant cues interrupt individuals' ongoing activity and involves the retrospective development of plausible meanings that rationalize what people are doing. Boin and associates (2013) contend that sensemaking is a crucial task for leaders to make informed decisions. The conditions of stress and deep uncertainty caused by crises are underlying factors that impede decision-making and communication (Boin et al., 2013). Combe and Carrington (2015) argue that sensemaking under crisis is an interactive process, where leaders must understand the cognitive filters that people use and what these filters include and exclude. McNulty et al. (2021) incorporate this belief in meta-leadership. They state that optimizing

leadership requires consideration and intentionality in processing the actions and information from diverse stakeholders, which begins with initial information gathering, leading to sensemaking, and concluding with concluding a later assessment of the effects of actions and decisions.

Addressing and bridging the reality gap of The Situation is essential in developing any crisis response plan (Tyler, 2013). For international school leaders, this is an incredibly complex and challenging task as they work with multiple groups of stakeholders. One major challenge for international school leaders is that they may not directly or formally lead certain constituency groups, such as parents, governmental education ministries, and governance entities. This relational complexity is also paired with time constraints requiring near-immediate action due to the fast-moving nature of crises (Marcus et al., 2015). Best meta-leadership practice dictates that the leader steps back from the immediate management of the present situation, trusting others to do their job while planning the following steps (Marcus et al., 2020).

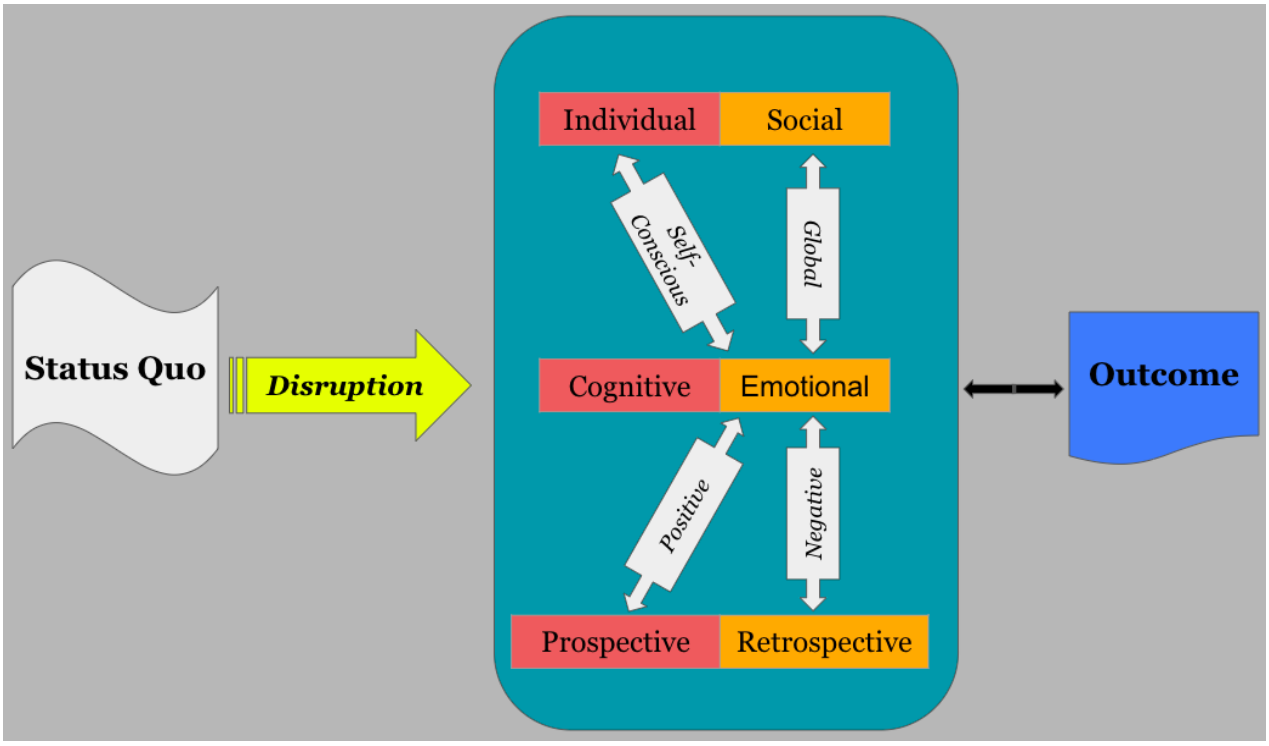
Several empirical studies indicate that international school leaders are active sense-makers (see Evans, 2007; Ganon-Shilon & Schechter, 2018; Gilbride et al., 2021*;* Sleegers et al., 2009; Walls, 2017). Gilbride and colleagues (2021) identify three discrete stages of sensemaking in school principals, with a trend shifting from a simple, static, and egocentric worldview towards a worldview that is dynamic, complex, and socio-centric. School leaders' sensemaking and decision-making activities align with these stages, beginning with independence, moving to dependence, and finally to inter-independence. This process is evidenced by school leaders' confidence in themselves and others (Gilbride et al., 2021). Ganon-Shilon & Schechter's (2018) study of Jewish

and Arab principals indicates that active sense-makers are present in international school leadership. Their study's results suggest that international school leaders operate within the framework of sensemaking to (a) care for teachers' needs, (b) preserve leadership discretion, and (c) adjust to school reality (Ganon-Shilon & Schechter, 2018).

Walls (2017) contends that sensemaking in schools begins with disrupting the status quo and contains duality in relational, thinking, and referential realms. Louis and associates (2013) maintain that sensemaking occurs at the individual and social levels. They claim that individual sensemaking occurs when individuals have time to process new stimuli deeply. In contrast, social sensemaking is likely to be high-leverage when there is a great deal of peer contact (Louis et al., 2013). Individual sensemaking is likely to be limited, while social sensemaking tends to amplify the scope of actions taken because responses can be coordinated and collectivized (Walls, 2017). How a crisis is understood can be framed through cognitive or emotional sensemaking. According to Maitlis and her colleagues (2013), cognitive sensemaking is concerned with understanding the size of a disruption, while emotional sensemaking is focused on the threat to one's individual or organizational identity. Referentially, Walls (2017) suggests a duality of sensemaking exists in the retrospective and prospective. Weick (1988) observes that sensemaking is retrospective as leaders must use past information to make future decisions. There is another school of thought that prospective sensemaking exists as leaders consider probable future impacts of specific actions and nonactions as they construct meaning to address a crisis (See Maitlis & Christianson, 2014; Gephart et al., 2010).

Figure 3

Sensemaking Framework



Note. Adapted "Sensemaking and school failure: Lessons from two cases" by J. H. Walls, 2017, *Journal of Organizational Theory in Education*, 2, p. 10 (https://doi.org/10.3102/1438792). Copyright 2017 by Jeff Walls.

Walls (2017) incorporates the above binary pairs to suggest that sensemaking is a complex phenomenon with subtle elements that help school leaders make informed decisions. These dualities should not be isolated but rather help support the other when engaged in the sensemaking process. Walls (2017) presents a sensemaking model derived from case studies of schools in crisis that aligns with and informs the field of meta-leadership of international schools (see Figure 3).

Crisis and Crisis Management

In attempting to define crisis and crisis management, the literature is clear that universally-accepted definitions do not exist, as these terms are as ambiguous as the

phenomena they describe. According to Shrivastava and his team (2013), the variance across industries, discipline, stakeholders, crisis types, location, and social context contributes to the ever-expanding list of crises and crisis management definitions. The descriptions in this research serve to frame crises and crisis management to better understand the topics and explore their application toward international school leadership. It is worth noting that the disagreement amongst scholars is inherent in the complex nature of crises and is healthy and expected (Mitroff et al., 2004).

Organizational crises are events interpreted by stakeholders as unexpected and highly salient, potentially disrupting the organization's goals and relationships with said stakeholders (Bundy et al., 2017). Grissom and Condon (2021) add to the Bundy group's definition by stating that a crisis yields a fundamental disruption to an international school's functioning and can potentially impact the school, its stakeholders, and its reputation. Bundy and his colleagues (2017) further argue that crises can be viewed through internal and external viewpoints and have four primary characteristics: (a) they are sources of disruption, change, and uncertainty; (b) they are harmful or threatening to the firm and its stakeholders due to conflicting needs and demands; (c) they are behavioral phenomena and socially constructed by the actors involved; and (d) they are components of more significant processes rather than unique events. MacNeil and Topping (2007) suggest that crises in schools are caused by a critical incident or stressor events that lead to a crisis response.

Mitroff and colleagues (2004) most accurately describe a crisis as an *ill-structured mess*, meaning a highly interdependent set of problems that are complex systems themselves, each of which is ill-structured. The scholarly concept of a mess was

first coined by social scientist Russell Ackoff and applied broadly across crisis management and systems architecture (Mitroff et al., 2004; Gharajedaghi, 2011). In order to clean up messes, they must be formulated through systems thinking that maps dynamic behaviors and identifies multiple feedback loops and iterations within the system (Gharajedaghi, 2011). Part of the mapping process involves classifying crises through a typology framework specific to the type of organization being addressed.

Scholars have introduced numerous crisis typology and categorization schemes to describe and organize inherently unpredictable, complex phenomena (see Mitroff, 2000; Boin, 2004; Coombs, 2010). Mitroff (2004) presents a group of seven major crisis events based on internal or external factors: (a) economic-related, (b) informational, (c) physical, (d) human resources, (e) reputational, (f) psychopathic acts, and (g) natural disasters. This schema is based on the business sector and is often cited in crisis management (see Coombs, 2010; Davies & Olmedo-Cifuentes, 2016; James et al., 2011; Smith & Reilly, 2012). Smith and Riley's (2010) crisis typology concept was developed for education, with emphasis on international schools. It contains five categories that describe school-based crises:

- Short-term crises: sudden in arrival and swift in conclusion.
- Cathartic crises: slow in build-up, reach a critical point, and then are swiftly resolved.
- Long-term crises: develop slowly and bubble along for a long time without any clear resolution.
- One-off crises: unique events that would not be expected ever to happen again.

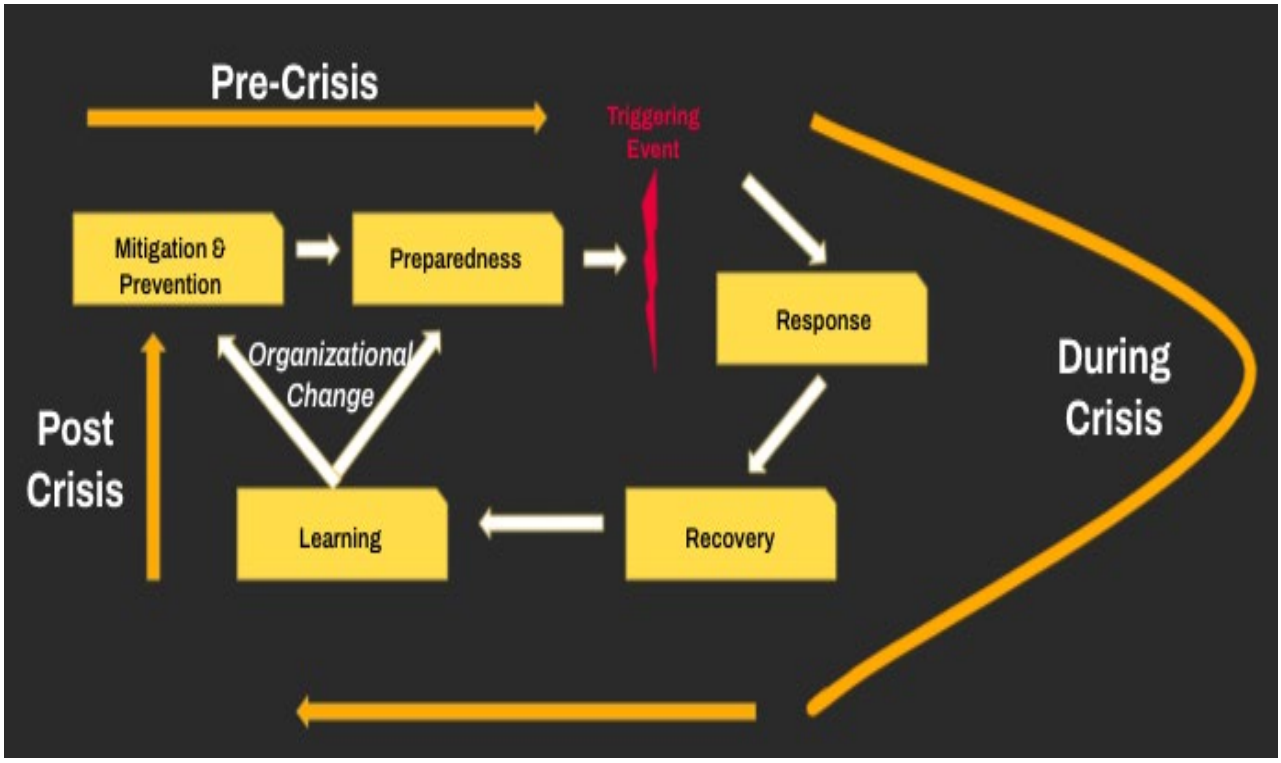
- Infectious crises: ones that occur and are seemingly resolved quickly yet leave behind other significant issues to be addressed, some of which may subsequently develop into separate crises.

International school leaders should have a basic grasp of the types of crises they may encounter in their roles. This understanding will assist them in preventing and mitigating school-based crises (Smith & Reilly, 2010).

One common thread across all crisis events, regardless of their type, is that each has a life of its own, and they follow a similar path to resolution. The framework for a crisis lifecycle can be developed through the lens of systems thinking. Scholars generally agree that Fink's four-stage model of crisis lifecycle introduced in 1986 is the seminal linear model created in crisis management (Jaques, 2007; Coombs, 2010). The prodromal stage is the period leading up to a triggering event. The acute and chronic stages occur during the actual crisis, and the resolution stage is the period of learning and recovery from a crisis (Liou, 2015). Other researchers further distill the crisis life cycle into before, during, and after stages (Mitroff et al., 2004; Boin, 2004; Coombs, 2010). In Wooten and James' (2008) study, their academic review of linear crisis lifecycles determined a model consisting of five phases: (a) signal detection, (b) preparation and prevention, (c) damage containment, (d) recovery, and (e) learning (pp. 355). Wooten and James' model was adapted for schools and districts by Grissom and Condon (2021; see Figure 4). Because of the model's cyclical design, the learning involved in dealing with current or recent crises feeds back to inform school leaders to identify, address, minimize, resolve, and recover from any future crisis they may experience (Smith & Reilly, 2012).

Figure 4

Crisis Management and Organizational Change Cycle in Schools



Note. Adapted from "Leading Schools and Districts in Times of Crisis" by J.A. Grissom & L. Condon, 2021, *Educational Researcher*, *50*(5), p. 316, (https://doi.org/10.3102/0013189X211023112). Copyright 2021 Sage Publications. Adapted with permission.

Linear, sequential lifecycle models are not without their flaws. One fundamental weakness is that the models imply that crises happen and are managed one at a time, while many would argue that different messes are managed concurrently at different phases (Mitroff et al., 2004; Jaques, 2007; Gilpin & Murphy, 2010). Liou (2015) suggests that linear and sequential models typically inform the field of crisis management; however, a non-linear and flexible mentality is a prerequisite for any international school leader facing a crisis.

The field of crisis management emerged in the early 1980s with Littlejohn's (1983) six-step model and Fink's (1986) four stage-model (as cited by Jaques, 2007).

Crisis management was a byproduct of rising environmentalism, post-industrial economic failures, and technological disasters caused by corporations (Shrivastava, 1994). Crisis management has evolved over the years and has settled into a more relational and holistic approach that involves preparation for and learning from crises (M. Taylor, 2010; Mitroff et al., 2004). Pearson and Mitroff (1993) further argue that crisis management intends not to produce a set of response plans but instead make the organization aware of the unthinkable so that the best possible decisions will be made in a time of crisis through creative thinking.

Bakatsaki and Zampetakis (2020) succinctly define crisis management as "the sum of activities to minimize the impact of a crisis" (p. 8). According to Wang (2008), organizational crisis management consists of the efforts by organizational members and external stakeholders to avoid crises and effective management of them when they do occur. Coombs (2010) defines crisis management as a set of factors intended to address crises and minimize or lessen the damage of unfavorable outcomes to protect the organization, stakeholders, and industry. Practical crisis management efforts require the organization to tailor their response programs to the specific industry, business environment, and crisis management developmental stage, where leaders are aware of the firm's vulnerabilities and understand the four significant crisis management variables: types, phases, systems, and stakeholders (Pearson & Mitroff, 1993).

It is worth noting that the facet of learning is absent from the bulk of the literature informing crisis management. However, Grissom and Condon (2021) argue that school-based crisis management must also include learning, which occurs during the post-crisis phase and should be intentional by leaders and decision-makers. It is

only by the learning and reflection process that school leaders can reframe a crisis into an opportunity (Kovoor-Misra, 2009). Wang (2008) further reminds us that learning from a crisis will strengthen organizational capacity and resilience in coping with future crises and other dynamic events.

Communication and information flow through public relations strategies and tactics is possibly the most critical element of crisis management (Reilly, 1993; Gainey, 2009). Coombs (2010) believes that communication is the essence of crisis management, while Fernandez & Shaw (2020) contend that open communication establishes a culture that builds trust, collaboration, and shared leadership. According to the Potter group's (2021) research, school leaders must recognize the importance of school, family, and community communication when responding to a crisis.

Leaders can influence and motivate through consistent, authentic, and transparent communication with all relevant stakeholders. Communication and messaging serve as the conduit between international school leaders and stakeholders in crisis and stasis. By blending crisis management with the ability to unify efforts across all constituencies and sectors, the concept of crisis leadership emerges (Dorn & McNulty, 2012). According to Dorn and McNulty (2012), crisis leadership fosters a connected purpose across entire communities, catalyzing communication, adaptation, collaboration, and decision making. Importance is placed on establishing these connections beyond a single situation, crisis, change, or other complex event. Connectivity must permeate across the culture and context of The Situation, and it must also surpass it.

Connectivity

Connectivity is the third and most dynamic dimension of meta-leadership. The meta-leader lays the foundation for successful crisis management and organizational change by establishing a connection with myriad stakeholders. Without Connectivity, trust can never be achieved to accomplish a common goal of strategically responding to a crisis (Tschannen-Moran et al., 2018). This dimension incorporates authentic and transformational leadership theory, followership, influence beyond authority, inter-and intra-organizational relations, network theory, and boundary spanning (Marcus et al., 2015). Meta-leaders treat the organization and outside entities as an ecosystem to identify previously unconnected links that allow agility and adaptability while leading through adversity (Marcus et al., 2006).

Connectivity consists of four discrete facets of leadership: Leading Down, Leading Up, Leading Across, and Leading Beyond (Marcus et al., 2015). It is important to acknowledge that through the context of negotiation theory, international school leaders must engage in negotiation in every direction of leading. The Lewicki group (2016) defines negotiation as a process where two or more parties attempt to resolve their opposing interests (p. 6). International school leaders continuously interface and negotiate with the same sets of internal and external stakeholders. Although, some situations may call for win-lose/zero-sum style of distributive bargaining, it is worth noting that this type of negotiation strategy is not effective for building relationships that have repeated interactions (Lewicki et al., 2016).

According to Densten (2006), transactional behaviors by leaders are similar to the integrative negotiation process of promoting mutual objectives by highlighting the

benefits for participants. Laubach (1997) posits that integrative negotiators exhibit an abundance mentality, which is the mindset that resources are limitless, and helping others achieve their goals only builds stronger long-term relationships. As integrative negotiators, international school leaders engage in cooperative, collaborative, win-win, mutual-gains, or interest-based problem solving (Lewicki et al., 2016).

When examining the four facets of Connectivity, trust plays a foundational role in understanding the effectiveness of meta-leadership. Connectivity relies on building trust with followers, superiors, and outside stakeholders through authority and influence. A meta-leader can Lead Down and Lead Across using their assigned leadership position within the organization (Northouse, 2019). Emergent, relational-based leadership is needed to develop influence, particularly when leading without authority. Open communication and a unifying vision are keys to building trust when Leading Up and Leading Beyond (Kotter, 2012). According to Harris & Jones (2020), during times of crisis, such as a pandemic, "a high degree of trust will be needed, as the collective glue, to ensure that issues are addressed collectively as they arise."

Meta-leaders must forge strategic connections to align stakeholders, both inside and out of the organization (Marcus et al., 2007). It is only by navigating multiple environments and constraints that overarching objectives can be achieved (Marcus et al., 2015). Uhl-Bien and colleagues (2006) viewed this process as a social influence mechanism that renders emergent coordination and change. Table 2 outlines each direction of Connectivity, established leadership theories or concepts related to each facet, and how meta-leaders apply them.

Table 2

The Four Facets of Connectivity in Meta-leadership

Facet	Concepts/Theories	Application in Leadership
Leading Down	Authentic Leadership (B. George, 2004), Transformational Leadership (Burns, 1978; Bass, 1990)	• "Leader of Leaders" (Northouse, 2019) • Emphasis on trust and communication with followers • Serves by example to inspire beyond/below their direct domain of influence.
Leading Up	Followership (Kelley, 1988)	• Informs and influences their superior(s) • Creates "vertical connectivity" within the organization (Marcus et al., 2015). • Uses emotional intelligence to build a strong interpersonal relationship with their superior(s)
Leading Across	Informal Leadership (Pielstick, 2000) Leadership Emergence (Murphy, 1941)	• Instructs, influences, and engages with multiple departments to create links. • Knows when to keep departments siloed and when to link them for synergistic results. • Emergence of leadership despite a lack of authority and accountability.
Leading Beyond	Boundary Spanning (J.D. Thompson, 1967) Authentic Partnership (Auerbach, 2010) Integrative Negotiation (Lewicki et al., 2016)	• Lack of assigned power/authority. • Seeks reciprocal partnerships through open communication, cooperation, integrity, and trust. • Integrates objectives, aligns motivations for cooperation and identifies risks and rewards. (Marcus et al., 2015).

Leading Down

Leading Down describes the meta-leader's role as the boss (Marcus et al., 2020). Leading Down is the most straightforward direction of Connectivity, as the boss has formal authority over their subordinates in the organization hierarchy. How that

authority is utilized is entirely up to the leader. Meta-leaders seek to make work productive and fulfilling for their direct reports with a balance of reward and support. A leader's behavior and management style are amplified through policies, procedures, and messaging. These artifacts permeate the hierarchical chain of command and set the organization's tone (Schein, 2004; Marcus et al., 2020). A meta-leader is a "leader of leaders" who fosters leadership development in their meta-followers as leadership is not held by a single person (Marcus et al., 2007, p. 14).

