A Causal Layered Analysis of Knowledge Diplomacy and Future Leadership Scenarios in the Iranian Education System

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Abstract

This study fills an important gap in the literature by examining how knowledge diplomacy can drive transformation in Iran's K–12 education. Confronting outdated policies and rapidly shifting global benchmarks, it asks: in what ways can knowledge diplomacy be harnessed to promote lasting innovation and address the systemic obstacles facing Iranian schools? Drawing on a condensed Causal Layered Analysis framework, the research explores: surface-level patterns like policy changes and international partnerships, the economic and structural forces at work, dominant cultural narratives and ideologies, and the deep metaphors that influence public and institutional mindsets. By streamlining methodological exposition, the paper remains sharply focused on practical implications for school leaders and policymakers. From this analysis, four future leadership scenarios emerge: An Alternative scenario marked by heightened global engagement; A Trend-Based scenario of slow progress amid cautious modernization; An Exploratory scenario prioritizing inward-looking reforms and curriculum design; A Back-casting scenario envisioning Iran as a hub of collaborative educational excellence. The findings demonstrate that embedding knowledge diplomacy strategically not only remedies current weaknesses in Iran's schooling system but also lays down a solid foundation for far-reaching reforms that align domestic practice with international standards. The study concludes with targeted recommendations, urging educational leaders and policy architects to adopt proactive strategies, cultivate visionary leadership, and establish flexible policy frameworks. In doing so, Iran's K–12 sector can become more innovative, responsive, and globally competitive. Beyond its immediate conclusions, this integrated analysis advances our understanding of how knowledge exchange and policy reform interact, offering a clear roadmap for sustained progress in today's dynamic educational landscape.

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Introduction

The contemporary global landscape is characterized by increasing interconnectedness, where national boundaries become more porous through various forms of exchange and interaction. In this evolving world order, education plays a pivotal role not only in developing individual capacities but also in fostering relationships and mutual understanding between nations. Knowledge diplomacy, an emerging concept encapsulating the intersection of education and international relations, recognizes that the 5exchange and co-creation of knowledge through education, research, and innovation can be a powerful tool for building bridges and addressing shared global challenges (Wilton Park, 2024a). Knowledge diplomacy involves a wide array of participants; however, other significant actors include national, regional, and international centers of excellence, research institutions, foundations, think tanks, professional associations, non-governmental education organizations, and governmental bodies (Knight, 2020a).

Interdisciplinary knowledge diplomacy is crucial, though often influenced by linguistic challenges and limited curriculum content knowledge. Key enabling factors include strategic academic policymaking, active promotion of communication, and a supportive structure of scientific-executive power. Developing interdisciplinary diplomacy, fostering academic exchanges, and conducting comparative studies are essential strategies for achieving academic authority and reconstructing interdisciplinary knowledge within the Iranian context (Asadi et al., 2021). The potential of knowledge diplomacy lies in its capacity to foster mutual understanding and cooperation, particularly during periods of political tension, by centering on shared intellectual pursuits and the common good.

Within this global context, the Iranian education system presents a unique case study. As a nation with a rich history and a distinctive cultural and political identity, Iran's engagement with the global knowledge landscape is shaped by a complex interplay of internal dynamics and external relations. Understanding how knowledge diplomacy operates within the Iranian education system, particularly at the foundational K-12 level, is crucial for educational leaders and policymakers seeking to effectively plan and navigate the future of education in the country. The growing global emphasis on building relationships and addressing shared challenges through collaborative intellectual endeavors underscores the potential for education to extend its positive influence beyond national borders (Wilton Park, 2024a). It is important to distinguish knowledge diplomacy from the concept of soft power. While soft power often centers on a nation's ability to influence others through attraction and persuasion to achieve its own interests, knowledge diplomacy prioritizes mutual benefit, reciprocity, and genuine collaboration among participating countries (Knight, 2022a). This distinction is particularly relevant in the Iranian context, where sensitivities regarding international influence may exist, and educational collaborations could be perceived as instruments for advancing other nations' agendas. Emphasizing the collaborative and mutually beneficial nature of knowledge diplomacy can foster trust and facilitate more sustainable international partnerships in education.

In the contemporary global landscape, the increasing interconnectedness of nations through education and research is frequently emphasized, yet such discussions often remain overly broad without addressing local realities. In Iran, for example, while global narratives highlight the power of knowledge diplomacy, there is a noticeable lack of critical analysis on how indigenous policy structures and decision-making processes—outlined in official documents such as the Fundamental Transformation Document and decisions from the Council of Higher Education—affect its implementation at the K-12 level. Although accurate data on the number of participating agencies and details of student and teacher exchange programs exist, previous studies have largely reported these figures without a critical evaluation of their impact on the local dynamics of educational leadership. This study aims to fill that research gap by critically examining the interplay between local administrative structures, cultural legacies, and international engagement within Iran's educational system. Employing a focused Causal Layered Analysis (CLA) framework, our research goes beyond mere description by dissecting surface-level trends, systemic factors, and underlying narratives, to reveal how these layers collectively influence knowledge diplomacy practice. We interrogate the tension between globally promoted exchange programs and indigenous capacities, exploring how limited curriculum content knowledge and bureaucratic decision-making processes may impede effective knowledge transfer. Moreover, by integrating verified data from recent policy reviews with documented evidence from sources such as the Fundamental Transformation Document and the Council of Higher Education rulings, this research establishes a direct link between local institutional practices and the broader objectives of knowledge diplomacy. Ultimately, our analysis not only redefines the local challenges and opportunities within Iranian K-12 education but also offers strategic recommendations for educational leaders, thereby presenting a clear, actionable research gap that future inquiry can address in the rapidly evolving global educational arena.

The unprecedented importance of scientific knowledge in shaping national policy and fostering

global cooperation has brought scientists and technical experts closer to those in power. This has fueled public discussion on key issues: the socio-political authority and autonomy of science, democratic oversight of experts, equitable access to knowledge, and the potential for scientific knowledge to legitimize authoritarian rule or strengthen authoritarian tendencies in weak democracies. Given that knowledge has become a potent tool for asserting interests and a source of legitimacy for national governments and global leadership, the high stakes involved make calls for greater accountability inevitable (Hernandez, 2021).