According to the Marcus group (2015), *Leading Down* is akin to the literature on Transformational Leadership established by Burns (1978), Bass (1990), and Bass (1999). Bass (1990) builds upon Burns' (1978) seminal research on Transactional vs. Transformational leadership theory by framing transformational leaders as those who elevate employee performance by bringing awareness and acceptance of a vision or mission greater than individual self-interest. This leader-follower dynamic is achieved through idealized influence, inspiration, individualized consideration, or intellectual stimulation (Bass, 1999). Meta-leaders emphasize communication, innovative thinking, and trust-building by reframing the mission, putting aside self-interests, to engage disparate stakeholder groups (Marcus et al., 2015).

Peering through the lens of integrated negotiation, it is worth noting that Transactional leadership (Burns, 1978; Bass, 1990) and performance reward relationships such as contingent rewards are effective at motivating employees. While financial rewards and performance bonuses are rare in international education, school leaders can use negotiation to establish or customize existing performance reward relationships that focus and motivate the efforts of their followers. Negotiation can

influence these leader-follower relationships to overcome limitations within formal performance relationships, reduce conflicts, develop solutions outside the system, modify held positions, and manage intangibles (Lewicki, 1992; Rubin and Brown, 1975 as cited by Densten, 2006). Moreover, negotiation gives leaders greater flexibility in customizing and increasing follower output. This supports Bass' (1999) argument that effective leaders incorporate both transformational and transactional leadership behaviors.

Leading Down in international schools is empirically grounded in authentic leadership (AL) theory. According to Celik and associates (2016), AL is similar to transformational leadership in that followers are motivated through a shared vision and empowerment. However, authentic leaders are true to themselves and their values. The seminal text on AL was introduced by B. George (2004). AL was later conceptualized and defined by Walumbwa et al. (2008) as established leader behavior that integrates and promotes positive psychological capacities and an ethical work environment, greater self-awareness, internalized moral perspective, and balanced information processing. AL requires relational transparency between leaders and followers to promote positive self-development. The components of AL fit directly with the actions and elements of The Person of the Meta-leader dimension of meta-leadership.

Several empirical studies report that leaders with an authentic leadership style positively impact organizational performance, trust, the satisfaction of follower needs, employee motivation, and improvement in the quality of work-life (see J.J. Bird et al., 2009; Datta, 2015; Hidayat, 2016; Korkmaz, 2017; Ramalu & Janadari, 2020). According to Datta (2015), AL leads to an increase in positive group attitudes and

behavior while limiting negative attitudes and behavior of followers such as absenteeism, dissatisfaction, and hostility. Celik and colleagues' (2016) research indicates that AL is more effective during a crisis than the transformational leadership style. They reason that the acute self-awareness of authentic leaders allows them to remain impartial when evaluating information and place their ego aside to make the best decisions possible.

International school leaders directly lead two distinct groups of followers: staff and students. Crippen (2012) suggests that for school leaders to gain followers, they must build and maintain authentic relationships that promote inclusivity, transparency, collaboration, and respect. In order to lead these groups, leaders must develop trust. For school staff, this means developing trust and using that trust to speak candidly and openly when appropriate (Chaleff, 2009). According to M.A. Hayes and Comer (2010), leaders who demonstrate humble behaviors, caring, and authenticity are more likely to inspire the employees they lead. Tschannen-Moran and Gareis (2017) concluded that teachers are inspired to move to higher levels of achievement and effort in the classroom when leaders form bonds of trust. The data indicates that increased trust in the leader-faculty relationship correlates to improved student learning and achievement.

Students are the second group of stakeholders who follow the authority of international school leaders. This relationship is different from the typical employee-employer shared between faculty and international school leaders as students play a subordinate role, but one not connected to a paycheck. Instead, school leaders enact informal control through influence and persuasion, behaviors grounded in leader trustworthiness research, with students to build rapport (Forsyth et al., 2011; Hoy &

Smith, 2007). Mitchell and Forsyth (2004) argue that when students trust the school leader, they will be more likely to cooperate with the task of learning and to feel a greater sense of bonding and commitment. Their empirical study found that as school leaders establish an atmosphere of trust within the school, their students are more likely to develop a sense of belonging and value school and school-related outcomes, particularly at the elementary level (Mitchell & Forsyth, 2004). A systematic review reveals that school leaders who foster and encourage trust are highly visible to their students, building a climate that facilitates positive student beliefs and behaviors (Grissom et al., 2021).

International school leaders should Lead Down to honor their core values, strengths, beliefs, and weaknesses (Gardner et al., 2011). AL assumes that leaders effectively lead and follow because they are true to themselves and build trust with others (George et al., 2007). Marcus and colleagues (2020) contend that leadership means "people follow you", but not necessarily in that order. In the next section, Leading Up, the concept that “you follow people” will be explored.

Leading Up

Almost everyone has a boss. Whether a person, board of directors, customer base, or multiple bosses, a constituency exists to hold the meta-leader accountable (Marcus et al., 2020). Leading Up describes leading one's boss or the boss following the meta-leader. In this dynamic, positive influence is required to achieve productive cohesion in this formal relationship. Leading Up is frequently seen through recommendations by subject specialists and those working more closely to situations called on to educate and inform those in a higher position of authority. In order to be a strong meta-leader, one

must also be an excellent subordinate, exuding dependability, honesty, reliability, and loyalty (Marcus et al., 2007). By validating the power and command equation and respecting and serving the objectives and proclivities of their boss, the meta-leader crafts vertical connectivity and bi-directional feedback.

Leading Up is informed by the concept of Followership. Kelley's (1988) seminal text on Followership introduced academic discussions on the nature and importance of the follower to organizational success. He argued that followers and leaders were roles, not people and that most managers are frequently required to play both roles (Kelley, 1988; Kelley, 2008). Kelly also explained that exemplary followership requires followers to be honest, courageous, self-motivated, and actively engaged (Uhl-Bien et al., 2014). According to S. Baker (2007), Chaleff (1995) built on Kelley's concept and introduced his followership model, which states the courageous follower must be willing to: (a) assume responsibility, (b) serve, (c) challenge the leader, (d) participate in change processes, and (e) oppose leaders when necessary. Both Kelley and Chaleff created typology schemes to classify followers (Uhl-Bien et al., 2014). Kelley's model uses axes to identify active participation and the sense of ownership of followership against the level of follower independent critical thinking. At the same time, Chaleff's quadrants describe the support followers give their leaders and the degree to which followers challenge the role or behavior of their leaders (Khan et al., 2019; Uhl-Bien et al., 2014).

Over a decade later, Kellerman (2008) incorporated a political approach to studying followership. Her model uses a single dimension based on followers' level of engagement (Khan et al., 2019). Followers are divided into five types that lay on a continuum ranging from followers who do absolutely nothing to those who are deeply

committed and passionately involved; the types are isolate, bystander, participant, activist, and diehard (Kellerman, 2008). While the research of Kellerman contributed to the body of knowledge exploring leader and follower roles through a follower-centric lens, a competing perspective emerged using the constructivist approach (Uhl-Bien et al., 2014; Khan et al., 2019). Under the constructivist perspective, followership is seen as a behavior or process, and leadership would not exist without following behavior (Uhl-Bien et al., 2014). Khan and colleagues (2019) attest that followership and leadership are constructed through the mutual relationship or relational interactions of leaders and followers. Gabarro and Kotter (2005) describe the follower-leader relationship of boss and subordinate as "a mutual independence between two fallible human beings" (p. 94). By the follower understanding the strengths and weaknesses of their leader and managing a healthy working relationship that meets the needs of both parties, meta-leaders place themselves in a position to Lead Up (Gabarro & Kotter, 2005; Marcus et al., 2015).

There are several different scenarios that international school leaders *Lead U*p, based on the type and structure of their organization and their position in the school. In a not-for-profit school, a parent-elected parent-member board of trustees is responsible for governance, including the hiring and firing of the school head (International School Services, 2021). Instead of a single boss, these international school leaders report to six or more members, including a board chair. International school leaders are placed in a precarious position as the role of boards combines contradictory activities, with board members expected to work as partners and yet monitor and control them, which can lead to role conflict and tension (Unda et al., 2022). According to Littleford (2021),

effective school heads build individual relationships with every board member. It is reported that strong management of a board may occupy up to 40% of a school leader's time but pays dividends due to the trust and support which can be leveraged during times of crisis (Littleford, 2021). Unda and colleagues' (2022) findings suggest that trust and effective communication are the vital interpersonal factors that allow school leaders to Lead Up to the board. Baker et al.'s (2016) study concluded that a healthy and productive relationship between board chair and school head leads to effective school governance. They also suggest that international school leaders must learn how to work with their boards collaboratively and cooperatively rather than get their boards to do what they want them to do (Baker et al., 2016).

On the other hand, proprietary model schools are not owned collectively by parents and may be owned by an individual, partnership, family, company, foundation, or another type of group (International School Services, 2021). According to ISC Research (2022), 80% of proprietary schools are run for profit. International school leaders' relationship with the owner/s is supported by understanding the roles and responsibilities of each party to ensure a high-quality education for students as well as profitability. According to Machin (2014), international school leaders of for-profit schools have to be comfortable with the dissonance of pedagogy and profit. Successful for-profit international school leaders address school owners on their terms to manage educational–commercial discourses at the personal, philosophical, and ontological levels (Machin, 2014). Gibson and Bailey (2021) contend that the lines between management, governance, and ownership can become blurred when owners are involved in school operations. The owner/s-school leader relationship is greatly affected

by a local locus of control, especially when a single owner is present in the school daily. International school leaders must carefully balance their relationships with owners, especially when behaviors are perceived as micro-management (Gibson & Bailey, 2021).

The relationship and trust between an international school leader and the board or owner/s are essential to successful vertical Connectivity. According to McNulty and his colleagues (2021), meta-leadership and meta-followership optimize performance and problem-solving. By Leading Up, international leaders leverage followership to lead and influence those in formal positions above them.

Leading Across

The vertical Connectivity of Leading Down and Leading Up is complemented by horizontal Connectivity. Looking inside the organization but outside of one's silo, the meta-leader expands their sphere of influence (Marcus et al., 2015). Collaboration and production can be enhanced by forging connections with those in charge of other divisions or departments (Marcus et al., 2020). By aligning common goals and informally leading, the meta-leader helps the organization reduce the energy and conflict spent on competition between silos. Cross-silo connectivity focuses on shared priorities, and leveraging capacity through collaboration and cooperation will produce results beyond the capabilities of a single entity (Marcus et al., 2007).

Leading Across is rooted in two leadership concepts where the leader lacks any formal authority or power over their followers. Informal leadership and leadership emergence are unique in their theoretical lens. They focus on leaders who are followed despite their lesser position or official title on the organization chart. Pielstick (2000) defines informal leaders as those who are not in positions of authority but are

recognized as leaders through authentic leading rather than power-wielding tactics. Miner (2013) adds that while informal leaders lack formal authority, they have limited accountability. Pielstick's (2000) groundbreaking empirical study found that others perceive informal leaders as showing higher levels of leadership than formal leaders overall, according to the six variables of authentic leadership: shared vision, communication, relationships, community, guidance, and character (Pielstick, 2000). According to Ruben and associates (2018), leadership is enacted through formal and informal roles. Informal leadership plays a critical role in the dynamics of social influence, especially in education institutions (Gigliotti, 2017). To develop their leadership capabilities and pursue their goals, informal leaders must rely primarily on personal and interpersonal skills (Pielstick, 2000). Miner (2013) contends that informal leaders can either promote or impede change, as they have established credibility and respect with followers by showing compassion and demonstrating altruism. Moreover, several scholars agree that the role of informal leadership is heightened during a crisis, as the informal leaders generate emotional support for those who follow them (see Bass & Steidlmeier, 1999; Minor, 2013; Oh et al., 2006; Pielstick, 2000; Reuben et al., 2017).

The field of informal leadership is concerned with the study of informal leaders themselves. On the other hand, leadership emergence describes the phenomena of why and how an informal leader emerges amongst peers (Carter et al., 2015). The first research on leadership emergence was published in 1941 by sociologist Albert Murphy; since then, the body of scholarly knowledge now totals nearly 300 articles and chapters written about the concept (Cox et al., 2021). Kaiser and associates (2008) posit leadership emergence as the exertion of influence in a group of peers or attaining high

status in a social system. The Plowman group (2007) study found that influence is the essence of emergent leadership behavior. Scholars agree that emergent leadership can be conceptualized as a relational phenomenon based on social networks with an organization and specific characteristics of the emerging leader (Brunell et al., 2008; McClean et al., 2018; Przybilla et al., 2019; Taggar et al., 1999).

More recently, Hanna and colleagues' (2021) comprehensive review produced a unified theoretical framework that argues lateral influence, unit of analysis, and temporal duration are the key elements of emergent leadership. Lateral influence occurs when peers or a group recognize leaderlike influence by one or more group members. How lateral influence is exhibited can vary greatly through behaviors or functions surrounding task completion (Hanna et al., 2021). Unit of analysis refers to emergent leadership being an individual-level phenomenon where one or more individuals can be perceived as an emergent leader because leaderlike influence originates from each team member individually rather than as a collective (Hanna et al., 2021). The third element of temporal duration suggests that leaders can emerge temporarily and for an unknown amount. According to Foti et al. (2008), influencing others should be considered a dynamic, evolving process with different factors determining who and for how long a member is perceived as an emergent leader. Thus, leadership emergence is fleeting and fluid as circumstances shift and change over time (Hanna et al., 2021). This concept applies to meta-leadership as those looking to create horizontal Connectivity through leadership emergence will do so with influence and authenticity and may not necessarily Lead Across for more than a short time (Marcus et al., 2015). Leadership emergence is

particularly relevant when leading through a crisis, as these are events that undergo a lifecycle and are eventually resolved.

Informal leadership and leadership emergence involve using influence to achieve tasks or goals. For international school leaders, the ultimate goal is always the support of student learning (see Academy of International School Heads, 2019; Fish & Palmieri, 2020; International School Services, 2021;). International school leaders are faced with niche situations where they must Lead Across. This dynamic is typically due to business and academic departments separately reporting to the owner or governance group in many proprietary and not-for-profit schools. According to Fish and Palmieri (2020), the formal role of business officers has grown beyond finance and accounting to include facilities and operations, human resources, risk management, campus safety, and technology. International school leaders must, at times, Lead Across the silo in order to garner support to attain their goals for student learning. When business and academics are siloed, international school leaders must actively partner with their business counterparts to leverage their strengths and align resources with the mission, address challenges, and innovate to ensure long-term sustainability (Fish & Palmieri, 2020). According to International School Services (2021), international school leaders must balance the financial return on investment (ROI) with educational ROI and reinforce the message that what is best for students is best for business.

Leading Across for some international school leaders exists solely in the school's academic structure. For example, in a school with two or more grade-level divisions, separate principals or division heads report to an academic superintendent or head of school. These leaders are responsible for their divisions, such as primary, elementary,

middle, and high school grade levels. While these leaders hold formal positions of authority in their respective divisions, they must use influence when working outside of their silos. According to Sun and associates (2013), school leadership is a social influence relationship distributed across multiple actors within the school and around specific tasks under local contexts. When Leading Across, international school leaders within these contexts should be aware that leadership encompasses a set of functions or tasks that may be performed by many different individuals in different roles throughout the school (Leithwood & Riehl, 2004). Authentic influence and shared goals are the key elements for international school leaders to Lead Across effectively.

Leading Beyond

Leading Down, Up, and Across all relate to the links between leaders and internal stakeholders. The final horizontal linkage is Leading Beyond, which is concerned with influencing external stakeholders and actors. Leading Beyond shares several characteristics with Leading Across as the meta-leader integrates different objectives, assesses and aligns motivations, and calibrates the risks and rewards of collaboration (Marcus et al., 2015). One important distinction is that the unified power and authority dynamic is absent when Leading Beyond. Silos within an organization ultimately share an overarching governance structure, report to a common authority, and have similar performance metrics (Marcus et al., 2020). Therefore, meta-leaders must emphasize transparency and authenticity when influencing and convincing others that the cross-cutting collaboration will yield overarching objectives and benefits to those involved (Marcus et al., 2015).

According to Marcus and colleagues (2015), Leading Beyond to individuals and inter-organizational entities requires the meta-leader to integrate different objectives, assess and align motivations, and calibrate the risk and reward sharing. These leaders must seek to influence other organizations through effective negotiation and the development of personal and organi-zational credibility that spans organizational boundaries (Marcus et al., 2006). In the absence of a unified authority and organizational vision, meta-leaders encourage collective leadership through transparency to establish trust upon which collaborative action thrives (Marcus et al., 2015).

Effective negotiation, as outlined by Lewicki and colleagues (2016), is based on the free flow of information between both parties to identify suitable outcomes. International school leaders should manage the context and process of negotiations to gain the cooperation and commitment of all parties involved. In addition to the behaviors suggested by the meta-leadership framework of open communication, trust, and common goals, leaders should also show faith in their problem-solving ability, demonstrate the motivation and commitment to work together, accept both parties' position as valid, and understand the dynamics of integrative negotiation (Lewicki, et al., 2016).

Leading Beyond in international schools relates to 2 distinct categories of external stakeholders. The first group consists of outside agencies and organizations, including government ministries, other educational institutions such as competitor schools and universities, vendors, and charitable organizations. Boundary spanning is the concept that illuminates Leading Beyond for these agents and actors. The second

group of external stakeholders is parents. The relationship between international school leaders and parent stakeholders is likely the most complex and layered dynamic in Connectivity research. The concept of a partnership continuum will be introduced to examine the various ways parents can be Led Beyond (see Auerbach, 2007).

A. Bird (2018) states that boundary spanning is a critical component for influential global leaders to permeate the lines of demarcation between organizations and agencies. James Thompson coined the concept of a boundary-spanner in 1967 to describe people who manage inter-organizational relationships (Williams, 2002). Miller (2008) argues that all educational leaders serve as boundary spanners to varying degrees. Their involvement in this task depends on their job description, community contexts, and personal skills. Boundary spanning activities in schools revolve around people and organizations working together that address common issues, promote better coordination and integration, reduce duplication, and make the best use of scarce resources (Williams, 2011). In inter-organizational research conducted by the Marchington group (2005), trust and informality are the foundational components of boundary spanning. By having consistent, open, and transparent communications, boundary spanning agents can establish trust through informal channels with their counterparts. A more recent study by Benoliel and Schecter (2017) determined that international school leaders engaged in boundary spanning activities can act as the permeable membrane between the school and the external environment to facilitate and balance knowledge transfer across multiple fields of interaction. Ultimately, the school leaders must be strategic when playing the boundary spanner role to ensure

institutional memory is intact while infusing fresh ideas to improve the quality of teaching and learning (Benoliel & Schecter, 2017; Coldren & Spillane, 2007).

Wegemer and Renick (2021) frame boundary spanning in education as partnerships dependent on adept navigation of sociocultural and organizational differences. There are many examples of boundary spanning partnership opportunities for international school leaders and the surrounding environment. Common inter-organizational partnerships include but are not limited to: admissions agreements with universities to allow automatic acceptance for graduating students, working with charitable organizations to provide community service opportunities for students, coordinating with local schools to form an athletics or activities conference, arranging corporate sponsorship for science, technology, engineering, art, and mathematics (STEAM) or robotics competitions, and contracting on-campus food or other services from an outside vendor. It is acknowledged that these examples of boundary spanning and Leading Beyond are not explicitly related to crises. However, when properly maintained, these relationships allow the meta-leader to build trust equity with external constituencies that will be needed when a crisis appears.

The power dynamic must be explored when evaluating parents as external stakeholders in international schools. Parents of international school students most likely pay tuition. However, they hold no other authority over the school or its leaders aside from transferring their student to another school. Conversely, the school and its leaders also lack any formal authority over parents or families of their students but are responsible for enrollment targets. Horvat and colleagues' (2010) review of the literature identified studies confirming universal agreement on the importance of

parental involvement in schools and its positive effect on student performance (see Cooper, 2009; Epstein et al., 2011; Hiatt-Michael, 2006; Bryk & Schneider, 2003; Cutler, 2000). However, a 30-year longitudinal case study concluded that in place of forming partnerships, school leaders managed parents and families by seeking engagement and support while limiting control, involvement, and influence (Horvat et al., 2010). Epstein and Sheldon (2019) argue that school leaders should actively promote parent-school partnerships that continually improve the school climate, increase the number of families engaged in their children's education at school and home, and increase student success.

Auerbach (2010) introduced the concept of a partnership continuum delineating four discrete leadership approaches to parent involvement in schools as follows:

- Leadership preventing partnerships: school leaders buffer the school from outside influences.
- Leadership for nominal partnerships: school leaders make some effort to involve parents but keep them limited and controlled.
- Leadership for traditional partnerships: school leaders are focused on two-way communication and more varied parental involvement, which likely revolves around the school's agenda.
- Leadership for authentic partnerships: School leaders build mutually respectful alliances with families that value relationship building, dialogue, and power-sharing as part of a collaborative process.

Based on Auerbach's partnership continuum, international school leaders must incorporate boundary spanning activities to varying degrees to establish a school climate

of trust. Auerbach's (2012) later research contends that relational trust is a prerequisite and result of authentic partnership because it allows for reciprocity. According to Bryk and Schneider (2003), the extent to which these leaders establish relational trust through competence, integrity, perceived respect, and caring with families ultimately determines the level of parental involvement. Under the lens of meta-leadership, international school leaders should strive for authentic partnerships as they Lead Beyond with parents and families.

Chapter Summation

This chapter provides an extensive examination of the empirically-backed research that guides and supports the three dimensions of the meta-leadership framework: The Person of the Meta-leader, The Situation, and Connectivity. Additional themes, including the role of trust, authentic leadership, systems and complexity thinking, emotional intelligence, and crisis management, support the theoretical basis for the framework. The beginnings of a self-assessment tool measuring meta-leadership competencies emerge from these themes.

Chapter 3: Methods

Accurate and reliable measurement of leadership is crucial for ensuring the quality of decisions and conclusions when assessing leadership or confirming theory (Zagorsek et al., 2006). This research aims to develop a valid and reliable self-assessment instrument for meta-leadership competencies. The Meta-leadership Inventory for International School Leaders (MLI-ISL) was designed for international school leaders, measuring the dimensions of The Person of the Meta-leader, The Situation in crisis, and Connectivity with followers, boss(es), peers, and stakeholders outside of their organization. The MLI-ISL is based on the curated theories and concepts of meta-leadership and draws from the research of established and validated surveys.

The methodological approach and design involved three phases. Phase one focused on developing the initial content and overall structure of a self-assessment tool for measuring meta-leadership competencies of international school leaders considering existing literature and tools. Phase two sought content validation of the MLI-ISL, relying on content experts' insights and recommendations for modification. The third phase of the research involved collecting data from an abstract population of international school leaders and conducting reliability analysis in order to support the psychometric properties of internal consistency and reliability of the MLI-ISL.

The objectives of this research were as follows:

1. To develop a self-report instrument (MLI-ISL) derived from the scholarly literature on meta-leadership competencies for international school leaders.
2. To validate the MLI-ISL with a panel of experts to ensure the content validity of the instrument.

3. To establish internal consistency reliability of the MLI-ISL using an independent sample of international school leaders.

Research Design

Creswell and Creswell (2018) contend that a broad research approach is a plan or proposal to conduct research informed by design, methods, and philosophical worldviews. Using Creswell and Creswell's (2018) framework, this research utilizes psychometrically-informed measurement methods guided by postpositivist philosophy. The methods used in this research are grounded in psychometric theory. DeVellis and Thorpe (2021) define psychometrics as the measurement of psychological and social phenomena. These phenomena are typically measured using a questionnaire (DeVellis & Thorpe, 2021). Revelle (2013) asserts that psychometrics assign numbers to observed psychological phenomena and unobserved concepts by evaluating the fit between theoretical models and empirical data. By focusing on the theoretical lens of the meta-leadership framework through a comprehensive literature review to identify leadership phenomena, the MLI-ISL was created to measure and assign scores to meta-leadership competencies of international school leaders.

Because the research adopts the quantitative approach, the researcher proposed a postpositivist worldview. According to Creswell and Creswell (2018), the postpositivist views knowledge based on careful observation and measurement of objective reality. Moreover, the researcher acknowledges that "developing numeric measures of observation and studying the behavior of individuals is paramount for a postpositivist" (Creswell & Creswell, 2018, p. 7).

Psychometric methods and a postpositivist lens are influential in the design process of instrument development for the MLI-ISL. The study design used in this research was separated into three distinctive design phases. Phase one consisted of instrument construction and item development. Phase two involved the process of content validation by a panel of subject experts. Phase three conducted a study of international school leaders to establish internal consistency and reliability of the MLI-ISL.

Phase One

The first phase in developing the MLI-ISL was the generation of the items for the instrument, which was designed as a self-report survey. According to Simms (2008), items that measure psychological constructs should be selected and grouped to form scales in alignment with the self-report method. Measurement of these psychological constructs is a vital component of leadership studies and the general field of psychology (Simms, 2008). Dussault and his associates (2013) contend that a self-report instrument to assess leadership is necessary given the trend in 360 evaluations. According to DeVellis and Thorpe (2021), self-report instruments offer many advantages over other assessments, including a low cost to administer, ease of scoring, and the most direct way to collect data about a target population's thoughts, behaviors, and competencies.

Strategies & Procedures

A literature search was conducted in the Spring of 2022 using the EBSCO, Scopus, PsycINFO, ProQuest, and Google Scholar databases for all articles using search queries for "meta-leadership" and "meta-leadership schools". Date of publication,

geographical and cultural restrictions were not imposed on the searches, but articles were limited to English. Greater than 95% of the studies cited were confirmed as peer-reviewed, primary sources.

Eighteen articles contained relevant information about the foundational research on meta-leadership from the initial database searches. Backwards snowballing (BSB) is described by Badampudi and associates (2015) as using reference lists of articles to identify additional relevant papers and studies. Using BSB, the initial 18 articles led to 11 additional sources.

Upon examining and synthesizing the initial 29 meta-leadership sources, database searches were conducted for the three meta-leadership dimensions and supporting theories. Search terms included: emotional intelligence, EQ, systems thinking, global mindset, transformative learning theory, crisis, crisis management, crisis management schools, sense-making, VUCA, transformational leadership, authentic leadership, followership, leadership emergence, informal leadership, authentic partnership, and boundary spanning. This expanded search utilized the same databases. However, during this round of database searches, forward snowballing (FSB) was utilized with searches conducted on Google Scholar. FSB allows researchers to identify additional, more recent research that cites the already identified literature being studied (Badampudi et al., 2015). The search yielded 161 unique sources that were integrated into the literature review.

Upon the successful identification of each data source, the reference information and PDF file was downloaded to EndNote software. Within EndNote, the source information was verified for accuracy and sorted into a folder/tagging system that

designated each reference into a theoretical dimension or dimensions of meta-leadership in a group. Each of the three dimensions of meta-leadership is organized into a group, with subgroups nested underneath them that correspond to subdimensions such as Emotional Intelligence or Systems Thinking. Peters (2017) acknowledges that the EndNote grouping approach is systematic, reproducible, and rigorous while potentially increasing the quality, clarity, and robustness of the overall scoping review process and data reporting.

Items for the MLI-ISL were developed based on the literature review of empirical studies that informed the organization of items into three dimensions and eleven subdimensions of meta-leadership. Additionally, preferred outcome measures of meta-leaders were developed considering this same literature. The generated items followed a deductive scale development approach, as the theoretical foundation of meta-leadership provides sufficient information to generate the initial set of items (Hinkin, 1998). Please refer to Appendix A for the initial draft of the MLI-ISL survey items and demographic questions.

Phase Two

Phase two involved assembling a panel of content experts to ensure the content validity of the MLI-ISL items generated in phase one. DeVellis and Thorpe (2021) define content validity as the extent to which a specific set of items reflects a content domain. One method to establish content validity is to have an expert or group of experts evaluate the relevance of the instrument's items to the domain of interest (DeVellis & Thorpe, 2021). Phase two relied on a group of meta-leadership, international school leadership, and questionnaire construction experts' insights and recommendations for

modification to the MLI-ISL. The purpose was to get their feedback on item quality, relevance, and how well each item reflected the measured construct. DeVellis and Thorpe (2021) recommend that content experts assess item validity through open-ended feedback or a Likert-type scale. Evidence of content validity for the MLI-ISL was provided by computing a content validity index (CVI) based on experts' ratings of item relevance, as suggested by Polit et al. (2007)**.**

Content Experts

According to Carpenter (2018), experts should consist of methodologists, intended participants, and subject-matter researchers. Fricker (2012) delineates two types of panel experts: substantive (subject matter) experts and instrument design experts. Instrument design experts should ensure the instrument and questions are up to best practices in survey research. In contrast, substantive experts verify that the facts are correct so that the survey meets the research objectives (Fricker, 2012). Individuals were be selected to review the MLI-ISL items and provide feedback for the instrument based on their expertise. Ikart (2019) suggests that content experts have a minimum of 10 years of experience in their respective fields. The experts selected for the panel were knowledgeable in meta-leadership, international school leadership, and/or theoretical survey development knowledge.

Yussof's (2018) review recommends that the number of experts for content validation should be between six to 10 members. The number of content experts for this research was six. The expertise of panel was evenly balanced with two experts each from the fields of international school leadership, meta-leadership, and survey development. The recruitment for suitable experts was through the professional networking of the

researcher. Through LinkedIn messaging and email communication, the context of their involvement for establishing content validity of the MLI-ISL was discussed. Following confirmation of their willingness to serve in this role, each expert was emailed instructions and a link to an online survey about meta-leadership of international school leaders (see Appendix B).

Validation Process and Procedures

Upon confirmation and establishment of the panel, the generated items from phase one were presented to each expert via an online survey using the Qualtrics survey platform. The content validation process involved the panel members being tasked to read each item in the survey and rate the degree to which the item matches the subdimension; along with a free-response section for descriptive feedback and comments (Wynd, Schmidt, & Schaefer, 2003). A 4-point rating scale (1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = highly relevant) will be applied on each of the items in the context of their importance for creating the MLI-ISL (Polit & Beck, 2006). Once the experts' responses were collected, inter-rater agreement of the items and scales were calculated so that a final version of the survey could be created.

Polit and colleagues (2007) define CVI as a measurement method for quantifying the content validity of multi-item scales. CVI can be calculated at the item-level (I-CVI) and the overall scale (S-CVI) (Polit et al., 2007). I-CVI was calculated for each MLI-ISL item by the number of experts assigning a three or four, divided by the total number of experts (N = 5). S-CVI was computed using the averaging method (I-CVI/Ave). A CVI score above 0.80 indicates content validity at both item and scale levels (Polit et al., 2007). Yousoff (2018) argues that content validity is vital to ensure any instrument's

overall validity and trustworthiness. His systematic review of several studies confirms and supports using a content validity index (CVI) to provide quantifiable evidence of content validity (see Polit et al., 2007; Polit & Beck, 2006; Davis, 1992; Lynn, 1986).

In addition to CVI, the kappa statistic was calculated to confirm inter-rater agreement. According to Wynd and associates (2003), the kappa statistic provides information about the degree of the experts' agreement beyond chance. Two separate studies confirm that kappa values above 0.74 are considered excellent, values between 0.6 and 0.74 are considered good, and values between 0.4 and 0.59 are considered fair (see Shrotryia & Dhanda, 2019; Zamanzadeh *et al.*, 2014). After content validation, items below the I-CVI and kappa thresholds were eliminated from the MLI-ISL.

The content experts were also asked to confirm the use of a 5-point Likert scale for subject responses, validate the 4 demographic questions, make suggestions for additional demographic questions, and confirm that the instrument measured the construct of meta-leadership. The MLI-ISL was then amended and updated to render the final MLI-ISL design used in phase three.

Phase Three

The third phase of the research involved preparing the MLI-ISL for digital distribution, collecting data from an abstract population of international school leaders, and conducting internal consistency reliability analysis to support the MLI-ISL's reliability. The MLI-ISL was the primary instrument used to collect data from participants.

The finalized MLI-ISL survey was prepared for digital distribution and data collection via Qualtrics, a survey administration tool. This digital survey contained 79

items involving meta-leadership and five items for participant demographic information. The finalized MLI-ISL items were entered into Qualtrics and grouped by the subdimensions, with a 5-point Likert scale allowing a single response per item. Each item was assigned the same weighted value ranging from a score of 1 to 5, with 5 being the highest level of agreement. The survey did not require each item to be answered before moving to the next item, however, a reminder prompt appeared if a participant did not enter a response. Any missing items received scores of zero and were excluded from descriptive statistical data. Scoring of the MLI-ISL overall instrument, dimensions, and subdimensions relied on the summation of the participant's responses to all items comprising the corresponding scale or subscale. The overall score of the MLI-ISL did not include any weighted values based on the dimensions of The Person, The Situation, or Connectivity.

The demographic questions were placed at the end of the survey; these items were multiple choice and allowed a single response. Demographic questions included information about the participants' current leadership position, the geographical region in which they work, years of experience as an international school leader, the size of their school, and their highest level of education.

A small pilot study was performed to ensure the electronic distribution and functions of the MLI-ISL works as designed. Approximately eight colleagues of the researcher who were current international school leaders were asked to pilot the survey. Each colleague received a Qualtrics survey link via email. Feedback was collected from the pilot respondents, and their individual responses were reviewed to ensure the MLI-ISL's reliability and usability for the target population of participants.

Target Population and Sample

The targeted population and sample for phase three were international school leaders. Suitable participants were those who were currently or in the past five years working in a leadership role in an international school. The criteria for what defines a leadership role was broad in order to ensure a sufficient number of responses for reliability analysis. Acceptable leadership positions ranged from academic subject coordinators to facilities managers up to the chief executive officer or head of school. Many international school leaders in academic and non-academic domains are involved in online professional networks to share ideas and communicate on issues unique to their fields. Because of this established dynamic, participants were approached through online professional networking groups, including LinkedIn, Research Gate, and WhatsApp (Nayak & Narayan, 2019).

The needed sample size was determined by published recommendations of researchers. DeVellis and Thorpe (2021) state that the higher number of items to be factored, requires a larger number of subjects for reliable analysis. They cite several statisticians who indicate a benchmark of 200 subjects is considered a fair sample size for analysis (Comrey, 1988 as cited by DeVellis & Thorpe, 2021; Tinsley & Tinsley, 1987 as cited by DeVellis & Thorpe, 2021).

Data Collection Strategies & Procedures

Participants were recruited through several different channels using direct and indirect approaches. Using the researcher's membership in several international school leadership organizations, LinkedIn professional network, Research Gate, WhatsApp groups, and network of Pepperdine's graduate students and faculty, international school

leaders, were recruited via email, peer-to-peer messaging, and general forum postings. A link to the Qualtrics survey was provided in all scenarios, along with a detailed script describing the focus of the research. The researcher utilized a snowball approach to recruitment by asking for referrals from participants to solicit additional participants.

Throughout the data collection period, the researcher regularly checked the Qualtrics platform to monitor the number of responses. Responses that had expired, were incomplete, or the participants opted out were deleted on a regular basis to ensure and accurate estimation of complete response sets. The survey remained open for six weeks during the Fall of 2022 to achieve the number of needed responses (N = 200). Once enough data had been verified, the researcher closed the survey so that it no longer accepted responses. The study data was downloaded from Qualtrics as an Excel document and then uploaded to Intellectus Statistics statistical software for analysis.

Analysis Process

Ercan and colleagues (2007) define reliability as an indicator of consistency of measurement values obtained from the measurements repeated under the same circumstances. The measurement of reliability is typically applied in one of three strategies: (a) split-half adjusted, (b) parallel or equivalent reliability using two forms of an instrument, and (c) internal consistency reliability (Brown, 2002). Internal consistency is the extent to which all the items in a test or scale measure the same concept, thus connecting to the inter-relatedness of the items within the instrument (Tavakol & Dennick, 2011).

The data from the phase three of this study will be analyzed using internal consistency analysis. Internal consistency is credited to Cronbach's (1951) coefficient

alpha (α). Cronbach alpha is a flexible tool used to investigate the reliability of test results. The formula estimates the proportion of variance in a set of test scores (Brown, 2002). Cronbach alpha is expressed as a number between 0 and 1, with 1 representing the highest degree of internal consistency
(Tavakol & Dennick, 2011).

DeVellis and Thorpe (2021) posit that the coefficient alpha is best applied with items that have multiple response options. The MLI-ISL uses a Likert scale to measure the level of agreement of meta-leadership competencies, thus supporting the application of Cronbach alpha coefficient to determine reliability. According to Brown (2002), calculating reliability estimate when a test is administered only one time is the best strategy for researchers to use. The MLI-ISL will be a one-time survey administered to international school leaders for the purpose of determining the reliability of the subscales within the tool. The Cronbach's alpha statistical procedure will be calculated using Intellectus Statistics to investigate the internal consistency reliabilities of the MLI-ISL overall instrument, its three main dimensions, and 11 subdimensions. The reliability alphas will be based on a 95% confidence interval. The reliability results will be reported in the findings section.

Human Subjects Considerations

Institutional Review Board (IRB) approval for this research was sought under the criteria for exempt research. Phase three involves an online survey targeting an abstract population and qualifies under exempt research category two. IRB approval was granted by the university (see Appendix C). As the survey collected response data anonymously, there was minimal risk to the human subjects. The possible, minimal risks of

participating in the survey included loss of time, boredom, and slight discomfort experienced from responding to survey questions. Subjects were provided with informed consent, could skip survey items, and exit the survey at any time.

The request for participating in the study was disseminated to an adult population located worldwide. The target population includes participants with current or recent experience as international school leaders. Participants are not considered members of vulnerable populations. Women and minorities were not excluded from this study.

All electronic data files from Qualtrics, Excel, and Intellectus Statistics are password-protected and were accessed by the researcher or faculty dissertation committee. Once three years have elapsed, the researcher will destroy all data.

Means to Ensure Study Validity

Internal study validity was established through procedures that ensured the research is trustworthy. Phase one incorporated psychometric theory to generate valid and reliable items. This phase was informed by Creswell and Creswell's (2018) framework establishing the research design, methodology, and philosophical worldview of the researcher. In phase two, content experts validated the MLI-ISL items through a review process. For the third phase, a pilot survey was conducted prior to the launch of the main study to ensure the usability of the online survey distribution process and response collection. Internal consistency reliability analysis supports the validity and reliability of the MLI-ISL instrument from the main study in phase three.

Chapter Summation

This chapter outlines in detail the three phases of the research of meta-leadership of international school leaders. Chapter 4 presents the findings from phases one and two of the research. The findings from phase three explicate the responses from the participants and confirm that the MLI-ISL is a valid and reliable instrument. Chapter 5 presents conclusions, implications, and recommendations for future investigation into meta-leadership and international school leadership.

Chapter 4: Findings

The purpose of this three-phase, quantitative research is to develop a valid and reliable self-assessment instrument for meta-leadership competencies for international school leaders. The Meta-leadership Inventory for International School Leaders (MLI-ISL) was designed for international school leaders, measuring the dimensions of The Person of the Meta-leader, The Situation in crisis, and Connectivity with followers, boss(es), peers, and stakeholders outside of their organization. The objectives of this research are as follows:

1. To develop a self-report instrument (MLI-ISL) derived from the scholarly literature on meta-leadership competencies for international school leaders.
2. To validate the MLI-ISL with a panel of experts to ensure the content validity of the instrument.
3. To establish internal consistency reliability of the MLI-ISL using an independent sample of international school leaders.

During phase one, an initial pool of items was identified for the proposed new index for meta leadership competencies (MLI-ISL) considering the existing body of literature. Phase two focused on the validation process for the MLI-ISL, relying on content experts from three distinct professional fields. Phase three involved collecting data from an abstract population of international school leaders and conducting a reliability analysis to support the psychometric properties of internal consistency and reliability of the newly validated index. This chapter examines the findings from each of the three phases.

Phase One Findings

Kalkbrenner's (2021) measure approach to instrument development and score validation helped guide the first phase of the research. Under this approach, a theoretical blueprint for item generation is crucial in identifying any instrument's initial content and overall structure (Kalkbrenner, 2021). First, the three main dimensions as proposed by the Marcus group (2015) served as the cornerstone of the blueprint. The Person of the Meta-leader, The Situation, and Connectivity were assigned as the main dimensions. Next, the four subdimensions for Connectivity were identified within the meta-leadership literature as the established leadership directions of down, up, across, and beyond. The four subdimensions of The Person of the Meta-leader and the three subdimensions of The Situation were developed through the literature review and assigned accordingly. The items for the MLI-ISL were developed based on the literature review of empirical studies that inform the three dimensions of meta-leadership and the 11 supporting subdimensions (see Table 3).

The MLI-ISL has three dimensions and 11 supporting subdimensions. The three dimensions correspond to The Person of the Meta-leader, The Situation, and Connectivity. The four subdimensions of The Person of the Meta-leader are Emotional Intelligence, Transformative Learning, Systems Thinking, and Global Mindset. The Situation contains three subdimensions: VUCA, sensemaking, and crisis management. Connectivity has four subdimensions corresponding to meta-leadership's formal and informal leadership directions: Leading Up, Leading Down, Leading Across, and Leading Beyond. 102 initial items were generated for the 11 subdimensions supporting the three main dimensions of meta-leadership.

Table 3

Meta-leadership Inventory Theoretical Blueprint

Dimension	The Person of the Meta-leader				The Situation			Connectivity			
Sub Dimension	Emotional Intelligence	Systems Thinking	Transformative Learning	Global Mindset	VUCA	Sensemaking	Crisis Management	Leading Down	Leading Up	Leading Across	Leading Beyond

DeVellis and Thorpe (2021) recommend that researchers build an initial pool of items that is three to four times larger than the anticipated final scale to protect against poor internal consistency. Each of the 11 supporting subdimensions contains between 8 to 15 initial items, for a total 102 items. The rationale for having a minimum of 8 items for each subdimension was to ensure that the content experts would have more freedom in suggestion that items from a certain subdimension were not relevant. In addition to the initial 102 items, four demographic questions were drafted to ask participants about their leadership roles, size of their institution, geographic region, and years of leadership experience.

Ikart (2019) notes that survey respondents should understand all terms and concepts of the intended study participants. By focusing on the research objectives and the theoretical blueprint, the preliminary items were generated with the intent to be specific, objective, understandable, and written at a 6th-grade reading level (DeVellis &

Thorpe, 2021). Kalkbrenner (2021) recommends that items are written as declarative statements with anchor definitions and response options to indicate the respondents' amount of agreement or approval of each statement. Ikart (2019) also suggests that the initial pool of items generated are close-ended questions that can be paired with a 5-point Likert response scale.

Phase Two Findings

The targeted number of content experts required to review the MLI was based on Youssof's (2018) review that suggested between 6 to 10 panel members. Exactly 10 experts were contacted to participate in reviewing the MLI items. A total of six experts agreed to serve as expert reviewers of the instrument. Using content experts from three distinct professional fields: meta-leadership in general; international school leadership; and scale development. The expertise of the panel was balanced across three distinct professional fields: meta-leadership (N = 2), international school leadership (N = 2), and scale development (N = 2).

Each member of the review panel was sent a digital link to an electronic survey which allowed them to rate the relevance of items, make recommendations, and suggest additions or revisions. The survey responses were downloaded to an Excel spreadsheet, where content validity indices (CVI) were calculated at the item, subscale, scale, and overall instrument levels. Additionally, a modified Kappa statistic, as recommended by Wynd et al (2003) was calculated to conform inter-rater reliability.

Content Validation Calculations

The first step in qualifying the MLI-ISL items was calculating the I-CVI for each of the 102 items. I-CVI was calculated by summing the number of experts assigning a 3

or 4 to each item, and dividing that number by the total number of experts. According to Polit and associates (2007), a CVI score above 0.80 indicates content validity at both item and scale levels. For this study, all items that surpassed the 0.80 CVI score threshold were retained, and the items that scored 0.80 and below were eliminated.

The range of scores for the initial items was between 1 and 0.33. 53 of the initial items earned an I-CVI score of 1 and 26 items scored an I-CVI of 0.83. These 79 items met the required level of content relevance and were retained. 23 items scored an I-CVI between 0.80 and 0.33, and were eliminated from the instrument. See Appendix D for the list of all 102 items, with the expert content relevance rankings, I-CVI scores, S-CVI scores, and Kappa statistics.

In the case of 10 items, one of the experts did not assign a score. Those items were calculated based on the scores they did receive, and averaged across the number of experts who responded ($N = 5$). Adjusted scores did not contribute to an item being eliminated or retained from the instrument. The rationale for adjusting the CVI for skipped items is based on the assumption that that the experts who skipped the items were for neither for nor against the item relevance. The researcher has no reason to assume that skipped items meant the rater felt the item was relevant, not relevant, or somewhere in the middle.