Knowledge diplomacy has gained increasing attention as a lens for understanding the role of international education and research in fostering positive inter-state relations. Wilton Park defines it as international research or educational collaboration that serves a positive diplomatic purpose, particularly during times of political tension (Wilton Park, 2024b). More broadly, often attributed to Jane Knight, it is understood as the process of building and strengthening relations between and among countries through international higher education, research, and innovation (IHERI) (Knight, 2022a; Wilton Park, 2024a). This definition emphasizes the active role of IHERI in fostering bilateral and multilateral relationships grounded in collaboration, reciprocity, and mutual benefits. Knight proposed a conceptual framework for knowledge diplomacy based on five elements: intentions, actors, principles, modes, and activities (Knight, 2022a). Intentions primarily revolve around building relationships and utilizing IHERI to address global challenges and promote peace. This involves collaboration among diverse actors: universities, research institutions, governments, NGOs, and international organizations. Key principles include cooperation, reciprocity, mutual benefit, and transparency. Modes of engagement involve collaboration, negotiation, mediation, and exchange. Activities range from student/scholar exchanges and joint research to conferences and curriculum development.

Wilton Park reports further elaborate, focusing on how knowledge diplomacy helps universities navigate a turbulent geopolitical world. It encompasses a wide range of research, education, cultural, and scientific collaborations that also serve a diplomatic purpose (Wilton Park, 2024a). Including research and innovation alongside education signifies the recognition that knowledge creation and application are integral to strengthening international relations and addressing global challenges, extending beyond traditional educational exchanges.

A crucial aspect is the emphasis on mutual benefit and reciprocity, distinguishing knowledge diplomacy from soft power (Skelton, 2019). While soft power can be driven by national self-interest, knowledge diplomacy is rooted in ensuring collaborations yield benefits for all participants, even if benefits differ (Knight, 2022a). It is based on co-creating and cooperation, collaboration and compromise, bringing together expertise, experience, knowledge, and insight for mutual (but often differing) benefit (Skelton, 2019). This collaborative nature is fundamental for building trust and sustainable international relationships in education and research.

Knowledge diplomacy is also broader than related concepts like science diplomacy (using scientific collaborations for international relations) and cultural diplomacy (using cultural exchanges for cross-cultural understanding). It encompasses aspects of both and extends to the wider role of higher education and innovation in strengthening ties (Wilton Park, 2024a). While overlapping with public diplomacy (engaging foreign publics) and education diplomacy (focusing on educational exchanges), knowledge diplomacy offers a more comprehensive framework integrating research and innovation alongside educational and cultural exchange for diplomatic goals (Knight, 2022a). It considers the impact of scholarly research, practice, innovation, and international higher education institutions on inter-state cooperation, and vice-versa (University of London, 2025). She explores the significant role that international higher education, research, and innovation play within international relations. Her study aims to develop a conceptual framework for "knowledge diplomacy" to better understand and structure the various ways these elements intersect with global affairs and traditional diplomacy (Knight, 2021).

Table 1: Key Definitions of Knowledge Diplomacy

Source	Definition	Key Themes
(Wilton Park, 2024b)	International research or educational collaboration that also serves a positive diplomatic purpose, particularly during times of political tension.	Diplomatic purpose, international collaboration, political tension.
(Wilton Park, 2024a)	The process of building and strengthening relations between and among countries through international higher education, research, and innovation.	Strengthening relations, international higher education, research, innovation.
(Knight, 2022a)	The process of building and strengthening relations between and among countries through international higher education, research, and innovation.	Strengthening relations, international higher education, research, innovation.

Source	Definition	Key Themes
(Skelton, 2019)	Based on co-creating and cooperation, collaboration and compromise, bringing together expertise, experience, knowledge, and insight for mutual (but often differing) benefit.	Co-creation, cooperation, collaboration, compromise, mutual benefit.
(University of London, 2025)	The impact of scholarly research, practice, innovation, and international higher education institutions on inter-state cooperation, and vice-versa.	Inter-state cooperation, scholarly research, innovation, higher education institutions.
(Knight, 2022c)	The process of strengthening relations between and among countries through international higher education, research, and innovation, involving diverse state and non-state actors with mutual benefits.	Strengthening relations, international higher education, research, innovation, diverse actors, mutual benefits.
(Knight, 2022d	A mode of practice that interprets the action of higher education institutions within the broader global knowledge economy or, indeed, global knowledge society, emphasizing mutuality and reciprocity.	Higher education institutions, global knowledge economy/society, mutuality, reciprocity.
(Knight, 2022a)	Understanding the role of IHERI in building bilateral and multi-lateral relationships based on collaboration, reciprocity, and mutuality of benefits.	IHERI, bilateral/multilateral relationships, collaboration, reciprocity, mutuality of benefits.
(Knight, 2018)	Focuses on the role of international higher education and research in building and strengthening relations between and among countries as a two-way reciprocal process.	International higher education and research, strengthening relations, reciprocal process.
(Knight, 2020b)	A new approach to understanding the role of international higher education, research, and innovation in strengthening relations among countries and addressing common global challenges, emphasizing collaboration.	International higher education, research, innovation, strengthening relations, global challenges, collaboration, reciprocity, mutuality.

Broader mechanisms for knowledge exchange are present but often affected by geopolitical issues and sanctions. Despite these obstacles, there is still a strong interest in academic exchange, particularly in higher education. Initiatives such as the IIE Iran Higher Education Initiative have aimed to strengthen academic ties between the US and Iran (Obst & Banks, 2015). US regulations, through OFAC general licenses, allow specific educational services and exchanges with Iranian universities and students, notably online graduate courses in select fields, providing some access to international resources despite the restrictions (University of Maryland, Baltimore County, 2025). The idea of a "jihad of knowledge" highlights a national emphasis on developing capabilities, potentially influencing the approach to international knowledge exchange by focusing on areas that align with strategic interests (Bazoobandi, 2024). Within Iranian educational institutions, informal knowledge sharing takes place, with ongoing efforts to improve knowledge transfer within the education system (Dokhtesmati & Bousari, 2013).

For K-12 policy, Iran consistently participates in international assessments such as TIMSS (Trends in International Mathematics and Science Study) (Kabiri, 2023; IEA.nl, 2025-a; NCES, 2025-a). This participation provides valuable comparative data on student performance, offering insights to inform K-12 policies and practices (NEQMAP, 2025; National Academy of Education, 2025). Challenges remain, including political tensions and sanctions that limit direct engagement and access to global networks (Rasian, 2009). However, there are opportunities to utilize online platforms and virtual exchanges (University of Maryland, Baltimore County, 2025). In TIMSS 2023, Iran participated at both the fourth and eighth-grade levels. The assessment was paper-based for Iran and included TIMSS 2019 trend items in at least one of these grade levels. Iran was among 59 countries participating at the fourth grade and 44 at the eighth grade (Mullis et al., 2021).