The 23 items that were eliminated were under the subdimensions of Systems Thinking ($N = 2$), Transformative Learning ($N = 5$), Global Mindset ($N = 2$), VUCA ($N = 3$), Sensemaking ($N = 5$), Leading Down ($N = 1$), Leading Up ($N = 3$), Leading Across ($N = 1$) and Leading Beyond ($N = 1$). None of the initial items were eliminated from the Emotional Intelligence and Crisis Management subdimensions. With regards to the

three main dimensions of meta-leadership, 9 of 44 items were eliminated from The Person of the Meta-leader, 8 of 26 items were eliminated from The Situation, and Connectivity had 6 of its initial 32 items removed.

Table 4

Initial and Final S-CVI Scores for Scales and Subscales

Level	Name	Initial S-CVI	Final S-CVI
Instrument	**Meta-leadership Inventory for International School Leaders (MLI-ISL)**	0.87	0.95
Dimension	***The Person of The Meta-leader***	0.90	0.97
Subdimension	*Emotional Intelligence*	0.97	0.97
Subdimension	*Systems Thinking*	0.93	0.98
Subdimension	*Transformative Learning*	0.78	0.97
Subdimension	*Global Mindset*	0.88	0.97
Dimension	***The Situation***	0.81	0.89
Subdimension	*VUCA*	0.80	0.92
Subdimension	*Sensemaking*	0.80	0.89
Subdimension	*Crisis Management*	0.88	0.88
Dimension	***Connectivity***	0.89	0.95
Subdimension	*Leading Down*	0.98	1
Subdimension	*Leading Up*	0.83	0.97
Subdimension	*Leading Across*	0.85	0.90
Subdimension	*Leading Beyond*	0.90	0.93

The next step in the content validation process was to calculate the subscale CVI and the overall CVI of the MLI-ISL. S-CVI was computed using the averaging method,

where the I-CVI of the items in a scale is summed, and then the total is divided the number of items in the scale. Despite 23 items not meeting the content validity threshold, the initial scales and all but two of the subscales passed the 0.80 S-CVI threshold for content validity (see Table 4).

Inter-rater Reliability

Inter-rater reliability is important to the content validation process because it provides information about the degree of the experts' agreement beyond chance (Wynd et al., 2003). To verify inter-rater reliability, a Modified Kappa statistic (K*) was calculated for each of the 79 items that met the I-CVI threshold. The index is called a Modified Kappa because it is an index of agreement among the content experts that the item is relevant (Polit, et al., 2007). The Modified Kappa statistic is calculated as K^* = (I-CVI – Pc) / (1 – Pc), where $Pc = [N! / A! (N – A)!] \times 0.5^N$. In this formula, N = number of experts in the panel, A = number of experts in the panel who agree that the item is relevant with a three or four.

Of the 79 items in the MLI-ISL, 53 items were assigned a three or four relevance score by all six experts. This calculates to an I-CVI score of one, with the probability of chance that all experts were in agreement with the items' relevance at 0.02, and K^* of 1.0. The remaining 26 items were rated with a three or four relevance score by five out of the six experts. This translates to an I-CVI score of 0.83, a Pc value of 0.09, and K^* value of 0.81. Based on the criteria for kappa, scores falling between .40 to .59 are fair, .60 to .74 are good, and greater than .74 is excellent (Cicchetti & Sparrow, 1981; Fleiss, 1981 as cited in Polit et al., 2007). Therefore, the evaluation of K^* at 1.00 and 0.81 are both considered excellent, suggesting that all items on the MLI-ISL have strong inter-

rater reliability. Table 5 displays a visual breakdown of the MLI-ISL items and their Modified Kappas by scale and subscale.

Table 5

Display of Kappa Values

Level	Name	# Items K^*=1 (6 of 6 experts in agreement)	#Items K^*=.83 (5 of 6 experts in agreement)
Instrument	**MLI-ISL**	53	26
Dimension	***The Person of The Meta-leader***	29	6
Subdimension	*Emotional Intelligence*	12	3
Subdimension	*Systems Thinking*	7	1
Subdimension	*Transformative Learning*	5	1
Subdimension	*Global Mindset*	5	1
Dimension	***The Situation***	6	12
Subdimension	*VUCA*	2	2
Subdimension	*Sensemaking*	2	4
Subdimension	*Crisis Management*	2	6
Dimension	***Connectivity***	18	8
Subdimension	*Leading Down*	7	0
Subdimension	*Leading Up*	4	1
Subdimension	*Leading Across*	3	4
Subdimension	*Leading Beyond*	4	3

MLI-ISL Edits and Additions

After calculating the CVI for items and scales, as well as verifying inter-rater reliability of each item, feedback from the content experts was reviewed to make edits to

the items that qualified for the final instrument. On the online survey, the content experts provided feedback on items they felt needed edits. Some experts commented on items being double-barreled, others suggested synonyms, rewording, or removal of words or phrases. Additionally, experts commented on readability and made suggestions to simplify the items that could be considered difficult to understand. In total, 19 items were edited and amended based on the feedback provided by the experts. Seven items from *Emotional Intelligence* were amended. *Global Mindset* and *Leading Beyond* each had three items requiring edits. Two items from both *Sensemaking* and *VUCA* were edited. The sub dimensions of *Crisis Management* and *Leading Up* each had 1 item requiring an edit. The items within *Systems Thinking*, *Transformative Learning*, *Leading Down*, and *Leading Across* did require any edits.

The experts all agreed that the initial four demographic items at the end of the survey were appropriate and did not ask for edits. Half of the experts suggested to add a demographic question to the end of the MLI-ISL. They felt that the instrument should ask participants about their level of education. Thus, a fifth demographic question was added to probe participants on their level of education, ranging from high school to doctoral level.

Instrument Structure

The structure and sequence of the items in MLI-ISL follows the theoretical blueprint developed and presented in the phase one findings of this chapter (see table 3). Items were presented to content experts in a linear order by dimension, starting with The Person of the Meta Leader (The Person), then The Situation, and finally asking about Connectivity. In each dimension, items were grouped into matrix tables by

subdimensions. For example, The Person has one matrix table for the Emotional Intelligence items, then a matrix table for the items on Systems Thinking, another matrix table for Transformative Learning, and finally a matrix table for the Global Mindset items.

At the end of the survey, the experts were asked if the instrument and its items reflected the overall constructs of meta-leadership of international school leaders. Four of the six experts answered yes, while two were unsure. The experts who were unsure if the instrument measured the theoretical constructs noted that they had little knowledge or experience with meta-leadership.

Experts were also asked to confirm the use of a 5-point Likert response scale seeking respondents' level of agreement with each item. The proposed scale contained the following responses: strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree. Five of the six experts concurred that the proposed 5-point response scale was appropriate for the instrument. One expert suggested a 4-point scale so respondents could not "sit on the fence". Thus the 5-point scale was retained for use in the final instrument.

Final Instrument

The MLI-ISL contains 79 items and five demographic questions: 35 items for The Person, 18 items for The Situation, 26 items for Connectivity. Under the subdimensions of The Person, Emotional Intelligence contains 15 items, Systems Thinking has eight items, with Transformative Learning and Global Mindset each having six items. For the three subdimensions of The Situation, VUCA has four items, Sensemaking has six items, and Crisis Management has eight items. The four subdimensions for Connectivity are

relatively balanced, with Leading Up having five items and Leading Down, Leading Across, and Leading Beyond each containing seven items. Table 6 shows a graphical representation of the scales, subscales, and corresponding number of items of the MLI-ISL.

Table 6

Scales and Items of the MLI-ISL

Scale Level	Name	# of Items
Instrument	**Meta-leadership Inventory for International School Leaders (MLI-ISL)**	79
Dimension	***The Person of The Meta-leader***	35
Subdimension	*Emotional Intelligence*	15
Subdimension	*Systems Thinking*	8
Subdimension	*Transformative Learning*	6
Subdimension	*Global Mindset*	6
Dimension	***The Situation***	18
Subdimension	*VUCA*	4
Subdimension	*Sensemaking*	6
Subdimension	*Crisis Management*	8
Dimension	***Connectivity***	26
Subdimension	*Leading Down*	7
Subdimension	*Leading Up*	5
Subdimension	*Leading Across*	7
Subdimension	*Leading Beyond*	7

The finalized MLI-ISL items were entered into Qualtrics and grouped into matrix display tables by subdimension. The items from each subdimension are listed in matrix

tables display on the left side, with the response options to the right. Items are arranged in rows with the response options displayed at the top and middle of the matrix table. The survey utilizes a horizontal Likert scale with responses displayed in ascending order: Strongly disagree, Disagree, Neutral, Agree, and Strongly Agree. According to Chyung and colleagues (2018) listing items in an ascending order reduces left-side selection bias by participants.

The survey does not request each item to be answered before moving to the next item, however, a reminder prompt appears if a participant did not enter a response to an item or items when navigating from one matrix display table to the next. The demographic questions are placed at the end of the survey; these items are multiple choice and allow a single response

The five demographic questions ask participants about their current status as an international school leader as well as their experience in the field. For current status, participants are surveyed on their current leadership role, the size of student enrollment of the institution, and the geographic region where the work. The two items for professional experience inquire about the participants' number of years of experience in international school leadership and their highest level of education.

Phase Three Findings

Findings from phase three of the research were obtained by the distribution of the MLI-ISL to an abstract sample of international school leaders.

Description of Sample Participants

An approximately seven-week data collection period began with initial recruitment posts and emails sent on October 14, 2022, and concluded on December

4th. Additional follow-up posts, emails, and digital messages were dispatched daily throughout the data collection period. The final sample attained was $N = 212$. Table 7 provides a summary of the demographic data. Out of the 212 participants, 205 chose to answer the demographic questions, signaling a 96.6% response rate within the sample.

Table 7

Frequency Table for Demographic Variables (N = 212)

Variable	*n*	%
Leadership Role		
Head of school, superintendent, director, president	75	35.38
Principal, division head, assistant head of school	52	24.53
Vice principal, assistant principal, dean	37	17.45
Other	41	19.34
Missing	7	3.30
Enrollment Size		
1000-1999 students	54	25.47
300-999 students	81	38.21
101-299 students	28	13.21
More than 2000 students	39	18.40
Less than 100 students	3	1.42
Missing	7	3.30
Geographic Location		
Africa / Middle East	54	25.47
Europe	37	17.45
North America	34	16.04
South America	20	9.43
Asia	48	22.64
Oceania	12	5.66
Missing	7	3.30

Variable	*n*	%
Years of Experience		
Over 20 years	29	13.68
15-19 years	36	16.98
10-14 years	49	23.11
5-9 years	54	25.47
Less than 5 years	37	17.45
Missing	7	3.30
Highest Degree		
Doctoral degree	38	17.92
Graduate degree	125	58.96
Undergraduate degree	41	19.34
Associate degree	1	0.47
Missing	7	3.30

Note. Due to rounding errors, percentages may not equal 100%.

The most frequently observed category of leadership role was Head of school, superintendent, director, president (n = 75, 35.38%). The most frequently observed category of enrollment size was 300-999 students (n = 81, 38.21%). The most frequently observed geographic location was Africa/Middle East (n = 54, 25.47%). The most frequently observed category of years of leadership experience was 5-9 years (n = 54, 25.47%). The most frequently observed category of highest degree was graduate degree (n = 125, 58.96%).

MLI-ISL Findings

Summary statistics were calculated for the MLI-ISL, The Person, The Situation, and Connectivity. All scale and subscale scores were determined by calculating the sum of their respective Likert item ratings. Higher scores indicated a higher level of

agreement across the rated behaviors of a given subscale. The overall composite score of the MLI-ISL did not include any weighted values based on the dimensions of The Person, The Situation, or Connectivity, as the score represents a simple calculation of all items across the instrument.

The MLI-ISL had an average score of 345.06 (*SD* = 25.48, SE_M = 1.75, Min = 224.00, Max = 378.00, Skewness = -1.54, Kurtosis = 2.92). The observations for The Person was an average of 156.98 (*SD* = 9.91, SE_M = 0.68, Min = 116.00, Max = 174.00, Skewness = -1.72, Kurtosis = 3.43). The observations for The Situation yielded an average of 78.18 (*SD* = 7.97, SE_M = 0.55, Min = 35.00, Max = 87.00, Skewness = -1.58, Kurtosis = 3.74). The observations for Connectivity showed an average of 109.90 (*SD* = 10.49, SE_M = 0.72, Min = 62.00, Max = 129.00, Skewness = -1.55, Kurtosis = 3.22). When the skewness is greater than 2 in absolute value, the variable is considered to be asymmetrical about its mean. When the kurtosis is greater than or equal to 3, then the variable's distribution is markedly different than a normal distribution in its tendency to produce outliers (Westfall & Henning, 2013). The MLI-ISL skewness and kurtosis indicate the scores are symmetrical about the mean, and that the scores are considered to have a normal distribution. The Person, The Situation, and Connectivity each have symmetry about their means and kurtosis values that are suggestive of score distributions that tend to produce outliers. The summary statistics can be found in Table 8.

The sample of international school leaders produced a mean Likert item rating of 4.42 on the MLI-ISL, indicating a moderate to strong level of agreement with meta-leadership competencies. The subscale with the highest mean Likert item rating is The

Person with a 4.49 mean, followed by The Situation with a 4.37 mean, and Connectivity with a nearly identical mean 4.36. It is worth mentioning that more items in The Situation and Connectivity were skipped on the surveys, contributing to lower overall scale and subscale scores as well as relatively higher standard deviation of scores when compared to The Person dimension.

Table 8

Summary Statistics Table for MLI-ISL and its Three Dimensions

Variable	*M*	*SD*	Mean Likert Item Rating	*n*	SE_M	Min	Max	Skewness	Kurtosis
MLI-ISL	345.06	25.48	4.42	212	1.75	224	378	-1.54	2.92
The Person	156.98	9.91	4.49	212	0.68	116	174	-1.72	3.43
The Situation	78.18	7.97	4.37	212	0.55	35	87	-1.58	3.74
Connectivity	109.90	10.49	4.36	212	0.72	62	129	-1.55	3.22

The Person Dimension Findings. The dimension of The Person has four corresponding subdimensions: Emotional Intelligence, Systems Thinking, Transformative Learning, and Global Mindset. The mean score for Emotional Intelligence was 67.59 (*SD* = 4.13, SE_M = 0.28, Min = 42.00, Max = 74.00, Skewness = -2.26, Kurtosis = 8.95). The mean score for Systems Thinking was 36.01 (*SD* = 2.82, SE_M = 0.19, Min = 22.00, Max = 40.00, Skewness = -1.59, Kurtosis = 3.79). The observations for Transformative Learning showed a mean score of 26.68 (*SD* = 2.46, SE_M = 0.17, Min = 16.00, Max = 30.00, Skewness = -1.56, Kurtosis = 2.87). Global mindset had a mean of 26.68 (*SD* = 2.81, SE_M = 0.19, Min = 5.00, Max = 30.00, Skewness = -2.93, Kurtosis =

16.17). Skewness values for Systems Thinking and Transformative Learning suggest each variable is symmetrical about its mean. Emotional intelligence and Global Mindset had skewness values indicative of those variables being asymmetrical about their means. The kurtosis value of Transformative Learning suggests a normal distribution, with few outliers. The higher kurtosis values of Emotional Intelligence, Systems Thinking, and Global Mindset indicate a markedly different than normal distribution in their tendency to produce outliers. This is evidenced by the low minimum score for Global Mindset due to one participant skipping five of the six items, a handful of other participants skipping item 4 in that subdimension. The summary statistics for the subscales of The Person can be found in Table 9.

Table 9

Summary Statistics Table for Subdimensions of The Person

Subdimension	*M*	*SD*	*n*	SE_M	Min	Max	Skewness	Kurtosis
Emotional Intelligence	67.59	4.13	212	0.28	42	74	-2.26	8.95
Systems Thinking	36.01	2.82	212	0.19	22	40	-1.59	3.79
Transformative Learning	26.68	2.46	212	0.17	16	30	-1.56	2.87
Global Mindset	26.68	2.81	212	0.19	5	30	-2.93	16.17

Emotional Intelligence Subdimension Findings. Summary statistics were calculated for the 15 items of Emotional Intelligence. Overall, the sample of international school leaders indicated moderate to high levels of agreement with their own level of Emotional Intelligence competence. Item 8, *I take responsibility for my*

personal performance, scored the highest across the sample with a mean rating of 4.66 and also possessed the lowest standard deviation (*SD* = 0.49, SE_M = 0.03, Min = 3.00, Max = 5.00). Item 8 had the lowest standard deviation value of any MLI-ISL item. Item 12, *I adapt my leadership style depending on whom I am working with*, scored the lowest in the subscale of Emotional Intelligence with a mean of 4.28; it also had the

Table 10

Summary Statistics Table for Items from Emotional Intelligence

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. My emotions are under control when faced with change.	4.42	0.78	212	0.05	2	5
2. I make decisions with honesty and integrity.	4.54	0.55	212	0.04	1	5
3. I am aware of my strengths and limitations.	4.55	0.54	212	0.04	3	5
4. During a crisis or emergency, I integrate my emotions appropriately.	4.42	0.60	212	0.04	2	5
5. Obstacles and setbacks also provide opportunities.	4.42	0.61	212	0.04	1	5
6. I make a concerted attempt to be aware of others' feelings, needs, and concerns.	4.49	0.60	211	0.04	2	5
7. I motivate others by establishing an enjoyable working environment that creates synergy.	4.40	0.62	212	0.04	1	5
8. I take responsibility for my personal performance.	**4.66**	**0.49**	212	0.03	3	5
9. Part of my role as a leader is to inspire and motivate others.	4.63	0.59	212	0.04	1	5
10. I strive for continuous improvement in myself and others.	4.62	0.54	212	0.04	1	5
11. I work with others towards shared goals.	4.52	0.60	212	0.04	1	5
12. I adapt my leadership style depending on whom I am working with.	**4.28**	**0.79**	212	0.05	1	5

Item	*M*	*SD*	*n*	SE_M	Min	Max
13. Building relationships through communication with others helps me achieve the goals and programs of my institution.	4.59	0.55	212	0.04	3	5
14. Empathy is required to advocate on behalf of stakeholders.	4.53	0.61	212	0.04	2	5
15. I regularly employ face to face interactions to build trust and relational cohesion across my institution.	4.54	0.65	212	0.04	1	5

highest standard deviation of any item in the subdimension (*SD* = 0.79, SE_M = 0.05, Min = 1.00, Max = 5.00). The summary statistics for all 15 items of Emotional Intelligence can be found in Table 10.

Systems Thinking Subdimension Findings. Summary statistics were calculated for the 8 items of the Systems Thinking subdimension. Item 1, *The decisions I make are based on many interdependent factors*, scored the highest level of agreement with a mean score of 4.65 (*SD* = 0.56, SE_M = 0.04, Min = 2.00, Max = 5.00). Item 3, *My decision-making relies on analyzing the possible consequences of various solutions to a problem*, yielded the lowest standard deviation of the items in this group (*M*=4.60, *SD* = 0.53, SE_M = 0.04, Min = 3.00, Max = 5.00). The observations of item 2, *My school is a complex environment with a diverse set of stakeholders*, show the item the scored the lowest mean rating and has the highest standard deviation of the items from Systems Thinking (*M*=4.40, *SD* = 0.66, SE_M = 0.05, Min = 2.00, Max = 5.00). This is a notable finding given not only the types of stakeholders (parents, students, staff, governance, etc.) but also the ethnic, linguistic, and nationalistic diversity typically found in international schools. Moreover, the second lowest scoring item, *I apply an adaptive and flexible approach when managing the complexities within my school*, (M=4.42, *SD*

= 0.65, SE_M = 0.04, Min = 2.00, Max = 5.00), builds on the lower level of agreement across the sample with taking an adaptable approach with people or complexities. The summary statistics for all Systems Thinking items are locate in Table 11.

Table 11

Summary Statistics Table for Items from Systems Thinking

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. The decisions I make are based on many interdependent factors.	**4.65**	0.56	212	0.04	2	5
2. My school is a complex environment with a diverse set of stakeholders.	**4.40**	**0.66**	212	0.05	2	5
3. My decision-making relies on analyzing the possible consequences of various solutions to a problem.	4.60	**0.53**	212	0.04	3	5
4. Seeking and analyzing relevant information is how I choose the best solution to a problem.	4.51	0.57	212	0.04	2	5
5. I assume situations are dynamic and interdependent on many systems.	4.47	0.55	212	0.04	3	5
6. I apply an adaptive and flexible approach when managing the complexities within my school.	4.42	0.65	212	0.04	2	5
7. My job requires me to identify the needs of the diverse sets of stakeholders to address gaps in institutional structures.	4.53	0.63	211	0.04	2	5
8. I pay close attention to interrelations, system forces, sources of resistance, emerging perspectives, influences, and changes.	4.47	0.62	211	0.04	2	5

Transformative Learning Subdimension Findings. The summary statistics for the subdimension Transformative Learning were calculated. The observations for item 6, *Leading requires the aptitude and cognitive ability to learn in real-time while applying new data and knowledge in real-time,* returned the highest mean score and lowest standard deviation (M = 4.61, SD = 0.53, SE_M = 0.04, Min = 3.00, Max = 5.00). Item 2, *My future actions and decisions are informed by recently-gained*

knowledge and experience, had the lowest mean of 4.32 (*SD* = 0.57, SE_M = 0.04, Min = 2.00, Max = 5.00). The observations for item 5, *A leader should first reflect and then act with agility*, showed the highest standard deviation of scores in the subdimension (*M* = 4.44, *SD* = 0.76, SE_M = 0.05, Min = 1.00, Max = 5.00). The summary statistics for all items from Transformative Learning can be found in Table 12.

Table 12

Summary Statistics Table for Items from Transformative Learning

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. I consistently revise my experience and knowledge for future actions and decisions.	4.57	0.64	212	0.04	2	5
2. My future actions and decisions are informed by recently-gained knowledge and experience.	**4.32**	0.57	212	0.04	2	5
3. Self-insight allows me to build a bigger picture in my decision-making.	4.41	0.68	212	0.05	2	5
4. I actively search for supplementary information to inform my decisions.	4.45	0.67	210	0.05	2	5
5. A leader should first reflect and then act with agility.	4.44	**0.76**	211	0.05	1	5
6. Leading requires the aptitude and cognitive ability to learn in real-time while applying new data and knowledge in real-time.	**4.61**	**0.53**	210	0.04	3	5

Global Mindset Subdimension Findings. Summary statistics for the Global Mindset subdimension were calculated. The observations for item 6, *Understanding cross-cultural etiquette is helpful in communicating and influencing a culturally diverse set of stakeholders*, showed the highest mean in the subdimension (*M* = 4.63, *SD* = 0.62, SE_M = 0.04, Min = 1.00, Max = 5.00). Item 3, *I am interested in the knowledge of the world, its nations, cultures, institutions, and people*, had the lowest standard deviation of scores in Global Mindset (*M* = 4.61, *SD* = 0.55, SE_M = 0.04, Min =

3.00, Max = 5.00, Skewness = -1.02, Kurtosis = 0.02). The observations for item 4, *I find myself switching mindsets between global integration and local responsiveness*, indicated the lowest mean score with the highest deviation of scores across the subdimension (M = 4.30, SD = 0.80, SE_M = 0.06, Min = 1.00, Max = 5.00). Summary statistics for all Global Mindset items can be found in Table 13.

Table 13

Summary Statistics Table for Items from Global Mindset

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. I am fascinated and curious about the interaction of people and ideas among cultures.	4.60	0.64	212	0.04	2	5
2. Understanding local and cultural differences allows me to cross cultures and change contexts with the aim of creating a consistent global standard. knowledge and experience.	4.34	0.58	211	0.04	2	5
3. I am interested in the knowledge of the world, its nations, cultures, institutions, and people.	4.61	**0.55**	211	0.04	3	5
4. I find myself switching mindsets between global integration and local responsiveness.	**4.30**	**0.80**	207	0.06	1	5
5. It is a priority to promote the diversity of students and staff at my school.	4.37	0.64	211	0.04	2	5
6. Understanding cross-cultural etiquette is helpful in communicating and influencing a culturally diverse set of stakeholders.	**4.63**	0.62	211	0.04	1	5

The Person and Demographics Findings. An analysis of variance (ANOVA) was conducted to determine whether there were significant differences in the subscale scores for The Person by the demographic variables of leadership role, years of experience, school size, degree, and geographic location. The ANOVA was examined based on an alpha value of .05. The results of the ANOVA were significant, F(19, 185) = 1.91, p = .015, indicating there were significant differences in The Person among the

levels of leadership role, years of experience, school size, degree, and geographic location (Table 14). The main effect, leadership role was not significant, $F(3, 185) = 1.38$, $p = .251$, indicating there were no significant differences of The Person subscales score and the type of leadership role at their school.

Table 14

Analysis of Variance Table for The Person by Leadership Role, Years of Experience, School Size, Degree, and Geographic Location

Term	SS	df	F	p	η_p^2
Leadership Role	357.17	3	1.38	.251	0.02
Years of Experience	667.95	4	1.93	.107	0.04
School Size	58.07	4	0.17	.954	0.00
Degree	446.82	3	1.72	.164	0.03
Geographic Location	1,341.28	5	3.11	.010	0.08

Table 15

Mean, Standard Deviation, and sample size for The Person and Geographic Location

Combination	*M*	*SD*	*n*
Africa / Middle East	154.17	10.51	54
Europe	159.86	7.40	37
North America	159.29	8.01	34
South America	158.30	11.11	20
Asia	155.08	10.67	48
Oceania	161.67	3.03	12

The main effect, years of experience, also was not significant, $F(4, 185) = 1.93$, $p = .107$, indicating there were no significant differences of the person by number of years they

have worked in international school leadership. The main effect, school size was not significant, $F(4, 185) = 0.17$, $p = .954$, indicating there were no significant differences of The Person by student enrollment levels. The main effect, degree was not significant, $F(3, 185) = 1.72$, $p = .164$, indicating there were no significant differences of The Person by level of highest degree attained. The main effect, geographic location was significant, $F(5, 185) = 3.11$, $p = .010$, $\eta_p 2 = 0.08$, indicating there were significant differences in scores of The Person based on the region where the respondent leads a school. This is indicated by higher scores for The Person for respondents from Oceania and lower scores from respondents working in Asia and Africa/Middle East. The means and standard deviations of The Person and geographic location are presented in Table 15.

The Situation Dimension Findings. Summary statistics were generated for the three subdimensions comprising The Situation. The observations for the VUCA subdimension had a mean score of 17.04 ($SD = 2.41$, $SE_M = 0.17$, Min = 7.00, Max = 20.00, Skewness = -1.25, Kurtosis = 1.53). The observations for Sensemaking had a mean of 26.12 ($SD = 2.91$, $SE_M = 0.20$, Min = 8.00, Max = 30.00, Skewness = -2.04, Kurtosis = 7.02). The observations for Crisis Management had a mean of 35.12 ($SD = 3.51$, $SE_M = 0.24$, Min = 19.00, Max = 40.00, Skewness = -1.33, Kurtosis = 1.82). The skewness values for VUCA and Crisis Management indicate the variables are considered symmetrical about their means. The skewness of Sensemaking is slightly above the absolute value of 2, and could be considered minimally asymmetrical about its mean. The kurtosis values for VUCA and Crisis Management fall within a normal distribution. The kurtosis value of Sensemaking suggests the variable's distribution is

markedly different than a normal distribution in its tendency to produce outlier. The summary statistics can be found in Table 16.

Table 16

Summary Statistics Table for Subdimensions of The Situation

Subdimension	*M*	*SD*	*n*	SE_M	Min	Max	Skewness	Kurtosis
VUCA	17.02	2.41	211	0.17	7.00	20.00	-1.25	1.53
Sensemaking	26.12	2.91	212	0.20	8.00	30.00	-2.04	7.02
Crisis Management	35.12	3.51	212	0.24	19.00	40.00	-1.33	1.82

VUCA Subdimension Findings. Summary statistics were generated for the 4 items in the subdimension of VUCA. The observations for item 3, *Decisiveness and transparent communication are essential during times of uncertainty*, had the highest mean score and lowest standard deviation in VUCA (*M* = 4.61, *SD* = 0.58, SE_M = 0.04, Min = 2.00, Max = 5.00). Item 2, *I am undeterred by constant surprises and lack of predictability*, had the lowest mean of 3.95 (*SD* = 0.79, SE_M = 0.05, Min = 2.00, Max = 5.00) while item 4, *My school is experiencing ambiguity in staffing due to various factors*, had the highest standard deviation of the VUCA items (*M* = 4.03, *SD* = 1.13, SE_M = 0.08, Min = 1.00, Max = 5.00). The *VUCA* summary statistics can be found in Table 17.

Table 17

Summary Statistics Table for Items from VUCA

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. I must anticipate and react in line with the nature and speed of changes.	4.51	0.66	211	0.05	2	5
2. I am undeterred by constant surprises and lack of predictability.	**3.95**	0.79	210	0.05	2	5
3. Decisiveness and transparent communication are essential during times of uncertainty.	**4.61**	**0.58**	210	0.04	2	5
4. My school is experiencing ambiguity in staffing due to various factors.	4.03	**1.13**	209	0.08	1	5

Sensemaking Subdimension Findings. Summary statistics were calculated for the Sensemaking subdimension items. The observations for item 6, *It is equally important to understand the size of a disruption as well as the threat to one's individual or organizational identity*, showed the highest mean score in the subdimension of 4.50 (*SD* = 0.68, SE_M = 0.05, Min = 2.00, Max = 5.00). Item 1, *When gathering information, I carefully consider and ratify the data I receive from various sources*, had the lowest standard deviation of all items in the subdimension (*M* = 4.48, SD = 0.59, SE_M = 0.04, Min = 3.00). The observations for item 2, *During a crisis, change, and challenge, I trust others to do their jobs of day-to-day management while I plan the subsequent actions,* showed the lowest mean score and the highest standard deviation of scores in Sensemaking (*M* = 4.06, *SD* = 0.75, SE_M = 0.05, Min = 2.00, Max = 5.00). The summary statistics for Sensemaking items can be found in Table 18.

Table 18

Summary Statistics Table for Items from Sensemaking

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. When gathering information, I carefully consider and ratify the data I receive from various sources.	4.48	**0.59**	212	0.04	3	5
2. During a crisis, change, and challenge, I trust others to do their jobs of day-to-day management while I plan the subsequent actions.	**4.06**	**0.75**	211	0.05	2	5
3. I use past information to make future decisions.	4.41	0.72	211	0.05	1	5
4. When constructing meaning to address a crisis, I consider probable future impacts of specific actions and nonactions.	4.45	0.62	210	0.04	2	5
5. Past events and probable future impacts guide my decision-making.	4.37	0.61	212	0.04	2	5
6. It is equally important to understand the size of a disruption as well as the threat to one's individual or organizational identity.	**4.50**	0.68	209	0.05	2	5

Crisis Management Subdimension Findings. The summary statistics for the subdimension Crisis Management were calculated. The observations for item 1, *Creative thinking is a requirement for addressing crises*, had the highest mean in the subdimension (M = 4.72, SD = 0.51, SE_M = 0.04, Min = 3.00, Max = 5.00). Both item 1 and item 7, *Leaders should prepare for and learn from crises*, had the lowest standard deviation of the Crisis Management subdimension which was SD = 0.51. The observations for item 6, *Every school crisis has a life of its own and is eventually resolved*, showed the lowest mean rating and the highest level of standard deviation in the subdimensions (M = 4.01, SD = 0.94, SE_M = 0.06, Min = 1.00, Max = 5.00). Crisis Management summary statistics can be found in Table 19.

Table 19

Summary Statistics Table for Items from Crisis Management

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. Creative thinking is a requirement for addressing crises.	**4.72**	**0.51**	211	0.04	3	5
2. Through learning and reflection, I reframe crises into opportunities.	4.27	0.63	212	0.04	2	5
3. Open communication establishes a culture that builds trust, collaboration, and shared leadership	4.60	0.60	212	0.04	2	5
4. Leaders can influence and motivate through consistent, authentic, and transparent communication with all relevant stakeholders.	4.60	0.62	212	0.04	2	5
5. Crises are components of more significant processes rather than unique events.	4.18	0.84	209	0.06	1	5
6. Every school crisis has a life of its own and is eventually resolved.	**4.01**	**0.94**	212	0.06	1	5
7. Leaders should prepare for and learn from crises.	4.61	**0.51**	211	0.04	3	5
8. I place a higher value on practicing crisis awareness than having a set of crisis response plans.	4.27	0.90	211	0.06	1	5

The Situation and Demographics Findings. An analysis of variance (ANOVA) was conducted to determine whether there were significant differences in the subscale scores for The Situation by the demographic variables of leadership role, years of experience, school size, degree, and geographic location. The ANOVA was examined based on an alpha value of .05. The results of the ANOVA were significant, $F(19, 185) = 2.20$, $p = .004$, indicating there were significant differences in The Situation among the levels of leadership role, years of experience, school size, degree, and geographic location (see Table 20). The main effect, leadership role was not significant, $F(3, 185) =$

0.78, p = .504, indicating there were no significant differences of The Situation by leadership role levels. The main effect, years of experience was not significant, $F(4, 185) = 1.53$, p = .196, indicating there were no significant differences of The Situation by years of experience levels. The main effect, school size was not significant, $F(4, 185) = 0.80$, p = .523, indicating there were no significant differences of The Situation by school size levels. The main effect, degree was not significant, $F(3, 185) = 1.88$, p = .134, indicating there were no significant differences of The Situation by degree levels. The main effect, geographic location was significant, $F(5, 185) = 4.69$, $p < .001$, $\eta_p 2 = 0.11$, indicating there were significant differences in The Situation by geographic location levels. The means and standard deviations are presented in Table 21.

Table 20

Analysis of Variance Table for The Situation by Leadership Role, Years of Experience, School Size, Degree, and Geographic Location

Term	*SS*	*df*	*F*	*p*	$\eta_p 2$
Leadership Role	129.88	3	0.78	.504	0.01
Years of Experience	337.56	4	1.53	.196	0.03
School Size	177.85	4	0.80	.523	0.02
Degree	311.80	3	1.88	.134	0.03
Geographic Location	1,296.09	5	4.69	< .001	0.11

Table 21

Mean, Standard Deviation, and Sample Size for The Situation by Geographic Location

Combination	M	SD	n
Africa / Middle East	76.28	8.89	54

Combination	M	SD	n
Europe	79.51	7.62	37
North America	81.38	4.56	34
South America	80.60	6.90	20
Asia	75.90	8.43	48
Oceania	83.00	2.80	12

A post-hoc *t*-test was calculated between each group combination to further examine the differences among the variables based on an alpha of .05. The Tukey HSD p-value adjustment was used to correct for the effect of multiple comparisons on the family-wise error rate. For the main effect of geographic location, the mean of The Situation for Africa / Middle East (M = 76.28, SD = 8.89) was significantly smaller than for North America (M = 81.38, SD = 4.56), p = .033. For the main effect of geographic location, the mean of The Situation for North America (M = 81.38, SD = 4.56) was significantly larger than for Asia (M = 75.90, SD = 8.43), p = .017. No other significant effects were found.

Connectivity Dimension Findings. The dimension of Connectivity has 4 corresponding subdimensions: Leading Down, Leading Up, Leading Across, and Leading Beyond. The mean score for Leading Up was 28.67 (SD = 2.07, SE_M = 0.14, Min = 16.00, Max = 34.00, Skewness = -1.49, Kurtosis = 7.20). The observations for Leading Down had a mean of 20.94 (SD = 3.04, SE_M = 0.21, Min = 10.00, Max = 25.00, Skewness = -1.08, Kurtosis = 0.72). The observations for Leading Across had a mean of 30.66 (SD = 3.21, SE_M = 0.22, Min = 19.00, Max = 35.00, Skewness = -1.26, Kurtosis = 1.25). The observations for Leading Beyond had a mean of 29.62 (SD = 4.30, SE_M = 0.30, Min = 9.00, Max = 35.00, Skewness = -1.84, Kurtosis = 4.83). The skewness values for all four

subdimensions indicate these variables are symmetrical about their means. The kurtosis values for Leading Up and Leading Beyond suggest that the distribution of those variables is different than a normal distribution and tend to produce outliers. The summary statistics for the subdimension of Connectivity can be found in Table 22.

Table 22

Summary Statistics Table for Subdimensions of Connectivity

Subdimension	*M*	*SD*	*n*	SE_M	Min	Max	Skewness	Kurtosis
Leading Down	28.67	2.07	212	0.14	16	34	-1.49	7.20
Leading Up	20.94	3.04	212	0.21	10	25	-1.08	0.72
Leading Across	30.66	3.21	212	0.22	19	35	-1.26	1.25
Leading Beyond	29.62	4.30	212	0.30	9	35	-1.84	4.83

Leading Down Subdimension Findings. Summary statistics were calculated for the Leading Down subdimension items. The observations for item 1, *I establish trust with my followers by being true to my values and beliefs*, had the highest mean within the subdimension items (M = 4.73, SD = 0.51, SE_M = 0.03, Min = 3.00, Max = 5.00). Item 1 also has the highest mean for any item in the MLI-ISL. Item 1 and item 6, *I provide opportunities for my school staff to speak candidly and openly when appropriate*, shared the lowest standard deviation value for Leading Down. Item 4, *I employ a transactional leadership approach with my subordinates*, had the lowest mean score and highest standard deviation of any Leading Down item (M = 4.06, SD = 1.16, SE_M = 0.08, Min = 1.00, Max = 5.00). Item 4, which was the only reverse-scored

item in the instrument, also had the largest standard deviation in the entire MLI-ISL. The summary statistics for Leading Down can be found in Table 23.

Table 23

Summary Statistics Table for Items from Leading Down

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. I establish trust with my followers by being true to my values and beliefs.	**4.73**	**0.51**	212	0.03	3	5
2. I stay impartial when evaluating information and maintain balanced information processing.	4.21	0.55	212	0.04	2	5
3. I place my ego aside to make the best decisions possible.	4.47	0.66	211	0.05	2	5
4. I employ a transactional leadership approach with my subordinates. *	**4.06**	**1.16**	208	0.08	1	5
5. It is important to engage disparate stakeholder groups by emphasizing communication, innovative thinking, and trust-building.	4.49	0.54	210	0.04	3	5
6. I provide opportunities for my school staff to speak candidly and openly when appropriate.	4.46	**0.51**	210	0.04	3	5
7. I am highly visible to my students through frequent interactions.	4.54	0.68	211	0.05	2	5

Note- '*' indicates the item is reversed-scored.

Leading Up Subdimension Findings. Summary statistics were calculated for the 5 items of the Leading Up subdimension. The observations for item 1, *I strive to understand the strengths and weaknesses of my boss or bosses to establish a healthy working relationship*, indicated the highest mean of the subdimension (M = 4.46, SD = 0.71, SE_M = 0.05, Min = 2.00, Max = 5.00). The observations for item 2, *I am courageous when it comes to telling my boss or bosses how it is*, had the lowest mean and smallest standard deviation within Leading Up (M = 4.10, SD = 0.68, SE_M = 0.05, Min = 2.00,

Max = 5.00). The observations for item 3, *I place my ego aside to make the best decisions possible*, exhibited the highest standard deviation of the subdimension (*M* = 4.34, *SD* = 0.85, SE_M = 0.06, Min = 1.00, Max = 5.00). The summary statistics for the items from Leading Up can be found in Table 24.

Table 24

Summary Statistics Table for Items from Leading Up

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. I strive to understand the strengths and weaknesses of my boss or bosses to establish a healthy working relationship.	**4.46**	0.71	211	0.05	2	5
2. I am courageous when it comes to telling my boss or bosses how it is.	**4.10**	**0.68**	211	0.05	2	5
3. I place my ego aside to make the best decisions possible.	4.34	**0.85**	209	0.06	1	5
4. My relationship with my boss/bosses can be described as a mutual independence between two or more fallible human beings.	4.21	0.84	207	0.06	1	5
5. I leverage followership to lead and influence those in formal positions above me.	4.11	0.82	208	0.06	1	5

Leading Across Subdimension Findings. Summary statistics were generated for the seven items in the subdimension of Leading Across. The observations for item 1, I actively seek to forge connections with those in charge of other divisions or departments, show the highest mean of the subdimension (*M* = 4.56, *SD* = 0.61, SE_M = 0.04, Min = 2.00, Max = 5.00). The observations for item 2, *I rely on personal and interpersonal skills to promote or impede change*, show the lowest mean of the subdimension (*M* = 4.22, *SD* = 0.64, SE_M = 0.04, Min = 2.00, Max = 5.00). Item 4, *I establish credibility and respect with informal followers by showing compassion and*

demonstrating altruism, the lowest standard deviation in Leading Across (M = 4.50, SD = 0.57, SE_M = 0.04, Min = 2.00, Max = 5.00). The observations for item 5, *Using influence to achieve tasks or goals is required during a crisis*, indicated the highest standard deviation in the subdimension (M = 4.27, SD = 0.79, SE_M = 0.05, Min = 1.00, Max = 5.00). The summary statistics for Leading Across can be found in Table 25.

Table 25

Summary Statistics Table for Items from Leading Across

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. I actively seek to forge connections with those in charge of other divisions or departments.	**4.56**	0.61	211	0.04	2	5
2. I rely on personal and interpersonal skills to promote or impede change.	**4.22**	0.64	209	0.04	2	5
3. I prefer influence over authority to achieve shared tasks or goals.	4.50	0.71	210	0.05	2	5
4. I establish credibility and respect with informal followers by showing compassion and demonstrating altruism.	4.50	**0.57**	208	0.04	2	5
5. Using influence to achieve tasks or goals is required during a crisis.	4.27	**0.79**	212	0.05	1	5
6. School leadership is a social influence relationship distributed across multiple actors within the school and around specific tasks under local contexts.	4.41	0.67	209	0.05	2	5
7. I partner with non-academic departments to garner support to continuously improve student learning.	4.48	0.70	212	0.05	1	5

Leading Beyond Subdimension Findings. Summary statistics were calculated for the subdimension of Leading Beyond. The observations for item 4, *I establish relational trust through competence, integrity, and caring with families to promote parental involvement in my school*, had the highest mean with the lowest

standard deviation in the subdimension (M = 4.49, SD = 0.57, SE_M = 0.04, Min = 2.00, Max = 5.00). Item 7, *I try to influence outside organizations through effective negotiation by developing credibility that spans boundaries*, had the highest standard deviation in the subdimension (M = 4.24, SD = 0.83, SE_M = 0.06, Min = 1.00, Max = 5.00). The observations for item 2, *I work with outside organizations and people to address common issues that include coordination and integration, duplication reduction, and maximizing scarce resources*, had a mean of 3.89 (SD = 0.82, SE_M = 0.06, Min = 2.00, Max = 5.00, Skewness = -0.75, Kurtosis = 0.37). This was the lowest mean of any item in the subdimension and in the entire MLI-ISL instrument. Summary statistics for Leading Beyond can be found in Table 26.

Table 26

Summary Statistics Table for Items from Leading Beyond

Item	*M*	*SD*	*n*	SE_M	Min	Max
1. I work in partnership with the parent group of my school.	4.47	0.75	208	0.05	1	5
2. I work with outside organizations and people to address common issues that include coordination and integration, duplication reduction, and maximizing scarce resources.	**3.89**	0.82	209	0.06	2	5
3. I form mutually respectful alliances with families that value relationship building, dialogue, and power-sharing as part of a collaborative process.	4.38	0.73	207	0.05	2	5
4. I establish relational trust through competence, integrity, and caring with families to promote parental involvement in my school.	**4.49**	**0.57**	209	0.04	2	5
5. Success is measured on collective rather than individual achievement.	4.47	0.68	212	0.05	2	5
6. When working with external stakeholders, it is important to integrate different objectives,	4.27	0.66	206	0.05	1	5

Item	*M*	*SD*	*n*	SE_M	Min	Max
assess and align motivations, and calibrate the risk and reward sharing.						
7. I try to influence outside organizations through effective negotiation by developing credibility that spans boundaries.	4.24	**0.83**	204	0.06	1	5

Connectivity and Demographics Findings. An analysis of variance (ANOVA) was conducted to determine whether there were significant differences in Connectivity by leadership role, years of experience, school size, degree, and geographic location. The ANOVA was examined based on an alpha value of .05. The results of the ANOVA were significant, $F(19, 185) = 1.89$, $p = .017$, indicating there were significant differences in Connectivity among the levels of leadership role, years of experience, school size, degree, and geographic location (see Table 27).