Table 2: International Collaborations and Knowledge Exchange in Iranian Education

Initiative/Program	Key Stakeholders	Objectives	Example Sources
Inclusive Education for Children with Disabilities	UNICEF, Ministry of Education, Special Education Organization	Remove barriers and provide interventions for children with disabilities to access inclusive education.	(UNICEF, 2025-a; UNICEF, 2025-b)
Education for Refugees	UNICEF, Bureau for Aliens and Foreign Immigrants Affairs, Ministry of Education, National Organization for Migration, UNHCR	Enhance the integration of refugee children into the Iranian public education system.	(UNICEF, 2025-a; UNICEF Iran, 2025-a; UNICEF, 2024)

Initiative/Program	Key Stakeholders	Objectives	Example Sources
UNESCO Chairs in Iran	UNESCO, Iranian National Commission for UNESCO, Ministry of Science, Research and Technology, Iranian Universities	Foster scientific development and international cooperation in various fields.	(UNESCO, 2025a)
National Consultation on SDG 4 (Education 2030)	Ministry of Education, UNESCO, UNICEF, Iranian National Commission for UNESCO	Discuss the implementation of Sustainable Development Goal 4 in Iran.	(Avadiplomatic, 2016)
IIE Iran Higher Education Initiative	Institute of International Education (IIE), US and Iranian Universities	Re-invigorate US-Iran higher education cooperation and explore potential for new bilateral activities.	(Obst & Banks, 2015)
Online Graduate Education for Iranian Students	US Academic Institutions, Iranian Students, OFAC	Provide online graduate-level educational services in specific fields under US sanctions regulations.	(University of Maryland, Baltimore County, 2025)
Participation in TIMSS	Iran Ministry of Education, International Association for the Evaluation of Educational Achievement (IEA)	Assess and compare Iranian students' achievement in mathematics and science with international benchmarks.	(Kabiri, 2023; IEA.nl, 2025-a; NCES, 2025-a; NEQMAP, 2025; National Academy of Education, 2025; Bakhshalizadeh & Karimi, 2015; NCEE, 2016; IEA.nl, 2021)

Problem statement

The Iranian formal education system is highly centralized and organized into several levels. Beyond an optional pre-primary stage for children aged 4–5, the system consists of compulsory primary education (Grades 1–6, ages 6–12) that emphasizes moral development, literacy, numeracy, social skills, hygiene, and basic subjects (Boston College, 2015). This is followed by lower secondary education (Grades 7–9, ages 13–15), which introduces physical and social sciences, humanities, art, and a second language (Boston College, 2015). Upper secondary education (Grades 10–12, ages 16–18) is not compulsory but is widely attended; students choose from academic, technical/vocational, or skill-knowledge tracks, with the national university entrance exam (CONCUR) playing a critical role in determining access to higher education (Hazari, 2015; Boston College, 2015; Scholaro, 2025). The curriculum overall is standardized to reflect the nation's political and religious orientations, including subjects such as Persian language/literature, math, science, history, geography, art, physical education, religious studies, and Quranic studies (Lorenzi, 2023). Oversight is provided by the Ministry of Education, which manages policy-making, curriculum development, teacher training, and school infrastructure, while the Supreme Educational Council formulates and monitors educational reforms. Although public education is free, private schools (comprising 7%–18% of the total) also operate under Ministry guidelines and are funded by tuition fees (Boston College, 2015; Bakhshalizadeh & Karimi, 2015).

In response to post-revolutionary shifts aimed at instilling Islamic values and countering Western secular influences, the education system has undergone significant changes, such as the abolition of coeducation and the enforcement of ideological directives among students and faculty (Avery & Mostofi, 2025; Kabiri, 2023). Despite initiatives to enhance school autonomy and stakeholder participation, real authority remains limited with a predominant focus on executing centrally designed plans—a shortfall revealed by evaluations of school-based management (Nami, 2016). Furthermore, concerns have been raised by experts regarding the prevailing oligarchic management ideologies and the lack of a rigorous scientific perspective in educational leadership, signaling a shift in the socio-economic context of educational administration (Mohammadi & Zare, 2024). In parallel, international collaborations—encompassing student and teacher exchange programs as well as participation in global ranking systems—play an increasingly vital role. These external engagements, coupled with calls for improved leader selection, specialized training, and pre-service educational programs, underscore the dynamic interplay between local practices and global influences in shaping the future of Iranian K-12 education (Ghanbarian Ghalandar et al., 2024).

Despite the presence of a well-structured and centralized framework supported by official policy

documents such as the Fundamental Transformation Document and decisions from the Council of Higher Education (Boston College, 2015; Kabiri, 2023), the Iranian K-12 education system faces profound challenges that undermine its potential for effective knowledge diplomacy. Post-revolutionary reforms intended to instill Islamic values and counter Western secular influences have, while achieving certain national objectives, inadvertently restricted school autonomy and stifled the development of innovative, evidence-based leadership. Evaluations of school-based management reveal limited stakeholder participation and a persistence of traditional, oligarchic management practices that are misaligned with the dynamic demands of international collaboration and global knowledge exchange (Nami, 2016; Mohammadi & Zare, 2024). Moreover, despite the existence of initiatives such as student and teacher exchange programs, the current system's rigid structure and centralized decision-making processes have prevented the seamless integration of international educational standards with local institutional realities. This significant disconnect between progressive knowledge diplomacy goals and entrenched administrative practices not only hampers the transformation of educational leadership but also calls for comprehensive reforms that reconcile national cultural and political ideologies with global best practices in order to foster sustainable and inclusive educational development (Ghanbarian Ghalandar et al., 2024).

This research aims to explore the dynamics of knowledge diplomacy within the Iranian education system, specifically focusing on understanding its current state and projecting potential future scenarios for leadership within the K-12 sector. By analyzing policy documents and synthesizing related research, this study seeks to provide valuable, actionable insights for educational leaders in Iran as they navigate an educational landscape increasingly shaped by global knowledge exchange. The primary objectives are: 1) To understand the current state of knowledge diplomacy in Iranian K-12 education, 2) to anticipate plausible future trajectories for leadership within this framework, and 3) to offer strategic guidance for educational leaders operating in the Iranian K-12 system. As evidence, Zeinabadi et al (2023) explored instructional leadership in the centralized educational context of Iranian public primary schools by interviewing successful principals. Then, they identified a contextually relevant model of

instructional leadership characterized by three dimensions: attention to the school's vision, management of the instructional program, and promotion of a learning climate, further defined by seven functions. This investigation highlights how specific societal features shape the understanding of instructional leadership and emphasizes the crucial relationship between leadership and its context within educational settings.