Table 27

Analysis of Variance Table for Connectivity by Leadership Role, Years of Experience, School Size, Degree, and Geographic Location

Term	*SS*	*df*	*F*	*p*	$\eta_p 2$
Leadership Role	334.13	3	1.18	.319	0.02
Years of Experience	644.91	4	1.71	.150	0.04
School Size	175.46	4	0.46	.762	0.01
Degree	255.01	3	0.90	.442	0.01
Geographic Location	1,406.18	5	2.98	.013	0.07

The main effect, leadership role was not significant, $F(3, 185) = 1.18$, $p = .319$, indicating there were no significant differences of Connectivity by leadership role levels. The main effect, years of experience was not significant, $F(4, 185) = 1.71$, $p = .150$,

indicating there were no significant differences of Connectivity by years of experience levels. The main effect, school size was not significant, $F(4, 185) = 0.46$, $p = .762$, indicating there were no significant differences of Connectivity by school size levels. The main effect, degree was not significant, $F(3, 185) = 0.90$, $p = .442$, indicating there were no significant differences of Connectivity by degree levels. The main effect, geographic location was significant, $F(5, 185) = 2.98$, $p = .013$, $\eta_p 2 = 0.07$, indicating there were significant differences in Connectivity by geographic location levels. The means and standard deviations are presented in Table 28.

Table 28

Mean, Standard Deviation, and Sample Size for Connectivity by Geographic Location

Combination	*M*	*SD*	*n*
Africa / Middle East	107.72	12.51	54
Europe	112.11	9.84	37
North America	114.03	5.51	34
South America	112.70	9.91	20
Asia	107.42	9.47	48
Oceania	115.92	3.73	12

A post-hoc *t*-test was calculated between each group combination to further examine the differences among the variables based on an alpha of .05. The Tukey HSD p-value adjustment was used to correct for the effect of multiple comparisons on the family-wise error rate. No other significant effects were found.

Reliability Analysis

Reliability testing was done to assess the consistency of responses among the group of questions in the MLI-ISL, its three dimensions and 11 subdimensions. This is

also referred to as internal consistency or inter-item reliability. Cronbach's alpha coefficient was used to measure reliability. The purpose of this test is to determine if a group of questions all measure the same construct, concept, or idea. This test is used when creating a composite score to ensure that all of the items that make up the composite score are consistent with each other. The Cronbach reliability test calculates the reliability coefficient alpha (α), which indicates the degree of consistency among the items. George and Mallery (2018) suggest the following guidelines for evaluating α values: greater than .9 is excellent, greater than .8 is good, greater than .7 is acceptable, greater than .6 is questionable, greater than .5 is poor, and less than .5 is unacceptable. The Cronbach reliability test assumes that the items being tested measure a single construct (i.e., the construct is unidimensional), and that observations are independent of each other.

MLI-ISL Reliability Findings

A Cronbach alpha coefficient was calculated for the MLI-ISL, The Person, The Situation, and Connectivity. The items for MLI-ISL had a Cronbach's alpha coefficient of .94, indicating excellent reliability. The following items were negatively correlated with the MLI-ISL overall composite score: Emotional Intelligence item 2: *I make decisions with honesty and integrity* and Systems Thinking item 2: *My school is a complex environment with a diverse set of stakeholders*. These items were automatically reverse coded to improve reliability. The items for The Person had a Cronbach's alpha coefficient of .86, indicating good reliability. Emotional intelligence item 2: *I make decisions with honesty and integrity* was negatively correlated with the overall composite score for The Person. This item was automatically reverse coded to improve

reliability. The items for The Situation produced a Cronbach's alpha coefficient of .85, indicating good reliability. The items for Connectivity had a Cronbach's alpha coefficient of .88, also indicating good reliability. Table 29 presents the results of the reliability analyses.

Table 29

Reliability Table for MLI-ISL, The Person, The Situation, and Connectivity

Scale	No. of Items	α	Lower Bound	Upper Bound
MLI-ISL	79	.94	.93	.95
The Person	35	.86	.84	.89
The Situation	18	.85	.83	.87
Connectivity	26	.88	.86	.90

Note. The lower and upper bounds of Cronbach's α were calculated using a 95.00% confidence interval.

The Person Subdimension Reliability Findings. A Cronbach alpha coefficient was calculated for each the four subdimensions of The Person. The items for Emotional Intelligence had a Cronbach's alpha coefficient of .73, indicating acceptable reliability. Emotional intelligence item 2: *I make decisions with honesty and integrity* was negatively correlated with the overall composite score for The Person. This item was automatically reverse coded to improve reliability. The items for Systems Thinking had a Cronbach's alpha coefficient of .68, indicating questionable reliability. The items for Transformative Learning had a Cronbach's alpha coefficient of .62, indicating questionable reliability. The items for Global Mindset had a Cronbach's alpha coefficient

of .62, indicating questionable reliability. Table 30 presents the results of the reliability analysis for the subdimensions of The Person.

Table 30

Reliability Table for Subdimensions of The Person

Scale	No. of Items	α	Lower Bound	Upper Bound
Emotional Intelligence	15	.73	.69	.78
Systems Thinking	8	.68	.63	.74
Transformative Learning	6	.62	.55	.68
Global Mindset	6	.62	.56	.69

Note. The lower and upper bounds of Cronbach's α were calculated using a 95.00% confidence interval.

The Situation Subdimension Reliability Findings. A Cronbach alpha coefficient was calculated for each the three subdimensions of The Situation. The items for VUCA had a Cronbach's alpha coefficient of .62, indicating questionable reliability. The items for Sensemaking had a Cronbach's alpha coefficient of .69, indicating questionable reliability. The items for Crisis Management had a Cronbach's alpha coefficient of .69, indicating questionable reliability. Table 31 presents the results of the reliability analysis for the subdimension of The Situation.

Table 31

Reliability Table for Subdimensions of The Situation

Scale	No. of Items	α	Lower Bound	Upper Bound
VUCA	4	.62	.56	.69
Sensemaking	6	.69	.63	.74
Crisis Management	8	.69	.64	.74

Note. The lower and upper bounds of Cronbach's α were calculated using a 95.00% confidence interval.

Connectivity Subdimension Findings. A Cronbach alpha coefficient was calculated for each the four subdimensions of *the Connectivity*. The items for Leading Down had a Cronbach's alpha coefficient of .56, indicating poor reliability. The items for Leading Across had a Cronbach's alpha coefficient of .68, indicating questionable reliability. The items for Leading Beyond had a Cronbach's alpha coefficient of .74, indicating acceptable reliability. Table 32 presents the results of the reliability analysis for Connectivity's subdimensions.

Table 32

Reliability Table for Subdimensions of Connectivity

Scale	No. of Items	α	Lower Bound	Upper Bound
Leading Down	7	.56	.50	.63
Leading Up	5	.69	.63	.75
Leading Across	7	.68	.62	.74
Leading Beyond	7	.74	.70	.79

Note. The lower and upper bounds of Cronbach's α were calculated using a 95.00% confidence interval.

Revisions

The MLI-ISL has excellent reliability, with its three supporting dimensions of The Person, The Situation, and Connectivity having good reliability. While the main dimensions are reliable, there is work to be done with the subscales. When looking at the reliability of the 11 subdimensions, only Emotional Intelligence and Leading Beyond scored in the acceptable range. Eight more subdimensions fall within the range of questionable reliability and Leading Down had poor reliability.

One method of improving reliability is to remove an item that negatively impact the Cronbach alpha of the subdimension. After running a reliability analysis in SPSS, 8 items were identified that, if excluded, would raise the reliability in some of the subdimensions. The excluded items are: Systems Thinking item 2, Transformative Learning item 2, Global Mindset items 2 and 5, Leading Down items 2 and 6, Leading Up item 2, and Leading Beyond item 5. For Emotional Intelligence, VUCA, Sensemaking, Crisis Management, and Leading Across, the removal of items from these subdimensions with questionable reliability would lower the reliability score further.

After removal of the 8 items and recalculating the Cronbach alpha coefficient, improvements in reliability were seen in the MLI-ISL, The Person, Systems Thinking, Transformative Learning, Global Mindset, Connectivity, Leading Down, Leading Up, and Leading Beyond. When item 2, My school is a complex environment with a diverse set of stakeholders, was pulled from Systems Thinking, the subdimension alpha coefficient increased from .68 to .71. After excluding item 2, *My future actions and decisions are informed by recently-gained knowledge and experience*, from *Transformative Learning*, the subdimension alpha coefficient increased from .62 to .73.

By excluding two items, from Global Mindset, the subdimension alpha coefficient increased from .62 to .68. For Leading Down, when two items were removed, the subdimension alpha coefficient increased from .56 to .60. When item 2, *I am courageous when it comes to telling my boss or bosses how it is*, was removed from Leading Up, the subdimension alpha coefficient increased from .69 to .70. Upon removing item 5, *Success is measured on collective rather than individual achievement*, from Leading Beyond, the subdimension alpha coefficient increased from .74 to .76.

Systems thinking and Leading Up improved from questionable to acceptable reliability. Leading down improved from poor to questionable reliability. Global mindset, Sensemaking, Crisis Management, and Leading Across are at the very top range of questionable, only one or two tenths away from acceptable reliability. Table 33 presents the findings from the process of removing items, recalculating alpha coefficients, and updating the reliability ratings for the scales.

Table 33

Initial and Revised Reliability of the MLI-ISL Scales

Scale	No. of Items	α	Reliability*
MLI-ISL	71	.95	Excellent
The Person	31	.87	Good
Emotional Intelligence	15	.73	Acceptable
Systems Thinking	7	.71	Acceptable
Transformative Learning	5	.63	Questionable
Global Mindset	4	.68	Questionable
The Situation	18	.85	Good

Scale	No. of Items	α	Reliability*
VUCA	4	.62	Questionable
Sensemaking	6	.69	Questionable
Crisis Management	8	.69	Questionable
Connectivity	22	.89	Good
Leading Down	5	.60	Questionable
Leading Up	4	.70	Acceptable
Leading Across	7	.68	Questionable
Leading Beyond	6	.76	Acceptable

Note. Adapted from "*IBM SPSS statistics 25 step by step: a simple guide and reference"* by D. George & P. Mallery, 2018, (pp. 249-260). Taylor & Francis. (https://doi.org/10.4324/9781351033909). Copyright 2018, Darren George and Paul Mallery.

The MLI-ISL and its three dimensions have excellent to good internal consistency reliability. Further analysis, modifications, and changes to items in the subdimensions with questionable reliability will be explored in chapter 5.

Summary

The findings presented above provide the end product from each of the three research phases. Phase one findings tender a theoretical blueprint and development of the initial MLI-ISL items based on an extensive literature review. Phase two findings present the content validation from subject experts and subsequent MLI-ISL instrument. Phase three offered a reliability analyses of the MLI-ISL, its three supporting dimensions, and 11 subdimensions, using the data from an abstract population of international school leaders. Further discussion of these findings and recommendations for improving internal consistency reliability are presented in

Chapter Five. Study conclusions with associated implications and recommendations are also addressed.

Chapter 5: Conclusions and Recommendations

The final chapter of this research will provide a summary of the issue, relevant literature, research methods, and the findings from each of the three phases of the research. The summaries will be followed by four conclusions derived from the research findings. The chapter will conclude with recommendations for future practice and scholarship and closing remarks.

Issue and Significance

Although the onset of COVID-19 arguably led to the most significant crisis in the history of modern education, crises continue to appear in most international schools today. International school leaders must be prepared to steer their schools through ongoing crises and changes, regardless of the factors creating the crises and the need for swift change. In order to achieve the best possible outcomes from dynamic situations, international school leaders must deploy skills and abilities delineated by the meta-leadership framework. They must be in tune with all the stakeholder sets involved to understand the situational context clearly and work towards a common purpose. (McNulty et al., 2021). International school leaders ultimately have a single and unifying reason to utilize meta-leadership theory and work in tandem with surrounding stakeholders, which is student success. Every outcome of a crisis, change, or other complex events should be grounded in a student-centered approach, which is the prescribed theory and practice for international school leaders (Academy of International School Heads, 2019). Through consistent interactions with those they lead and intentional focus on the students, international school leaders establish a climate of

connectivity and support needed to navigate crises and change and proven improvement in student achievement (Tharp, 2006).

Specific competencies are required to enable effective leadership while managing crises and implementing change initiatives. Yet, reliable instruments that measure school leadership competencies at the local, national, and international levels are non-existent. A need exists for a tool specifically designed to measure the competencies of international school leaders. The competencies outlined by the meta-leadership framework (Marcus et al., 2015) apply to international school leaders. There is a two-fold need in the fields of international school leadership and meta-leadership for competency assessments. This void presented an opportunity to develop a valid and reliable instrument measuring meta-leadership competencies for international school leaders faced with the challenges of leading within environments regularly facing crises and the need for rapid change. This research is significant in that it developed an instrument that measures the meta-leadership deftness of international school leaders.

Theoretical Foundation

The meta-leadership framework as developed by Marcus and colleagues (2015) serves as the theoretical foundation of this research. Meta-leadership organizes and integrates several strands of leadership analysis, experience, and scholarship to give leaders the concepts and tools to successfully resolve crises, drive change, and navigate other complex and dynamic challenges (McNulty et al., 2021). The meta-leadership framework identifies three dimensions, The Person of the Meta-Leader (The Person), The Situation, and Connectivity, each of which addresses distinct bodies of research and scholarship (Marcus et al., 2015). The Person represents the individual's leadership

capacity, The Situation constitutes leadership context, and Connectivity relates to organizational/ interpersonal capability.

The Person dimension draws from emotional intelligence studies (see Goleman, 1998), systems thinking (see Senge, 2006), transformative learning theory (see Mezirow, 1996), and global mindset, which is informed by global leadership studies (see Osland, 2018).

The Situation dimension is represented by the fields of research in crisis management and decision science. Several scholars anchor the general body of research (see Boin, 2004; Coombs, 2010; Fink, 1986; Mitroff et al., 2004; Wooten & James, 2008). The environment within any situation in an international school setting is framed as volatile, uncertain, complex, and ambiguous (VUCA) and draws from that body of literature (see Alkhaldi et al., 2017). The dimension of Connectivity is the most complex dimension of meta-leadership. The dimension of Connectivity and its four directions of leading are supported through several empirically supported leadership theories and methods. The subdimension Leading Down incorporates the seminal works of Burns' (1978) transformational leadership and George's (2004) authentic leadership. *Leading Down* subdimension is based on Kelley's (1988) work on followership. Pielstick's (2000) definition of informal leadership is akin to the subdimension of Leading Across. In the Leading Beyond subdimension, the meta-leadership framework points toward the concepts of boundary spanning (see J.D. Thompson, 1967), integrative negotiation (see Lewicki et al., 2016), and authentic partnership (Auerbach, 2010). When using the principles of meta-leadership, international school leaders must

integrate and adapt these leadership styles to influence stakeholders and build consensus through trust, communication, and authenticity.

Methods

This study utilized a three-phase quantitative design to create a valid and reliable instrument that measures the meta-leadership competencies of international school leaders. This study was guided by three research objectives:

1. To develop a self-report instrument (MLI-ISL) derived from the scholarly literature on meta-leadership competencies for international school leaders.
2. To validate the MLI-ISL with a panel of experts to ensure the content validity of the instrument.
3. To establish internal consistency reliability of the MLI-ISL using an independent sample of international school leaders.

During phase one, an initial pool of items and was created for the proposed instrument considering the existing body of literature. The creation of a theoretical blueprint and process of item generations were informed by Kalkbrenner's (2021) measure approach for to instrument development and score validation.

Phase two methods were focused on the validation process for the MLI-ISL. Six content experts from three distinct professional fields were recruited to validate the content of the instrument's items. Using Qualtrics online survey administration tool, the experts validated the items, suggested edits and additions, and confirmed the validity of the theoretical blueprint. Survey data was exported to Excel for content validation analysis and inter-rater reliability calculations.

Phase three of the research involved collecting data from an abstract population of international school leaders (N = 212) to establish reliability of the MLI-ISL. Participants were recruited through forum and social media postings, as well as targeted recruitment via email and direct messaging. Participants accessed the MLI-ISL through the Qualtrics online survey administration tool. Survey data was exported to Excel, cleaned, and then uploaded to SPSS and Intellectus Statistics software to conduct the reliability analysis. A multi-stage process to arrive at the strongest reliability coefficients for dimensions and subdimensions was conducted.

Summary of Findings

During phase one, an initial pool of items was identified for the proposed new index for meta leadership competencies (MLI-ISL) considering the existing body of literature. Phase one produced an initial instrument consisting of 102 items across three dimensions and eleven subdimensions. Utilizing Kalkbrenner's (2021) measure approach to instrument development and score validation, the dimensions and subdimensions were aligned within a theoretical blueprint of meta-leadership. In addition to the 102 items, the instrument developed in phase one also contained four demographic questions.

Phase two findings are derived from the content validation process for the MLI-ISL instrument that was developed by the researcher in phase one. After the six-person content expert panel reviewed the instrument, 79 items met the required level of content relevance and were retained, while 23 items did not meet the required level of content relevance and were eliminated from the instrument. With regards to the three main dimensions of meta-leadership, nine of 44 items were eliminated from The Person, eight

of 26 items were eliminated from The Situation, and Connectivity had six of its initial 32 items removed. At the suggestion of the panel, a fifth demographic question was added to probe participants on their level of education, ranging from high school to doctoral level.

Some experts commented on items being double-barreled, others suggested synonyms, rewording, or removal of words or phrases. Additionally, experts commented on readability and made suggestions to simplify the items that could be considered difficult to understand. In total, 19 items were edited and amended based on the feedback provided by the experts.

The resulting MLI-ISL instrument contains 79 items and five demographic questions: 35 items for The Person dimension; 18 items for The Situation dimension; and 26 items for Connectivity. The Person dimension includes four subdimensions: Emotional Intelligence containing 15 items; Systems Thinking containing eight items; with Transformative Learning and Global Mindset subdimensions each having six items. There are three subdimensions of The Situation: VUCA has four items, Sensemaking has six items, and Crisis Management has eight items. The third dimension of Connectivity includes four subdimensions: Leading Up has five items and each of the remaining subdimensions of Leading Down, Leading Across, and Leading Beyond contain seven items.

Phase three involved collecting data from an abstract population of international school leaders using the validated MLI-ISL in order to assess the reliability of the overall instrument as well as each of the dimensions and subdimensions. Invitations to participate resulted in 212 participants completing the survey.

Table 34

Scales and Items of the MLI-ISL

Scale Level	Name	# of Items
Instrument	**Meta-leadership Inventory for International School Leaders (MLI-ISL)**	79
Dimension	***The Person of The Meta-leader***	35
Subdimension	*Emotional Intelligence*	15
Subdimension	*Systems Thinking*	8
Subdimension	*Transformative Learning*	6
Subdimension	*Global Mindset*	6
Dimension	***The Situation***	18
Subdimension	*VUCA*	4
Subdimension	*Sensemaking*	6
Subdimension	*Crisis Management*	8
Dimension	***Connectivity***	26
Subdimension	*Leading Down*	7
Subdimension	*Leading Up*	5
Subdimension	*Leading Across*	7
Subdimension	*Leading Beyond*	7

Reliability analyses using Cronbach alphas were performed to assess the consistency of responses among the group of items for the 79 item MLI-ISL; each of its three main dimensions and corresponding 11 subdimensions. Where reliability would be improved by removing individual items, the alpha coefficients were re-run. This resulted in the MLI-ISL having a total of 71 items. The overall MLI-ISL had a Cronbach alpha coefficient of .95, indicating excellent reliability (George & Mallery, 2018). For The

Person dimension, the Cronbach alpha coefficient is .87, indicating good reliability (George & Mallery, 2018). The second dimension items for The Situation produced a Cronbach alpha coefficient of .85; again, indicating good reliability (George & Mallery, 2018). The third dimension of Connectivity had a Cronbach alpha coefficient of .88, the highest of the three main dimensions, and also with good reliability.

The subdimensions of each of the three main dimensions were determined with Cronbach's alpha coefficient. The Cronbach alpha coefficient of the four subdimensions of The Person were: Emotional Intelligence (α = .73); Systems Thinking (α = .71); Transformative Learning (α = .63); and Global Mindset (α = .68). The subdimensions of Emotional Intelligence and Systems Thinking demonstrated acceptable reliability while Transformative Learning and Global Mindset were just below the threshold for acceptable reliability. The reliability for The Situation's three subdimensions attained questionable reliability. The items for VUCA had a Cronbach's alpha coefficient of .62, however, the items for both Sensemaking (α = .69) and Crisis Management (α = .69) were just below George & Mallery's (2018) level for acceptable reliability. For each the four subdimensions of the Connectivity, Leading Down (α = .60) had the weakest reliability with Leading Up *(*α = .69) and Leading Across (α = .68) just below the threshold for acceptable reliability. The items for Leading Beyond did meet the acceptable level with a Cronbach's alpha coefficient of .74.

Of the 212 respondents, 205 completed the demographic questions. Head of school, superintendent, director, president (N = 75, 35.38%) was the most frequently observed leadership role. The largest number of participants worked in a school with 300-999 students (N = 81, 38.21%). The most frequently observed geographic locations

were Africa/Middle East (*N* = 54, 25.47%) and Asia (*N* = 48, 22.64%). The most frequently observed category of years of leadership experience was 5-9 years (*N* = 54, 25.47%). The majority of participants hold a graduate degree (*N* = 125, 58.96%).

Table 35

Revised Number of Items and Reliability of the MLI-ISL Scales

Scale	No. of Items	α	Reliability*
MLI-ISL	71	.95	Excellent
The Person	31	.87	Good
Emotional Intelligence	15	.73	Acceptable
Systems Thinking	7	.71	Acceptable
Transformative Learning	5	.63	Questionable
Global Mindset	4	.68	Questionable
The Situation	18	.85	Good
VUCA	4	.62	Questionable
Sensemaking	6	.69	Questionable
Crisis Management	8	.69	Questionable
Connectivity	22	.89	Good
Leading Down	5	.60	Questionable
Leading Up	4	.70	Acceptable
Leading Across	7	.68	Questionable
Leading Beyond	6	.76	Acceptable

Note. Adapted from "*IBM SPSS statistics 25 step by step: a simple guide and reference"* by D. George & P. Mallery, 2018, (pp. 249-260). Taylor & Francis. (https://doi.org/10.4324/9781351033909). Copyright 2018, Darren George and Paul Mallery.

The sample of international school leaders produced a mean Likert item rating of 4.42 on the overall MLI-ISL, indicating a moderate to strong level of agreement with

meta-leadership competencies. The dimension subscale with the highest mean Likert item rating was The Person with a 4.49 mean, followed by The Situation with a 4.37 mean level agreement, with the lowest mean level agreement rating for the Connectivity dimension subscale at 4.36. The sample produced an average overall score of 345.06 on the MLI-ISL with a *SD* = 25.48). Considering each of the dimensions; The Person resulted in an average of 156.98 (*SD* = 9.91); The Situation dimension yielded an average of 78.18 (*SD* = 7.97), and Connectivity showed an average of 109.90 (*SD* = 10.49).