Methodology

The methodology addresses several critical issues to strengthen the study's rigor. First, it explicitly specifies that the research is a theoretical and futures-oriented document analysis, clarifying that the primary data sources include official policy documents (e.g., the Fundamental Transformation Document and Council of Higher Education decisions), scholarly articles, and the researcher's lived experiences. Second, it provides detailed information on data collection and selection criteria, ensuring transparency in how sources were identified and used. Third, the process for executing the Causal Layered Analysis (CLA) framework is clearly delineated by explicating the criteria for categorizing content into its four distinct layers—Litany, Social/Systemic Factors, Worldview, and Myth/Metaphor—and by explaining how scenarios are developed from these layers. Fourth, the methodology acknowledges that the analysis is not purely conceptual but is rigorously supported by empirical evidence, thereby addressing potential criticisms of subjectivity. Additionally, issues of validity, credibility, and limitations are thoroughly discussed, while also contextualizing the historical application of CLA within Iranian educational research. This comprehensive methodological framework not only bridges the gap between rich empirical data and complex theoretical insights but also enhances the overall scholarly and practical value of the study. A well-designed critical analytical study relies on robust and widely accepted methodological references to ensure the depth and validity of its analysis. For instance, employing the Causal Layered Analysis (CLA) framework—as established by Inayatullah (2005, 2009, 2019)—provides a comprehensive approach to deconstructing complex phenomena through multiple layers, ranging from surface-level trends to deep-rooted cultural metaphors. This methodological reference not only underpins the structured analysis of historical, political, economic, and sociocultural influences but also lends

credibility and systematic rigor to the study by aligning it with established academic practices in futures studies and critical analysis. Such reliance on reputable methodological sources is essential for demonstrating that the research is grounded in valid theoretical underpinnings and for ensuring that its findings are both replicable and methodologically sound. Below is the methodology data structured into three parts:

A) Research Design: Synthesizing Policy, Literature, and Futures Research:

This study adopts a qualitative and interpretive research design to explore the future scenarios of Iran's Higher Education Diplomacy for innovative teaching and learning. The approach is multi-faceted, integrating analyses of policy documents, a systematic review of contemporary scientific literature, and the application of established futures methodologies. The core of the research design lies in the synthesis of these diverse data sources to construct a nuanced understanding of the current state, underlying drivers, and potential future trajectories. By employing Causal Layered Analysis (CLA), the research aims to move beyond surface-level descriptions to uncover deeper causal structures and worldviews. This, in turn, informs the development of plausible and challenging future scenarios. The interpretive nature of the study acknowledges that futures are not predetermined but are shaped by human agency, choices, and the narratives we construct about them. CLA (Causal Layered Analysis) is a technique in futures studies used to better understand, reconstruct, and develop alternative futures by exploring the various causal relationships of a phenomenon (Lingrün, 2025). Scupelli (2022 &2023) explores approaches to facilitate the transfer of this knowledge to students' design practice, noting improved outcomes with a "Studio Project CLA" assignment compared to a "Personal Futures CLA" assignment. To achieve these objectives, this research utilizes the Causal Layered Analysis (CLA) framework (Inayatullah, 2005; Inayatullah, 2009). CLA is a futures studies method enabling a deeper exploration of complex issues by examining them across four distinct layers: the Litany (surface-level observations and trends), Social and Systemic Factors (underlying causes, structures, and systems), Worldview (dominant narratives, ideologies, and discourses), and Myth/Metaphor (deeply ingrained cultural beliefs and archetypes) (UN Global Pulse, 2023a&b; Inayatullah, 2019, Inayatullah, Causal Layered Analysis is a critical part of futures education because it helps students deepen their understanding of controversial issues. However, critical thinking about the future is new and challenging to most students (Davidson, 2020).

As both a theoretical framework and a practical methodology, Causal Layered Analysis (CLA) strives to foster broader and more inclusive perspectives on the future. The approach can uncover and probe the foundational narratives and power structures that govern how individuals and groups interact. It is also capable of highlighting existing systems of privilege and exclusion that contribute to discriminatory practices. By charting these stories and metaphors, CLA nurtures an atmosphere receptive to varied viewpoints, thereby improving decision-making processes and promoting fairer results. (Mercer, 2022).

According to Conway (2012) Causal Layered Analysis (CLA) was employed to investigate the dynamics and perceived tension or "divide" between academic and administrative staff. Conway's research explored the nature of this relationship, which has become increasingly characterized by tension since the late 20th century. Applying this framework aims to uncover the multiple layers influencing the conceptualization and implementation of knowledge diplomacy in the Iranian educational context, providing a holistic and nuanced analysis to inform strategic decision-making for educational leaders. CLA's ability to move beyond superficial descriptions to probe underlying causes, narratives, and beliefs makes it particularly useful for understanding the complexities of knowledge diplomacy in a context like Iran. Causal Layered Analysis (CLA), developed by futurist Sohail Inayatullah, serves as the core interpretive framework for this research. CLA is a futures research method designed to deepen understanding of complex issues by moving beyond conventional, often problem-saturated, analyses to explore underlying causes, worldviews, and metaphors. It integrates empiricist, interpretive, critical, and action learning modes of research, aiming not merely to predict the future but to create transformative spaces for the envisioning and creation of alternative futures. In the end, four distinct scenario archetypes will be developed, each offering a different lens in the future:

1. **Alternative Scenarios:** These scenarios are often constructed using a 2x2 matrix methodology, where two critical uncertainties with divergent potential outcomes form the axes, resulting in four distinct future worlds (Stapleton,2020; Kolonko, 2025).

2. **Trend-based Scenarios:** This type of scenario describes a future that represents a continuation or extrapolation of current, observable trends without major disruptions or policy shifts (Fiveable, 2024). It often serves as a "business-as-usual" or reference scenario against which alternative futures can be compared.

3. **Exploratory Scenarios:** These scenarios aim to explore a broad range of possible futures based on the interplay of various key driving

forces and critical uncertainties, without assigning probabilities to their occurrence (Kolonko, 2025; Stapleton,2020). The primary goal is to understand "what could happen?" across a spectrum of plausible developments, thereby challenging existing assumptions and broadening strategic thinking.

4. **Back-casting Scenarios:** Unlike forecasting, back-casting starts with the definition of a desirable or specific future outcome and then works backward to identify the necessary steps, policies, and conditions that would be required to achieve that future (Kolonko, 2025). This normative approach is particularly useful for strategic planning when there are clear long-term goals, such as achieving widespread innovative teaching and learning practices.

B) Data Corpus: Iranian Upstream Policy Documents and Literature Review (2018-2025):

This research draws on two primary categories of sources to examine Iran's educational reform and leadership practices from 2018 to 2025: (a) key Iranian upstream policy documents and (b) the related scientific literature. The upstream documents provide a high-level framework that outlines the strategic vision for education, science, and technology development, while the literature offers critical and empirical analyses of these strategies and their implementation.

At the core of Iran's educational reform landscape is the **Fundamental Reform Document of Education (FRDE)**. The FRDE is designed to overhaul the education system by cultivating individuals who embrace Islamic values—faith in God, adherence to Islamic principles, wisdom, justice-seeking, and bravery. As a comprehensive blueprint for reform across pre-school, school, and higher education levels, the FRDE outlines philosophical foundations, macro strategies, and specific measures for transforming curriculum, teacher training, organizational structures, and student assessment. However, despite its ambitious vision, the FRDE faces significant challenges. Critics have noted its idealistic goals, centralized approach, lack of clear financial policies, shortages of specialized human resources, and limited focus on creativity, tolerance, democracy, and citizenship rights—all factors that hinder its practical implementation (Nemati & Ghaffarian Panahi, 2019; Madandar Arani et al., 2023).

Complementing the FRDE are documents that broaden the scope of national strategy. The **Comprehensive Scientific Map of Iran** specifies Iran's strategic vision for science, technology, and innovation. Rooted in the broader national aspirations articulated in the **20-Year Perspective Document (Vision 2025)**, this map outlines the roles of universities and research institutions in advancing scientific and technological progress. Vision 2025 establishes overarching long-term goals across key sectors—including education—and sets the stage for more targeted policies. It envisions the enhancement of research development, the advancement of science, and the integration of religious and cultural values within education (Alipour Hafezi, 2024; Zaker Salahi & Keykha, 2019). Additionally, the **National Development Plans**—typically organized in five-year cycles—play a crucial role in translating these high-level visions into actionable programs. Specific policy directives, such as those found in Article 25 of the Fourth Development Plan and Article 64 of the Sixth Development Plan, support international academic cooperation, partial self-financing for universities admitting international students, and other aspects of higher education internationalization. Despite these targeted measures, analysis of these plans reveals a disconnect between the ambitious intentions of upstream documents and the realities of implementation. In many cases, emphasis on infrastructure and research overshadows core educational functions, and the involvement of stakeholder groups like teacher unions remains a dynamic and sometimes underutilized factor (Alipour Hafezi, 2024; Medadi & Mahdavi, 2025; Mahdi et al., 2025).

The scientific literature, drawn from both Persian and English databases (e.g., Scopus, Web of Science, SID.ir, Civilica, Magiran, Noormags, and IranJournals.ir), offers a complementary view that deepens our understanding of these upstream documents. Research spanning 2018 to 2025 covers diverse topics including higher education diplomacy, internationalization, innovative teaching and learning, and futures studies in education. International theorists such as Knight (2018) and Altbach (Rumbley et al., 2023) provide essential theoretical grounding on higher education internationalization, while local studies—such as those by Asadi et al. (2021) on knowledge diplomacy and Rabbani Khah et al. (2024) on academic governance scenarios—offer empirically based insights into Iran's educational context.

Empirical studies on education and leadership in Iran further highlight the need for context-specific approaches. For instance, Malaki et al. (2018)

propose a grounded theory model for curriculum leadership in primary education that is attuned to the centralized nature of Iran's education system. Similarly, Amini, Yari Haj Ataloo, and Daneshvar Haris (2022) identify the key dimensions and components of transformational leadership required to navigate the complexities of educational reform. Their work emphasizes that strategic, context-sensitive leadership is essential for bridging the gap between high-level policy directives and classroom practice. At the same time, evaluations of educational materials (e.g., Maghsoudi & Khodamoradi, 2023) and analyses of diversity representation in policy (e.g., Hassanpour et al., 2023) reveal that while upstream documents are comprehensive in some areas, they often devote less than 20% of their content to addressing the core functions of higher education directly.

Collectively, these documents and studies demonstrate that upstream policy documents are critical in shaping the strategic direction for educational reform in Iran. They articulate grand visions that align with national, cultural, and religious values and provide frameworks intended to guide transformational change across all levels of education. Yet, a persistent disconnect exists between the lofty ambitions of these documents and the practical realities encountered by educational institutions. There is a clear call for enhanced alignment between policy and practice—a mandate that involves refining leadership practices, ensuring consistent policy implementation, and actively involving stakeholders such as teacher unions to translate strategic visions into effective educational reforms.

In conclusion, while the FRDE, Comprehensive Scientific Map, Vision 2025, and National Development Plans lay out an inspiring vision for transforming Iran's education system, empirical research underscores the complexities and challenges inherent in moving from policy rhetoric to actionable, impactful practice. Addressing these gaps calls for greater coherence between policy formulation and everyday educational operations, a challenge that remains at the heart of contemporary debates in Iranian education.

C) International Collaborations and Knowledge Exchange in Iranian K-12 Education:

Despite the unique socio-political and cultural context of Iran, its education system actively engages in international partnerships to align with global standards and address critical challenges in K–12 education. These collaborative initiatives not only help improve educational quality and accessibility but also foster a dynamic exchange of knowledge and practices that benefit both local communities and international stakeholders.

One prominent example is the involvement of **UNICEF**. UNICEF plays a multifaceted role in promoting inclusive education by supporting children with disabilities—providing vital resources such as braille embossers—and by developing earthquake preparedness materials in collaboration with UNESCO and the International Institute of Earthquake Engineering and Seismology (IIEES). In addition, UNICEF is committed to the education of refugee children, primarily from Afghanistan, by facilitating their integration into public schools and training refugee teachers. These initiatives are complemented by cooperative projects with the Ministry of Energy on water scarcity, illustrating UNICEF's comprehensive approach that bridges educational, social, and infrastructural domains (UNICEF, 2025-a; UNICEF, 2025-b; UNICEF Iran, 2025-a; UNICEF, 2024).

Similarly, **UNESCO** contributes significantly by strengthening scientific diplomacy and fostering international cooperation through initiatives such as the establishment of UNESCO Chairs. These Chairs act as catalysts for knowledge exchange in education, science, and communication. UNESCO's commitment extends to preserving Iran's rich cultural heritage through its active involvement in managing UNESCO World Heritage sites and Biosphere Reserves. Moreover, its support for empowering Afghan women refugee teachers further underscores the organization's dedication to inclusive educational development and cross-cultural dialogue (UNESCO, 2025-a; UNESCO, 2023).

In addition to the efforts of individual organizations, **joint initiatives** involving Iran's Ministry of Education, UNESCO, UNICEF, and the Iranian National Commission for UNESCO illustrate a strong commitment to global educational agendas. High-level national consultations on Sustainable Development Goal 4 (Education 2030) exemplify these collaborative efforts, ensuring that international standards and practices are effectively integrated into domestic educational policy. These consultations underscore the vital role of international partnerships in shaping strategies to meet both universal educational objectives and local needs (Avadiplomatic, 2016).