The dimension of The Person has four corresponding subdimensional composite scores: Emotional Intelligence (*M* = 67.59, *SD* = 4.13), Systems Thinking (*M* = 36.01, *SD* = 2.82), Transformative Learning (*M* = 26.68, *SD*), and Global Mindset (*M* = 26.68, *SD* = 2.81). The statistical observations of the three subdimensions of The Situation dimension include VUCA (*M* = 17.04, *SD* = 2.41), Sensemaking (*M* = 26.12, *SD* = 2.91), and Crisis Management (*M* =35.12, *SD* = 3.51). Connectivity's four subdimensional observations were Leading Down (*M* = 20.94, *SD* = 3.04), Leading Up (*M* =28.67, *SD* = 2.07), Leading Across (*M* = 30.66, *SD* = 3.21), Leading Beyond (*M* = 29.62, *SD* = 4.30).

Analyses of variance (ANOVAs) were conducted for demographic variables and revealed significant differences in the subscale scores for all three dimensions of the MLI-ISL. The main effect of geographic location on The Person*, $F(5, 185) = 3.11$, $p = .010$, $\eta_p^2 = 0.08$,* was significant. The main effect of geographic location on The Situation*, $F(5, 185) = 4.69$, $p < .001$, $\eta_p^2 = 0.11$,* was also significant. The main effect, geographic location was significant*, $F(5, 185) = 2.98$, $p = .013$, $\eta_p^2 = 0.07$,* indicating there were significant differences in the Connectivity dimension by geographic location

levels. The four other demographic variables did not have a significant effect on the MLI-ISL or its three dimensions of The Person, The Situation, and Connectivity.

Study Conclusions

Research conclusions are supported by the findings from each of the three phases. After an extensive analysis of the research findings, four conclusions for this study were determined. Each conclusion has related discussions of implications for both practice and scholarship.

Conclusion #1: The newly designed and developed MLI-ISL is a valid and reliable instrument measuring meta-leadership competencies of international school leaders.

The research findings in phases two and three support the conclusion that the MLI-ISL is both a valid and reliable instrument that measures the meta-leadership competencies of international school leaders. During phase two, 79 items from the MLI-ISL were deemed to have a high level of content validity by the panel of six subject matter experts. Based on the benchmarks set by Polit and associates (2007), the findings from the content validity indices (CVI) qualified 79 items, 11 subdimensions, 3 dimensions, and the MLI-ISL instrument with a high level of content validity.

The findings from the inter-rater agreement also support the validity of the items that qualified for the MLI-ISL. Results of the calculated modified Kappa statistic for all 79 items exceeded the threshold of 0.74 for excellent inter-rater reliability (Cicchetti & Sparrow, 1981; Fleiss, 1981 as cited in Polit et al., 2007). The 79 items had a modified Kappa value between 0.81 and 1, supporting the conclusion that all items on the MLI-ISL have strong inter-rater reliability with respect to content validation.

MLI-ISL survey data from the phase three supports the conclusion that the instrument has internal reliability consistency. Results of the Cronbach's Alpha reliability analysis indicate that the MLI-ISL and its three dimensions of The Person of the Meta-Leader, The Situation, and Connectivity have a strong level of reliability. The levels ranged from good to excellent according to George and Mallery's (2018) widely-accepted guidelines.

Measuring meta-leadership competencies of international school leaders is useful in that these leaders are faced with the challenges of leading within environments regularly facing crises and experiencing rapid change. The MLI-ISL can provide valuable feedback in identifying areas needing improvement for international school leaders already tasked with crisis management and change initiatives. This instrument is also useful in that is helps international school leaders pinpoint areas of improvement in any of the three dimensions and 11 supporting subdimensions. Whether the opportunity for improvement is intrapersonal or interpersonal, the MLI-ISL benefits international school leaders by pinpointing their meta-leadership competencies in need of focus and attention.

Additionally, the MLI-ISL makes leaders aware that leadership is about Connectivity and influencing disparate, internal and external stakeholder groups. Littleford's (2021) study found that 70% of international school leaders are fired, and the average stay of a headship is only 3.5 years. The high turnover rate is directly related to gaps in Connectivity. International school leaders who lead their board of trustee or school owners, create authentic partnerships with parents, and lead their student and

teacher groups with transparency and accountability, are much more likely to retain their jobs.

Because of the reported high turnover rate of international school leaders, another potential use of the MLI-ISL is that it can be used to help identify the potential of the leadership candidates of today and tomorrow. International school leaders need a strong team to be successful, and should ensure their new recruits are able to connect and respond immediately upon hire. The MLI-ISL as a recruitment tool would assist hiring managers to find suitable leaders that possess the meta-leadership qualities needed for these critical and essential roles. Sometimes, the best choice is an internal candidate who may have untapped potential to lead. Administering the MLI-ISL to one's current staff roster would also be of service to international school leaders looking for quality internal candidates.

Implications for Scholarship. The conclusion and the findings of the study support the meta-leadership framework of the Marcus group (2015) and the surrounding literature on international school leadership. Because meta-leadership has received limited research attention, very few studies of meta-leadership in education exist (see S.D. Hayes et al., 2021; Srinivasan, 2012; Growe, 2011). This research and its findings provide the first valid and reliable instrument to measure meta-leadership competencies for any field. This research and the resulting instrument may be used as a springboard to further explore the meta-leadership mode in myriad applications. Additionally, there is an opportunity to distill and condense the MLI-ISL to make a truncated, more general instrument applicable to leadership of any professional field.

Conclusion #2: The three main dimensions of the instrument: The Person of the Meta-leader; The Situation constituting the leadership context; and Connectivity representing organizational and interpersonal capability; are each highly reliable, however, the 11 subdimensions of the MLI-ISL instrument are less reliable and require further refinement.

Based on the data from the MLI-ISL survey administered in phase three of the research, it can be concluded that the instrument and the three dimensions are highly reliable at measuring meta-leadership competencies of international school leaders. The findings from the data set indicate that the seven of the subdimensions hold significantly lower reliability internal consistency. Even after item removal, all subdimensions scored between the questionable and acceptable range of reliability. Items that were removed to increase reliability coefficients support the conclusion that further refinement is needed.

Some explanation is needed to understand the reasons behind the lower reliability scores. One possible cause for questionable subdimension reliability is that the sample size of 212 may not have been sufficient to offset the smaller number of items in some of the subdimensions. A larger sample through a more robust and creative recruitment method could possibly assist in determining if the subdimensions can be highly reliable.

A more-likely reason for low subdimension reliability is that the items do not hold together and need some fine-tuning. The wording and vocabulary used in these items could be improved and refined to ensure they are more reflective of their respective subdimensions. Additional refinement efforts should also include shortening

the length of the items' wording. Subdimensions with lower reliability also contained the wordiest items. It can be concluded that through the process of item refinement by rewording and simplification, the internal consistency reliability of the subdimensions will likely improve.

Implications for Scholarship. The acceptable level of reliability supports the subdimensions of Emotional Intelligence, Systems Thinking, Leading Up, and Leading Beyond, as well as the literature that grounds each subdimension. Goleman's (1998) work on emotional intelligence and Senge's (2006) contributions on systems thinking adequately support the MLI-ISL subdimensions named after them. Kelley's (1988) work on followership holds true and relevant to the Leading Up subdimension. Leading Beyond, which had the top subdimension reliably coefficient, is based on boundary spanning, authentic partnership, and integrative negotiation (See J.D. Thompson, 1967; Auerbach, 2010; Lewicki et al., 2016). The reliability findings from phase three further signal agreement and confirmation of the literature of these four subdimensions, which yielded Cronbach alpha scores ranging from 0.70 to 0.76.

The findings question the work of the lowest scoring subdimensions, which were Transformative Learning, VUCA, and Leading Down. These three subdimensions were at the low end of the questionable reliability range. The subdimension Transformative Learning, is based on Mezirow's (1996) transformative learning theory. The VUCA subdimension is named after and grounded by the work of Alkhaldi et al. (2017). Leading Down was the least reliable subdimension. This subdimension is informed by the contributions of Burns (1978) and Bass (1990) in the concepts of transformational and transactional leadership. The questionable reliability of these subdimensions

ranged from 0.60 to 0.63, which suggests that the items from these subdimensions do not adequately measure the constructs or concepts derived from the literature.

One assumption of the researcher was that all participants would be fluent in English. While DeVellis and Thorpe (2021) recommend survey items are written simply and at a sixth-grade reading level, they do not account for native and non-native English speakers. It would be helpful to better understand the demographic composition of international school leaders by determining the percentage of native and non-native speakers. It is probable that non-native English-speaking participants misunderstood or misinterpreted some terminology used in the MLI-ISL, thus impacting reliability scores of subdimensions. For example, the item, *I employ a transactional leadership approach with my subordinates*, from Leading Down had a mean Likert agreement rating of 4.06 and standard deviation of 1.16. This was the only reverse-scored item on the MLI-ISL, and it is unclear if the term *transactional* is too specialized to understand by all respondents. Moreover, the score deviation of this item directly contributed to Leading Down have the lowest reliability of any subdimension.

Kalkbrenner (2021) suggests that instruments should provide definitions of terms that vague, abstract, or specialized in nature. Since the MLI-ISL was distributed internationally, the findings indicate that some survey items are likely to be problematic with target population of international school leaders with varying abilities of English language fluency. Reviewing the word choice in the items would ensure an increased likelihood that the meaning of each item is fully understood and accessible by all participants. Identifying specialized and unfamiliar words in the items with the purpose

of providing their definitions on the MLI-ISL may prove to increase participant understanding and raise the level of reliability scores in the subdimensions.

Conclusion #3: The MLI-ISL measured behaviors and actions of international school leaders are influenced by the cultural context of the geographic location of the leader's school.

The findings from phase three indicate that the demographic of geographical region had a significant effect on the sample of dimensional scores for The Person, The Situation, and Connectivity. Participants working in the Africa/Middle East region and Asia scored the lowest on each three dimensions. The mean dimensional scores for participants working in Europe, Oceania, South America, and North America were nearly identical and markedly higher than Asia and Africa/Middle East. The mean dimensional scores from Asia and Africa/Middle East were 5-9% lower than all other regions. For The Person, Africa/Middle East scored 5% lower on average than leaders in the region of Oceania. Leaders working in Asia scored 9.7% lower on average in their agreement with competencies of The Situation when compared to leaders working in Oceania. Leaders in North American international schools scored 5.8% higher on average in the dimensions of Connectivity when compared to leaders in Asia.

It can be concluded that cultural context influences how international school leaders act and behave due to the expectations of the country or region. This conclusion is supported by Adler's (1997) global leadership theory, which examines the interaction of people and ideas among cultures. The cross-cultural exchange by international school leaders is evidenced by their adoption and integration of the leadership behaviors accepted by the society in which they work.

In practice, these findings suggest that international school leaders relocating to a different geographic region would benefit from understanding the cultural context of leadership practice and expectations of that particular region. Onboarding of expatriate leaders sometimes consists of cultural competency training. This conclusion would support this type of training or orientation as school leaders moving from vastly different societies would benefit in understanding the behaviors and actions that will be expected of them. Thus, regardless of linguistic or national background, leaders of international school act and behave in line with the cultural expectations of leaders from those geographic regions.

The MLI-ISL helps to assess the competency of The Person, The Situation, and Connectivity of individuals with the range of the sample scores used to benchmark expected scores. Practitioners and recruiters may use the instrument to see if leadership candidates are an ideal fit with the societal culture surrounding the school. Through comparison of mean scores, and pinpointing gaps, the MLI-ISL will assist in acclimating international school leaders to their new roles and accounting for differences in societal cultures.

Implications for Scholarship. When viewed through the lens of the GLOBE study, the cultural dimensions of collectivism, power distance, and uncertainty avoidance provide support behind the significant effect of geographic region on mean scores of The Person, The Situation, and Connectivity (see House et al., 1999; Javidan & Dastmalchian, 2009). In Asia and Africa/Middle East, high collectivism and high power distance are societal norms. This means that these societies have collectivistic cultures where people act in the interests of their own in-group, which influences hiring and

promotion decisions. Relationships are based on personal status rather than the truth or merit of their work, and loyalty in these cultures overrides most other societal rules and regulations. Collectivistic behavior through societal norms is likely a key to influencing leaders in the workplace. This influence is evidenced by the gap in scores across geographic regions for The Person and Connectivity dimensions which focus on interpersonal relationships for all stakeholder groups.

Another factor contributing to the significant effect of geographic regions on dimensional scores of the MLI-ISL is power distance. Most societies in Asia and Africa/Middle East exhibit a high degree of power distance. The attitude of these societies towards power inequalities is expected and they accept that power is distributed unequally. Leaders and follower endorse a hierarchical order in which everybody has a place and which requires no further justification. This phenomenon can be influencing MLI-ISL scores of leaders from those regions, as they place less value on the competencies outlined in The Person and Connectivity.

It can also be concluded that competencies assessed on The Situation are influenced by the high degree of uncertainty avoidance adopted by the different geographical regions. In regions where international school leaders scored lower in The Situation, institutions try to avoid ambiguous or unknown situations because they feel threatened. This likely impacts the behavior of leaders when it comes to ambiguous situations (VUCA) and utilizing creative thinking when applying the core tenets of Crisis Management.

This conclusion confirms and supports findings of the Project GLOBE study conducted by House et al. (1999). Dorfman (2012) states that leaders tend to behave in a

manner expected in their country and are perceived effective leaders if their behavior fits their country's expectation. Findings from the MLI-ISL support the literature in confirming lower scores in meta-leadership competencies with emphasis on lower emotional intelligence, situational and contextual awareness, and relationships with internal and external stakeholders. The influence on these scores are likely attributed to the culture of the region and expectations on leadership behavior. This aligns with Project GLOBE's assertion that global leaders require a global mindset, tolerance of ambiguity, and cultural adaptability and flexibility to be effective in their roles (House et al., 1999).

Conclusion #4: International school leaders exhibit a high level of meta-leadership competency overall with the strongest attributes evidenced through their intrapersonal and interpersonal skills enabling them to strategically lead others through dynamic and complex events within their organizations.

Based on the quantitative data collected in the third phase of the research, the fourth and final conclusion surmises that international school leaders have a high agreement with meta-leadership competencies. Their high agreement is evidenced by the mean Likert item score for MLI-ISL instrument of 4.42 on a 5-point scale. The dimensional Likert item mean for The Person had the highest level of any dimension at 4.49. This is indicative of international school leaders possessing a strong level of intrapersonal skills relating to self-awareness, self-regulation, motivation, continuous learning, understanding of mental models, and curiosity. These are the competencies

outlined by the Marcus group (2015) as intrapersonal skills that meta-leaders possess to a high degree.

Items from the dimension of The Situation had the second highest level of agreement by the sample population with 4.37. The most highly-rated items from The Situation were statements about communication. This data indicates that international school leaders value open and transparent communication with stakeholders, especially during times of crisis. Work in the field of crisis management concurs with the conclusion that communication and information flow are critical and essential tasks for competent international school leader (See Coombs, 2010; Fernandez & Shaw, 2020, Mitroff, 2004). Communication across dynamic situations and events should be considered another example of a strong interpersonal skill attributed to international school leaders.

The dimension of Connectivity had a mean Likert item score of 4.36. While this was the lowest of the three dimensions, it still a very high level of agreement overall. The four subdimensions of Connectivity correspond to the interpersonal skills required for influencing and communicating with internal and external stakeholders. International school leaders demonstrate these competencies by forging partnerships with parents, being visible and accessible to students and faculty, establishing productive working relationships with the school board or owner, and boundary spanning with outside individuals and organizations.

Implications for Scholarship. The strong agreement of competencies marked by intrapersonal and interpersonal skills by international school leaders confirms the theoretical blueprint of this research and meta-leadership constructs set forth by

Marcus et al. (2015). The MLI-ISL was developed as a self-report instrument to measure the competencies of meta-leadership within the dynamic and complex environments of international school leaders. The highest level of agreement in the subdimension Emotional Intelligence further validates the personal and social skills set forth by Goleman's (1998) emotional competence framework. It is clear that international school leaders are highly competent intrapersonally, as evidenced by high item agreement in self-awareness, self-regulation and motivation.

When examining the interpersonal set of social skills described by Goleman (1998), the competency of empathy stands out. The findings of the study validate Winburn group's (2020) study and Gomez-Leal and colleagues' (2021) systematic review on empathy in school leaders. This research supports their conclusions that empathy positively affects student and community advocacy, and is linked to teacher satisfaction and performance. The findings from phase three indicate that of all the meta-leadership competencies, empathy is one leadership behavior that is most highly valued by international school leaders.

Another concept worthy of examination is how trust plays a role in the ways international school leaders connect with others. Marcus and colleagues (2015) state that developing and establishing trusting relationships is required for leaders to connect with multiple stakeholder groups and ensure organizational cohesion. Intrapersonal attributes such as self-awareness and being true to one's values and beliefs are key reasons why leaders attract followers. Interpersonal personal interactions allow for a leader to exhibit their authenticity, thus creating trust and influence across the various constituents they interact with. Therefore, it can be concluded that international school

leaders must possess the meta-leadership competencies highlighted in the dimension of Connectivity in order to build trust within their school communities.

The implication exists that building trust and connectivity rely primarily on interpersonal skills. When building rapport and seeking support from stakeholders, international school leaders must be strategic in their approaches to gain influence. Strategically employing interpersonal skills maintains Lewicki and colleagues' (2016) contention that effective international school leaders must engage in cooperative, collaborative, win-win, mutual-gains, or interest-based problem solving. Leaders must be deliberate in their choice of interpersonal techniques, which should be deployed depending on the relational dynamic and the desired goals or outcomes. This conclusion supports the tenets of negotiation theory, as international school leaders must engage in negotiation in every direction of leading on a continuous basis with the same sets of stakeholders.

Limitations and Study Validity

During phase one of research the literature review was limited to the theoretical and conceptual foundations of meta-leadership and international school leadership. The theoretical blueprint designed to generate the scales, subscale, and items is limited to the relevant literature connected to the meta-leadership framework. Phase two of the research was limited to six content experts to validate the content of the MLI-ISL. The panel consisted of two meta-leadership experts, two survey design experts, and two experts in the field of international school leadership. This composition of expertise, while varied, also meant that four of the reviewers did not have explicit knowledge of

meta-leadership or international school leadership. This lack of explicit knowledge may have contributed to the questionable reliability of several of the subdimensions.

The study in phase three of the research was limited to a sample of 212 participants, of whom were or currently self-identified as international school leaders. The recruitment process through social media, professional networking, and snowballing yielded a sufficient number of participants. However, the sample may not be entirely representative of the overall community of international school leaders. Linguistic differences were not screened effectively, nor were the geographic regions accurately reflective of the population of international school leaders.

Another limitation was the length of the survey itself. With 79 items and 5 demographic questions, approximately 200 empty responses needed to be removed from the data set and another 36 responses needed to be removed because participants completed a limited number of questions. Survey fatigue most likely played a role in limiting the number of completed responses and was evidenced by the most frequently skipped items placed in the later portions of the survey. Considering the incomplete responses by some participant as well as the need for reviewing several subdimensions, the MLI-ISL's structure and number of items needs to be revisited.

Finally, the captured demographic variables created a limitation of the study. The inability to distinguish between native and non-native English speakers as well as not knowing the participants' home countries suggests uncertainty in survey findings. This limitation was evidenced by questionable reliability in several of the subdimensions.

Internal study validity was established through procedures that ensured the research is trustworthy. Phase one incorporated psychometric theory and a theoretical

blueprint of dimensions and subdimensions to generate valid and reliable items. This phase was informed by Creswell and Creswell's (2018) framework establishing the research design, methodology, and philosophical worldview of the researcher. In phase two, content experts validated the MLI-ISL items through a review process. Expert agreement and inter-rater reliability were calculated to support content validity of the items. For the third phase, a pilot survey was conducted prior to the launch of the main study to ensure the usability of the online survey distribution and response collection. Also, an internal consistency reliability analysis supports the validity and reliability of the data set from the main study in phase three.

Recommendations for Future Research

This research developed a valid and reliable instrument that measures the meta-leadership competencies of international school leaders. Based on the findings and conclusions stated above, five recommendations are made for further research pertaining to the development of the MLI-ISL. These recommendations focus on research-informed improvement to the instrument.

Recommendation #1: Refine the Instrument Length

One recommendation for the MLI-ISL is to reduce the number of items. Asking busy international school leaders to thoughtfully respond to 71 items is a challenging task, given the complex and demanding nature of their jobs. Additional research and data analysis are required to make a short-form version of the MLI-ISL for future studies. According to Tavakol and Dennick (2011), instruments and scales with alpha coefficient values above 0.90 indicate redundant items that can be eliminated. By identifying redundant and less reliable items, the instrument can be truncated. The

researcher recommends a distilled MLI-ISL version should contain approximately 35-40 items, excluding demographic questions.

Recommendation #2: Revise the Demographic Items

The demographic variables on the MLI-ISL produced significant data findings and conclusions supporting previous studies on the cultural influence on leadership behavior. While the demographic items are completely separate from the MLI-ISL tool, they provide value and context. International school leaders are a diverse group yet possess certain homogenous qualifications. The second conclusion stated that the demographics do not distinguish between native and non-native English speakers. The study also did not ask participants if they were expatriates or working in their home country. More information is needed to better understand this group of leaders.

The researcher recommends revising the demographic questions to exclude items whose analysis of variance had no significant effect on the meta-leadership dimensions. These items should be replaced with more culturally-focused criteria. First, identifying the percentage of native and non-native English speakers would assist in evaluating the need to refine and simplify the wording of future instruments. Second, the study limitation of not knowing the participants' home countries and their work context should be addressed. It would be valuable to know the composition of international school leaders working as local, within nation, within region, or expatriate employees. Understanding the cultural ambiguities and complexities faced by international school leaders would allow for future research to discern the experiences and insights of this diverse group based on their employment situation. Moreover, the value of measuring cultural background, work context, and linguistic differences will be important for

future studies and specific research questions, however, these items are separate from the overall tool.

Recommendation #3: Improve the Reliability of the Subdimensions

In the conclusions section, it was noted that seven of the 11 subdimensions of the MLI-ISL instrument are less reliable and require further refinement. A recommendation for future research is to investigate why these subdimensions were less reliable, and identify methods and practices to improve reliability scores.

Reliability scores may strengthen by calculating Theta and Omega coefficients in order to pinpoint items or correlations that make the subdimensions less reliable (see Ercan et al., 2007). It is also possible that the reliability of the subdimensions would demonstrate stronger reliability within the existing dataset, when Cronbach alphas are run by geographic region subgroups. Any future study should carefully examine and analyze the theoretical blueprint of the meta-leadership dimensions and subdimensions to render strong reliability across all scales and subscales of the MLI-ISL.

Recommendation #4: Expand the Instrument's Target Population

This research and the valid and reliable MLI-ISL is limited to the field of international school leadership. A more general Meta-Leadership Inventory (MLI) would benefit leaders of all industries, agencies, and environments. The meta-leadership framework is not confined to international school leadership, and this instrument could be of value to leaders working in volatile, uncertain, complex, and ambiguous environments. By expanding the inclusion criteria for the instrument, the MLI could be distributed to a larger target population. Future research is needed to

reconstruct the MLI-ISL into a more far-reaching self-assessment instrument for leaders in general.

Recommendation #5: Rethink Item Weighting for Overall Scoring

As currently constructed, the MLI-ISL yields a summated score derived from a participant's response to the corresponding items. This method of composite scoring does not account for missed items. Currently no differential weighting of items exists. There is a disparity across the dimensions with regards to the number of items, thus the scores from The Person items (N = 31) give more weight to the MLI-ISL when compared to The Situation (N = 18) and Connectivity (N = 22). The researcher recommends including considerations about weighting the items based on the dimension for interpretation of overall score.

One approach to better balance the weight of items across the three dimensions, and account for missing item response, on the MLI-ISL overall score is to calculate a mean-item summated score for each dimension, add those summated scores, and divide by three. According to Warmbrod (2014) a mean-item summated score is the summated scores divided by the number of items completed from the scale or subscale which produces a score falling within the range of response values. To give each dimension of the MLI-ISL equal weighting would allow for a more proportionate measurement of meta-leadership competencies of international school leaders. Additionally, adopting the mean-item summated score method would also be helpful in rendering easy, simplified interpretation of scores at the instrument, dimension, and sub-dimension levels.

Closing Comments

As international school leaders continue to serve their communities and stakeholders, they must be prepared to steer their schools through ongoing crises. The COVID-19 crisis and the ensuing pivot to online learning has been a lesson with a steep learning curve for these leaders. Given the volatile, uncertain, complex, and ambiguous nature of any school environment, it is simply a matter of time before a crisis of any magnitude occurs. International school leaders must establish and maintain connectivity with stakeholders through self-awareness, authenticity, and interpersonal skills before the next dynamic event unexpectedly appears. Exercising meta-leadership practices and competencies before, during, and after a crisis is best way for international school leaders to navigate their challenging roles.

This research attained its objective of creating a valid and reliable instrument that measures the meta-leadership competencies of international school leaders. The outcomes of this research provide readers with recommendations to refine, improve, revise, and expand the newly-developed MLI-ISL. The results from this research gives international school leaders a psychometrically-sound and theoretically-grounded self-assessment that measures meta-leadership competencies.

As an international school leader who navigated through the uncertainty and rapid change in education due to COVID-19, it is validating to know that meta-leadership competencies apply to my complex and challenging job. This research has helped me to better conceptualize and contextualize international school leadership. The strategic road map provided by this research now informs my personal leadership practice and enables me to develop the leaders around me. Understanding the dimensions and

subdimensions of meta-leadership, and knowing when to apply them, is a skill that I shall carry with me in professional, volunteer, and personal endeavors.

As a researcher, it is gratifying to attain the research objective of creating a valid and reliable instrument that measure the meta-leadership competencies of international school leaders. Being able to contribute the MLI-ISL to the overall body of scholarship has made the last two years of research a worthwhile pursuit. I am optimistic to continue this research through collaborations with peers and colleagues on the recommendations made for future research.

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APPENDIX A: Initial List of MLI-ISL Survey Item**s**

Each of the survey items will have a 5-point Likert scale

The Person of the Meta-leader

Emotional Intelligence:

1. My emotions are in check when faced with disruptive change,
2. I make decisions with honesty and integrity.
3. I am aware of my strengths and limitations.
4. During a crisis or emergency, I let my emotions guide my actions.
5. Obstacles and setbacks also provide opportunities.
6. I make a concerted attempt to be aware of others' feelings, needs, and concerns.
7. I motivate others by establishing an enjoyable and synergistic working environment.
8. I take responsibility for my personal performance.
9. My role as a leader is to inspire and motivate others.
10. I strive for continuous improvement in myself and others.
11. I work with others towards shared goals.
12. I change my leadership style depending on whom I am working with.
13. Promoting relationships and communication with others helps me achieve the goals and programs of my institution.
14. Empathy is required to manage relationships with stakeholders and advocate on their behalf.
15. I frequently and consistently employ face to face interactions to build trust and relational cohesion across my institution.

Systems Thinking:

16. The decisions I make are based on many interdependent factors.
17. My school is a complex environment with a diverse set of stakeholders.
18. My decision-making relies on analyzing the possible consequences of various solutions to a problem.
19. Seeking and analyzing relevant information is how I choose the best solution to a problem.
20. I assume situations are dynamic and interdependent on many systems.
21. I apply an adaptive and flexible approach when managing the complexities within my school.
22. Tiny changes made in my school can lead to significant problems elsewhere.
23. My job requires me to identify the needs of the diverse sets of stakeholders to address gaps in institutional structures.
24. I pay close attention to interrelations, system forces, sources of resistance, emerging perspectives, influences, and changes.
25. Mental models provide an opportunity to freely experiment within a system due to a broad thinking area and developed openness of mind.

Transformative Learning:

26. I continuously revise my experience and knowledge for future actions and decisions.
27. My future actions and decisions are informed by recently-gained knowledge and experience.
28. Self-insight allows me to build a bigger picture in my decision-making.

29. During a crisis, my perspective transforms over time.
30. A reality-belief gap exists for all school leaders.
31. I actively search for supplemental information to inform my decisions.
32. I value a "both/and" mindset over "either/or" thinking.
33. A leader should first reflect and then act with agility.
34. Leading requires the aptitude and cognitive ability to learn in real-time while applying new data and knowledge in real-time.
35. I believe the alignment of being, knowing, and doing at the self, group, and organizational levels expands creativity, deepens innovation, and enhances self and collective transformation.
36. I build upon my fundamental leadership assumptions while expanding my view of myself and others.

Global Mindset:

37. I am fascinated and curious about the interaction of people and ideas among cultures.
38. My role requires me to cross cultures and change contexts by recognizing when it is beneficial to create a consistent global standard by understanding local and cultural differences.
39. I am interested in the knowledge of the world, its nations, cultures, institutions, and people.
40. I find myself switching mindsets between global integration and local responsiveness.
41. I face simultaneous demands of recognizing both global and local elements in my

role as an international school leader.

42. I am open to promoting the diversity of students and staff at my school.
43. Understanding cross-cultural exchange is helpful in communicating and influencing a culturally diverse set of stakeholders.
44. I assume that any situation is dynamic and interdependent on systems.

The Situation

VUCA:

45. I must anticipate and react in line with the nature and speed of changes.
46. I am undeterred by constant surprises and lack of predictability.
47. Being decisive and transparent is essential during times of uncertainty.
48. Navigating through complexity and confusion requires an open systems-thinking approach.
49. My school has experienced a shift in the type of applicants and enrollment attrition.
50. Educating students in the digital world has been challenging at my school.
51. My school is experiencing ambiguity in staffing due to various factors.

Sensemaking:

52. During a crisis, change, and challenge, my primary goal is to accurately convey the reality of the situation to all concerned parties.
53. When gathering information, I carefully filter the data I receive from various sources.
54. During a crisis, change, and challenge, I trust others to do their jobs of day-to-day management while I plan the subsequent actions.

55. I use past information to make future decisions.
56. I consider probable future impacts of specific actions and nonactions as they construct meaning to address a crisis.
57. It is more effective to process unexpected events independently than in groups.
58. Past events and probable future impacts guide my decision-making.
59. Nonactions are just as important as specific actions.
60. Crisis response is equal parts critical thinking and emotional thinking.
61. It is equally important to understand the size of a disruption as well as the threat to one's individual or organizational identity.
62. Stress and deep uncertainty caused by crises are underlying factors that impede decision-making and communication.

Crisis Management:

63. Creative thinking is a requirement for addressing crises.
64. Through learning and reflection, I reframe crises into opportunities.
65. Open communication establishes a culture that builds trust, collaboration, and shared leadership.
66. Leaders can influence and motivate through consistent, authentic, and transparent communication with all relevant stakeholders.
67. Crises are components of more significant processes rather than unique events.
68. Every school crisis has a life of its own and is eventually resolved.
69. Leaders should prepare for and learn from crises.
70. Crisis awareness is more important than a set of response plans.

Connectivity

Leading Down:

71. I establish trust with my followers by being true to my values and beliefs.
72. I stay impartial when evaluating information and maintain balanced information processing.
73. I place my ego aside to make the best decisions possible.
74. I use my school's mission and vision to empower students and staff members.
75. I use a transactional leadership approach with my subordinates.
76. It is important to engage disparate stakeholder groups by emphasizing communication, innovative thinking, and trust-building.
77. I provide opportunities for my school staff to speak candidly and openly when appropriate.
78. I am highly visible to my students through frequent interactions.

Leading Up:

79. Strong leaders are also excellent subordinates.
80. My boss or bosses would describe me as dependable, honest, reliable, and loyal.
81. I strive to understand the strengths and weaknesses of my boss or bosses to establish a healthy working relationship.
82. I am courageous when it comes to telling my boss or bosses how it is.
83. I am frequently required to play the roles of follower and leader.
84. As a follower, I assume responsibility, serve my institution, challenge the leader, participate in change processes, and oppose leaders when necessary.
85. The relationship with my boss/bosses can be described as a mutual

independence between two or more fallible human beings.

86. I leverage followership to lead and influence those in formal positions above me.

Leading Across:

87. I actively seek to forge connections with those in charge of other divisions or departments.
88. I take control when collaborating with other departments or divisions that I am not formally in charge of.
89. I rely on personal and interpersonal skills to promote or impede change.
90. I prefer influence over authority to achieve shared tasks or goals.
91. I establish credibility and respect with informal followers by showing compassion and demonstrating altruism.
92. Using influence to achieve tasks or goals is required during a crisis.
93. School leadership is a social influence relationship distributed across multiple actors within the school and around specific tasks under local contexts.
94. I partner with non-academic departments to garner support to continuously improve student learning.

Leading Beyond:

95. I work in partnership with the parent group of my school.
96. I work with outside organizations and people to address common issues, promote better coordination and integration, reduce duplication, and make the best use of scarce resources.
97. Working with outside organizations requires consistent, open, and transparent communications through informal channels.

98. I build mutually respectful alliances with families that value relationship building, dialogue, and power-sharing as part of a collaborative process.
99. I establish relational trust through competence, integrity, and caring with families to promote parental involvement in my school.
100. Success is measured on collective rather than individual achievement.
101. When working with outside organizations and external stakeholders, it is important to integrate different objectives, assess and align motivations, and calibrate the risk and reward sharing.
102. I influence outside organizations through effective negotiation and the development of personal and organizational credibility that spans boundaries.

Demographic Items

These questions will have categorical responses and allow only a single response per item.

My current or most recent leadership role is:

A) Head of school, superintendent, director, president
B) Principal, division head, assistant head of school
C) Vice principal, assistant principal, dean
D) Other

What is the enrollment of your institution?

A) Less than 100 students
B) 101-299 students
C) 300-999 students
D) 1000-1999 students
E) More than 2000 students

Which geographical region do you work in?

A) Asia
B) Africa / Middle East
C) Europe
D) North America
E) Oceania
F) South America

How many years' experience do you have in leadership roles in international schools?

A) Less than 5 years
B) 5-9 years
C) 10-14 years
D) 15-19 years
E) Over 20 years

APPENDIX B: Instructions for Content Experts

Subject: Thank you for being an expert reviewer!

Hello (NAME),

Thank you for your participation as a content expert reviewer for an instrument designed to measure the Meta-leadership competencies of international school leaders. Your feedback is valued and time is appreciated!

The survey link can be found here:
https://pepperdine.qualtrics.com/jfe/form/SV_b7L0t4RhF6jNzF4

The review should take about 1 hour to complete and the directions are on the survey. Please contact me if you have any questions or issues.

With sincere gratitude,

Matthew

APPENDIX C: IRB Approval

Pepperdine University
24255 Pacific Coast Highway
Malibu, CA 90263
TEL: 310-506-4000

NOTICE OF APPROVAL FOR HUMAN RESEARCH

Date: September 30, 2022

Protocol Investigator Name: Matthew Wilkens

Protocol #: 22-07-1890

Project Title: THE META-LEADERSHIP INVENTORY: DEVELOPING A VALID AND RELIABLE INSTRUMENT FOR INTERNATIONAL SCHOOL LEADERS

School: Graduate School of Education and Psychology

Dear Matthew Wilkens:

Thank you for submitting your application for exempt review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations 45 CFR 46.101 that govern the protections of human subjects.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Since your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at community.pepperdine.edu/irb.

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chair

cc: Mrs. Katy Carr, Assistant Provost for Research

APPENDIX D: Expert Content Relevance Rankings, I-CVI scores, S-CVI scores, and Kappa Statistics for Items, Subdimensions, and Dimensions

Dimension	Sub-Dimension	Item	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5	Reviewer 6	# of 3s and 4s	Item I-CVI	Adjusted I-CVI with 5 experts (missed response)	Probabiltiy of Chance Agreement (Pc)	Modified Kappa (K)
The Person of the Meta-Leader (S-CVI = 0.90)	*Emotional Intelligence (S-CVI = 0.97)*	EQ1	3	4	4	4	3	3	6	1.00		0.02	1.00
		EQ2	4	4	3	4	3	4	6	1.00		0.02	1.00
		EQ3	4	4	4	4	3	4	6	1.00		0.02	1.00
		EQ4	3	4	4	1	3	4	5	0.83		0.09	0.82
		EQ 5	3	4	4	3	1	4	5	0.83		0.09	0.82
		EQ 6	3	4	4	4	3	4	6	1.00		0.02	1.00
		EQ 7	3	4	3	4	3	3	6	1.00		0.02	1.00
		EQ 8	4	4	3	4	3	4	6	1.00		0.02	1.00
		EQ 9	3	4	3	4	1	3	5	0.83		0.09	0.82
		EQ 10	4	4	3	4	3	4	6	1.00		0.02	1.00
		EQ 11	4	4	3	4	3	4	6	1.00		0.02	1.00
		EQ 12	3	4	4	3	3	4	6	1.00		0.02	1.00
		EQ 13	4	4	4	4	3	4	6	1.00		0.02	1.00
		EQ 14	4	4	4	4	3	3	6	1.00		0.02	1.00
		EQ 15	4	4	4	4	3	3	6	1.00		0.02	1.00
	Systems Thinking (S-CVI = 0.93)	ST 1	3	4	3	4	4	4	6	1.00		0.02	1.00
		ST 2	4	-	4	4	4	4	5	0.83	1.00	0.02	1.00
		ST 3	4	4	4	4	3	3	6	1.00		0.02	1.00
		ST 4	3	4	3	4	3	4	6	1.00		0.02	1.00
		ST 5	2	4	4	4	4	4	5	0.83		0.09	0.82
		ST 6	4	4	4	4	4	4	6	1.00		0.02	1.00
		ST 7	2	-	4	4	4	4	4	0.67	0.80	0.16	0.76
		ST 8	3	4	4	4	4	3	6	1.00		0.02	1.00
		ST 9	3	4	4	4	4	4	6	1.00		0.02	1.00
		ST 10	2	4	4	4	2	4	4	0.67		0.23	0.56
	Transformative Learning (S-CVI = 0.78)	TL 1	3	4	3	4	-	4	5	0.83	1.00	0.02	1.00
		TL 2	3	4	4	4	4	3	6	1.00		0.02	1.00
		TL 3	2	4	3	4	3	4	5	0.83		0.09	0.82
		TL 4	2	4	4	4	2	4	4	0.67		0.23	0.56
		TL 5	2	2	4	2	1	4	2	0.33		0.23	0.13
		TL 6	3	4	4	4	3	4	6	1.00		0.02	1.00
		TL 7	2	4	4	2	3	4	4	0.67		0.23	0.56
		TL 8	3	3	3	4	3	4	6	1.00		0.02	1.00
		TL 9	4	4	4	4	4	4	6	1.00		0.02	1.00
		TL 10	2	2	4	4	2	4	3	0.50		0.31	0.27
		TL 11	2	-	4	4	2	4	3	0.50	0.60	0.31	0.42
	Global Mindset (S-CVI = 0.888)	GM1	3	4	4	4	4	3	6	1.00		0.02	1.00
		GM 2	3	-	4	4	3	4	5	0.83	1.00	0.02	1.00
		GM 3	3	3	4	4	4	4	6	1.00		0.02	1.00
		GM 4	2	3	4	4	3	4	5	0.83		0.09	0.82
		GM 5	2	3	4	4	2	4	4	0.67		0.23	0.56
		GM 6	4	4	4	4	3	4	6	1.00		0.02	1.00
		GM 7	3	4	4	4	3	4	6	1.00		0.02	1.00
		GM 8	3	4	4	1	1	4	4	0.67		0.23	0.56

Dimension	Sub-Dimension	Item	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5	Reviewer 6	# of 3s and 4s	Item I-CVI	Adjusted I-CVI with 5 experts (missed response)	Probabiltiy of Chance Agreement (Pc)	Modified Kappa (K)
The Situation (S-CVI = 0.83)	*VUCA (S-CVI = 0.84)*	V 1	3	4	3	4	4	4	6	1.00		0.02	1.00
		V 2	2	4	4	4	4	4	5	0.83		0.09	0.82
		V 3	4	3	3	4	3	4	6	1.00		0.02	1.00
		V 4	3	4	4	1	2	4	4	0.67		0.23	0.56
		V 5	3	2	3	4	1	3	4	0.67		0.23	0.56
		V 6	3	2	4	4	1	4	4	0.67		0.23	0.56
		V 7	3	3	3	4	1	3	5	0.83		0.09	0.82
	Sensemaking (S-CVI = 0.80)	SM 1	2	4	4	4	2	4	4	0.67		0.23	0.56
		SM 2	3	4	4	4	2	3	5	0.83		0.09	0.82
		SM 3	3	4	4	4	1	4	5	0.83		0.09	0.82
		SM 4	3	4	3	4	3	3	6	1.00		0.02	1.00
		SM 5	3	4	4	4	2	4	5	0.83		0.09	0.82
		SM 6	1	4	3	4	2	3	4	0.67		0.23	0.56
		SM 7	4	4	4	4	3	4	6	1.00		0.02	1.00
		SM 8	4	4	4	2	2	4	4	0.67		0.23	0.56
		SM 9	2	4	4	4	2	4	4	0.67		0.23	0.56
		SM 10	3	4	4	4	1	4	5	0.83		0.09	0.82
		SM 11	3	4	4	-	1	4	4	0.67	0.80	0.16	0.76
	Crisis Management (S-CVI = 0.88)	CM 1	3	4	3	4	3	4	6	1.00		0.02	1.00
		CM 2	2	4	4	4	3	4	5	0.83		0.09	0.82
		CM 3	4	4	4	4	1	4	5	0.83		0.09	0.82
		CM 4	3	4	4	4	1	4	5	0.83		0.09	0.82
		CM 5	1	4	3	4	3	4	5	0.83		0.09	0.82
		CM 6	2	4	3	4	3	4	5	0.83		0.09	0.82
		CM 7	4	4	4	4	3	4	6	1.00		0.02	1.00
		CM 8	3	4	4	4	2	3	5	0.83		0.09	0.82
Connectivity (S-CVI = 0.89)	*Leading Down (S-CVI = 0.98)*	LD 1	3	4	3	4	-	4	5	0.83	1.00	0.02	1.00
		LD 2	3	4	3	4	-	4	5	0.83	1.00	0.02	1.00
		LD 3	3	4	4	4	-	4	5	0.83	1.00	0.02	1.00
		LD 4	2	4	4	4	-	4	4	0.67	0.80	0.16	0.76
		LD 5	3	4	3	4	-	4	5	0.83	1.00	0.02	1.00
		LD 6	3	4	4	4	-	4	5	0.83	1.00	0.02	1.00
		LD 7	4	4	4	4	-	4	5	0.83	1.00	0.02	1.00
		LD 8	4	4	4	4	-	4	5	0.83	1.00	0.02	1.00
	Leading Up (S-CVI = 0.83)	LU 1	2	4	2	4	1	4	3	0.50		0.31	0.27
		LU 2	2	4	4	4	2	4	4	0.67		0.23	0.56
		LU 3	4	4	4	4	4	4	6	1.00		0.02	1.00
		LU 4	3	4	3	4	4	4	6	1.00		0.02	1.00
		LU 5	3	4	4	4	1	4	5	0.83		0.09	0.82
		LU 6	4	4	4	1	2	4	4	0.67		0.23	0.56
		LU 7	4	4	4	3	3	3	6	1.00		0.02	1.00
		LU 8	3	4	4	4	3	4	6	1.00		0.02	1.00
	Leading Across (S-CVI = 0.85)	LA 1	4	4	4	4	3	4	6	1.00		0.02	1.00
		LA 2	2	4	2	4	2	4	3	0.50		0.31	0.27
		LA 3	3	4	4	4	1	4	5	0.83		0.09	0.82
		LA 4	3	4	4	4	2	4	5	0.83		0.09	0.82
		LA 5	3	4	3	4	3	3	6	1.00		0.02	1.00
		LA 6	3	4	4	4	1	4	5	0.83		0.09	0.82
		LA 7	4	4	4	4	1	4	5	0.83		0.09	0.82
		LA 8	4	4	4	4	3	3	6	1.00		0.02	1.00
	Leading Beyond (S-CVI = .90)	LB 1	3	4	4	4	3	4	6	1.00		0.02	1.00
		LB 2	3	4	4	4	3	4	6	1.00		0.02	1.00
		LB 3	2	4	4	-	3	4	4	0.67		0.23	0.56
		LB 4	4	4	4	4	3	4	6	1.00		0.02	1.00
		LB 5	4	4	4	4	3	4	6	1.00		0.02	1.00
		LB 6	2	4	4	4	4	4	5	0.83		0.09	0.82
		LB 7	2	4	4	4	3	4	5	0.83		0.09	0.82
		LB 8	2	4	4	4	3	4	5	0.83		0.09	0.82