Findings

The research findings are presented in two primary sections. In the first section, CLA Framework Applied to Knowledge Diplomacy in Iranian K-12 Education, the study employs the Causal Layered Analysis to dissect and illuminate the multi-layered

dynamics influencing knowledge diplomacy. This section reveals how surface trends, systemic factors, dominant worldviews, and deep-seated cultural metaphors collectively shape the educational landscape and the interplay between national policies and international influences in Iran. The second section, Future Scenarios for Leadership in the Iranian K-12 Education System, builds on these insights by outlining four potential trajectories for school leadership—ranging from proactive international engagement to inward-focused reform—each accompanied by detailed implications for policy, leadership dynamics, and practical capacity building. Together, these two sections offer a comprehensive, critically analytical framework that not only enhances our theoretical understanding of knowledge diplomacy in education but also provides actionable strategies for transforming educational leadership in Iran.

A) CLA Framework Applied to Knowledge Diplomacy in Iranian K-12 Education

Applying the Causal Layered Analysis (CLA) framework to knowledge diplomacy in Iranian K-12 education reveals a richly complex picture that emerges only when its four distinct layers are thoroughly distinguished and analyzed. At the **Litany level**, the focus is on observable trends and surface-level phenomena. Here, the Iranian education system is characterized by tightly centralized control as the Ministry of Education wields significant authority over curriculum development, teacher training, and administration (Bakhshalizadeh & Karimi, 2015). The enforced emphasis on Islamic values and ideology across all educational levels (Avery & Mostofi, 2025), the high-stakes nature of the CONCUR exam that shapes secondary education trajectories (Hazari, 2015), and participation in international assessments (Kabiri, 2023) all serve as immediate, visible markers of the system. Additionally, targeted project-based international collaborations with organizations like UNESCO and UNICEF (UNICEF, 2025-a; UNESCO, 2025a) coexist alongside challenges such as reduced access to international research due to sanctions (Obst & Banks, 2015), a curriculum criticized for its theoretical slant (Tohidian et al., 2021), teacher shortages (Khoshraftar Somee Sofla, 2015; NCRI Women Committee, 2024), and a noticeable increase in private or semi-private schools (Tohidian et al., 2023; Iran News Update, 2025). These observable features are also bolstered by stated government intentions to modernize the education system and a variety of documented evidence from policy reviews and research studies (Zaker Salehi, 2019; Mahdi et al., 2025; Asadi et al., 2021; Rabbani Khah et al., 2024; Nobakht et al., 2022).

Moving deeper to the **Social and Systemic Factors level**, the analysis examines the underlying causes of these surface phenomena. Here, the structure of the political system, government priorities, and economic constraints are seen as central forces that shape educational policy and practice (Lorenzi, 2023; Moinipour, 2021). Economic limitations restrict resource allocation and infrastructure development, thereby curtailing the system's ability to embrace innovative educational reforms (Agharezaei, 2024; Obst & Banks, 2015). Moreover, entrenched social inequalities further complicate access to high-quality education (Lorenzi, 2023; Broken Chalk, 2025), while a deeply centralized bureaucratic framework and traditional administrative practices restrict the adoption of decentralized, innovative initiatives (Tohidian et al., 2023; Rasian, 2009). The national discourse of self-reliance—often articulated through concepts like a "jihad of knowledge"—fosters a cautious approach toward international collaboration (Bazoobandi, 2024), and societal emphasis on higher education, driven in part by the critical role of the CONCUR exam, shapes K-12 priorities in ways that may impede broader educational goals. This layer, supported by evidence from comprehensive national documents such as the "Comprehensive Scientific Map of Iran" and the "20-Year Perspective Document" (Zaker Salehi, 2019; Asadi et al., 2021), reveals how systemic factors underpin and sometimes constrain the observable trends.

At the **Worldview level**, dominant narratives and ideologies come to the fore, framing how knowledge diplomacy is perceived and practiced. In this layer, the preservation of Islamic identity and the maintenance of national sovereignty are not only policy imperatives but also ideological convictions (Avery & Mostofi, 2025; Moinipour, 2021). Education is viewed as a vehicle for national progress and cultural integrity (Kabiri, 2023; Pmas-aaur, 2021), yet this same conviction often breeds a skepticism toward the mutual benefits of international collaborations—with concerns about hidden agendas and potential dominance by external powers (Wilton Park, 2024a). Furthermore, the pursuit of scientific and technological advancement is consistently framed within an Islamic context, indicating that progress must be harmonized with traditional values. This worldview shapes policy choices and influences how alternatives and reforms are evaluated, as evidenced by research on academic governance and international comparative studies (Knight, 2021, 2022, 2023).

Finally, the **Myth and Metaphor level** delves into the deep cultural underpinnings that subtly steer the overall discourse within the education system. At this level, powerful metaphors emerge—education is often seen as a "shield" against cultural invasion and a safeguard of national identity, while the CONCUR exam is metaphorically portrayed as a "gatekeeper" determining the future trajectories of students. There is also a prevailing myth of a glorious Islamic past that must be revived through

education, reinforcing the importance of instilling traditional values in every aspect of learning. Additionally, a firm belief in national self-sufficiency and the independent pursuit of excellence contributes to a guarded approach to international collaboration, which in turn affects the openness of the system to external knowledge exchange. This deeply ingrained conceptual framework, drawn from shared cultural memories and societal narratives (Zaker Salehi, 2019; Nobakht et al., 2022), significantly influences both the formulation and implementation of educational policies and the practice of knowledge diplomacy.

In summary, the CLA framework enables a multilayered analysis of knowledge diplomacy in Iranian K-12 education. The Litany layer captures the surface realities and trends, while the Social and Systemic Factors layer exposes the structural forces shaping these manifestations. The Worldview level highlights the dominant ideologies that guide policy and perceptions, and the Myth and Metaphor level uncovers the profound cultural narratives that silently govern decision-making processes and the execution of educational reforms. Together, these layers offer a holistic and critical understanding of the interplay between deep-seated cultural paradigms and evolving international educational practices, illuminating the challenges and opportunities inherent in reforming knowledge diplomacy within the Iranian context.

At the deepest level of analysis, the Myth and Metaphor layer reveals the powerful cultural narratives and symbolic representations that shape knowledge diplomacy in Iranian K-12 education. This layer uncovers how education is often metaphorically cast as a "shield" against cultural invasion and external ideological influence—a narrative that reinforces the protection of a historically glorified Islamic past, as documented in the "20-Year Perspective Document" by Zaker Salehi (2019). Moreover, the CONCUR exam is frequently imbued with mythic qualities, serving as a "gatekeeper" that not only determines students' future prospects but also symbolizes the rigorous filtration of knowledge and opportunities. Nobakht et al. (2022) demonstrate through their alternative scenario designs via the CLA framework how these cultural metaphors actively inform and constrain educational reforms, embedding a sense of national self-sufficiency and independent excellence in policy discourses. Additionally, Knight's studies (2021, 2022, 2023) on knowledge diplomacy argue that these deep-seated metaphors are not merely rhetorical devices but constitute the underlying logic that directs policymaking, influencing the cautious engagement with international collaborations. Together, these documented cultural underpinnings illustrate how historical narratives and collective beliefs are intricately woven into the fabric of Iran's educational policy and reform, thereby critically shaping the practice and potential of knowledge diplomacy in the region. Below is the table 3 "CLA Framework Applied to Knowledge Diplomacy in Iranian K-12 Education" presented.

Table 3: CLA Framework Applied to Knowledge Diplomacy in Iranian K-12 Education

CLA Level	Description	Examples/Insights from Research (Illustrative Sources)
Litany	Observable facts and trends related to education policies, international collaborations, knowledge exchange.	Centralized control (Bakhshalizadeh & Karimi, 2015); Islamic values emphasis (Avery & Mostofi, 2025); Competitive CONCUR (Hazari, 2015); TIMSS participation (Kabiri, 2023); UNESCO/UNICEF collaborations (UNICEF, 2025-a); Research access challenges (Obst & Banks, 2015); Teacher shortages (Khoshraftar Somee Sofla, 2015).
Social & Systemic Factors	Underlying social, economic, political, and technological factors influencing knowledge diplomacy.	Political system influence (Lorenzi, 2023); economic constraints (Agharezaei, 2024); social inequalities (Lorenzi, 2023); Centralized bureaucracy (Tohidian et al., 2023); National self-reliance emphasis (Bazoobandi, 2024); Higher ed value (Hazari, 2015); Resistance to external influence (Moinipour, 2021).
Worldview	Dominant narratives and ideologies shaping perceptions of knowledge diplomacy in Iran.	Preserving Islamic identity (Avery & Mostofi, 2025); National sovereignty emphasis (Moinipour, 2021); Education for progress (Kabiri, 2023); Skepticism on collaboration mutuality (Wilton Park, 2024a); Science within Islamic values (Bazoobandi, 2024); Need for reform perception (Khoshraftar Somee Sofla, 2015).
Myth & Metaphor	Underlying cultural metaphors and myths influencing understanding of knowledge diplomacy.	Education as a shield; Myth of glorious past; CONCUR as gatekeeper; Myth of self-sufficiency; Knowledge as power.

B) Future Scenarios for Leadership in the Iranian K-12 Education System

Based on the CLA, four distinct future scenarios for leadership in the Iranian K-12 education system emerge:
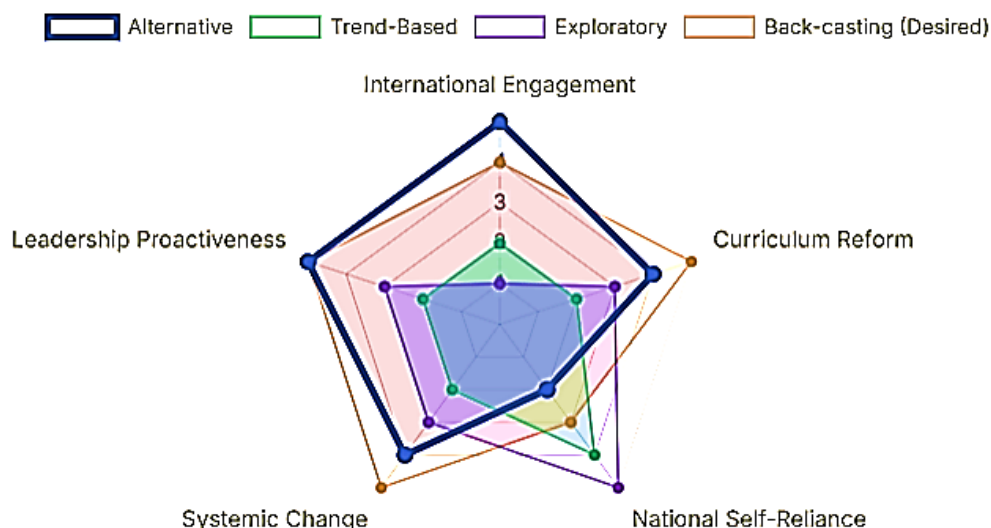
Figure 1: Future scenarios of Leadership in the Iranian K-12 education system

• **Scenario 1: Alternative (Increased International Engagement)**

Based on the CLA analysis, this scenario envisions a dynamic shift in Iranian K-12 education where knowledge diplomacy becomes a strategic imperative. At the Litany level, observable trends such as centralized control, the emphasis on Islamic values (Avery & Mostofi, 2025), and the dominating influence of the high-stakes CONCUR exam (Hazari, 2015) set the stage. When synthesized with the Social and Systemic Factors—namely easing international tensions, growing domestic recognition of the benefits of global collaboration, and mounting pressures for policy openness (Kabiri, 2023)—this scenario projects an active embrace of international partnerships. Educational leaders, under this model, would proactively seek diverse global collaborations, champion comprehensive curriculum reforms that incorporate intercultural competencies, and rigorously facilitate teacher and student exchange programs. This transformative vision calls for leaders proficient in cross-cultural negotiation and adept at managing a spectrum of stakeholder interests, while also aligning international engagements with national values and integrating these efforts into broader development plans.

• **Scenario 2: Trend-Based (Stagnation with Selective Engagement)**

This scenario, also emerging from the CLA framework, reflects the surface-level trends that reveal a cautious approach due to persistent geopolitical tensions and the prevailing narrative of national self-reliance. The Litany observations—such as limited international research engagement and selective project-based collaborations (UNICEF, 2025-a; UNESCO, 2025a)—are underpinned by Social and Systemic Factors like bureaucratic inertia and enduring political priorities

(Moinipour, 2021). Here, leadership remains risk-averse, focusing on forming partnerships only with ideologically aligned nations or through multilateral agencies. The curriculum is only modestly infused with global perspectives because of the dominant influence of traditional practices. This scenario suggests that while moderate progress may occur in isolated areas, the system overall is likely to continue operating within its constrained parameters, thereby perpetuating restricted access to cutting-edge international knowledge and limiting the scope of wider educational reform.

• **Scenario 3: Exploratory (Internal Focus and Curriculum Reform)**

Deriving from a deeper exploration of the CLA's Social/Systemic and Worldview levels, the Exploratory scenario envisions an inward shift triggered by deteriorating international relations and a strengthened nationalistic sentiment. This scenario arises from the recognition that current policies, reflecting a persistent focus on internal challenges such as educational quality, equity, and teacher capacity, lead to a deliberate prioritization of domestic issues over external engagements. Under this model, educational leadership would concentrate on comprehensive curriculum reform anchored in local values and needs, invest in robust domestic teacher training programs, and allocate resources to improve infrastructure. However, while such a focus might bolster national self-sufficiency, it also risks intensifying isolation from global academic discourses and best practices, thereby constraining the potential benefits of international collaboration and limiting students' exposure to diverse perspectives.

• **Scenario 4: Back-casting (Desired Future of Collaborative Excellence)**

The fourth scenario, emerging from a holistic integration of all CLA layers—from the observable

trends and systemic factors to the underlying worldviews and deep cultural metaphors—presents a visionary future where the Iranian K-12 education system becomes a globally recognized center of excellence. This back-casting approach envisions educational leaders who can bridge traditional values with global competencies by identifying strategic areas for internationally beneficial collaboration and establishing robust frameworks for knowledge exchange. Leaders in this scenario are expected to build and sustain trust with international partners through transparency, reciprocity, and the promotion of global citizenship ideals. The policy implications call for a long-term national strategy that not only encourages comprehensive international engagement and

curriculum internationalization but also ensures systematic capacity building and rigorous quality assurance, as emphasized by UNESCO (2017). This scenario encapsulates the transformative potential of harmonizing cultural narratives with modern educational imperatives, thereby offering a roadmap for a future defined by collaborative excellence in knowledge diplomacy.

Below is a comparative analysis table summarizing the four future scenarios for leadership in the Iranian K-12 education system based on the CLA framework, followed by a critical analytical discussion that highlights their distinct characteristics and interrelationships:

Table 4: Future Scenarios for Leadership in Iranian K-12 Education

Scenario	Description & Drivers	Leadership Dynamics	Policy Implications	Key Evidence
Alternative	Proactive international engagement driven by easing geopolitical tensions and growing domestic acknowledgment of the benefits of global collaboration.	Leaders are envisioned as proactive change agents skilled in cross-cultural negotiations, actively reforming curricula to incorporate global perspectives, and facilitating wide-ranging teacher/student exchanges.	Requires comprehensive policy reforms to reduce bureaucracy, invest in language training and exchange infrastructure, and align global partnerships with national development priorities.	Avery & Mostofi (2025); Hazari (2015); Kabiri (2023)
Trend-Based	A continuation of current cautious and selective international engagement, shaped by persistent geopolitical tensions and a strong emphasis on national self-reliance.	Leadership remains risk-averse, focusing on partnerships only with politically or ideologically aligned entities, resulting in only modest and selective integration of global pedagogical inputs.	Policies tend to maintain the status quo with targeted collaborations, leading to moderate progress but little systemic innovation.	Moinipour (2021); UNICEF (2025-a); UNESCO (2025a)
Exploratory	A shift towards internal focus due to worsening international relations and rising nationalistic sentiments, prompting emphasis on domestic curriculum reform and capacity building.	Leaders concentrate on internal strengths by prioritizing curriculum reforms grounded in local values, investing in teacher training, and upgrading infrastructure while limiting external collaborations.	Policies would prioritize reallocating resources to resolve domestic challenges, though the approach risks further isolation from cutting-edge global educational practices.	Hazari (2015); Tohidian et al. (2023); Zaker Salehi (2019)
Back-casting	A visionary, desired future where Iranian K-12 education is globally recognized for excellence, achieved through strategic and comprehensive knowledge diplomacy while upholding national values.	Leaders adopt transformational and integrative approaches, building transparent, reciprocal international partnerships, and promoting global citizenship from an early age.	Demands a long-term national strategy that integrates international engagement into development plans, along with substantial investments in capacity building and rigorous quality assurance.	UNESCO (2017); Knight (2021, 2022, 2023)

The four scenarios, as detailed in the table above, offer distinctly different trajectories based on the interplay of observable trends (the Litany level) and deeper systemic, ideological, and cultural forces as revealed by the CLA framework. The **Alternative** and **Back-casting** scenarios lean toward extensive international engagement. While the Alternative

scenario builds on the existing openness by harnessing improved global ties and proactive leadership (Avery & Mostofi, 2025; Hazari, 2015), the Back-casting scenario presents a more ambitious transformation that requires a paradigm shift in leadership, strategic planning, and policy innovation (UNESCO, 2017; Knight, 2021, 2022, 2023). In

contrast, the **Trend-Based** scenario depicts a continuation of current practices where caution and self-reliance remain predominant, and the **Exploratory** scenario signals a retreat inward to strengthen domestic capacities, albeit at the risk of international isolation.

Analyzing the dimensions of international engagement, the Alternative and Back-casting scenarios both emphasize the integration of global perspectives as a means of elevating the educational system. However, the Alternative scenario is rooted in leveraging existing trends—such as easing tensions and growing openness—to implement practical reforms. By contrast, the Back-casting scenario is aspirational, envisioning a complete overhaul of leadership dynamics and offering a roadmap toward globally competitive excellence by merging international best practices with traditional values. The Trend-Based scenario, while exhibiting some level of selective engagement, remains constrained by a risk-averse leadership style, as evidenced by the limited scope of global interactions reported in contemporary analyses (Moinipour, 2021).

The Exploratory scenario, which prioritizes internal curriculum reform and resource reallocation, stems from a reaction to diminished international interactions and rising nationalistic sentiment. Leaders in this scenario focus on reinforcing local strengths and addressing internal challenges, yet this inward orientation may inadvertently exacerbate isolation from global educational innovations (Hazari, 2015; Tohidian et al., 2023). In direct contrast, transformational leadership in the Back-casting scenario not only reconciles domestic values with global aspirations but also critically redefines leadership roles as agents of change who actively pursue and sustain international collaborations. This scenario reflects an ambition to integrate both internal capacity building and external benchmarking into a cohesive, future-oriented strategy.

A comparative analysis of these scenarios reveals that while each approach offers distinct benefits and carries inherent risks, their effectiveness hinges on striking an appropriate balance between internal reform and international engagement. Scenario comparisons underscore that a purely inward focus, as depicted in the Exploratory scenario, may yield robust domestic reforms yet leave the system vulnerable to global stagnation. Conversely, an overemphasis on rapid international integration, as suggested in the Alternative and Back-casting scenarios, may clash with ingrained cultural and bureaucratic norms. The analysis, therefore, suggests that the most sustainable path forward might involve a hybrid strategy that carefully blends the proactive, globally oriented initiatives of the Alternative/Back-casting visions with the pragmatic, locally responsive measures found in the

Trend-Based and Exploratory approaches. This balanced strategy would harness the strengths of each scenario to foster a robust, adaptive, and internationally competitive K-12 education system in Iran.

Discussion and Conclusion

This study examines knowledge diplomacy within the Iranian K-12 education system using the Causal Layered Analysis (CLA) framework to explore underlying influences and future leadership scenarios. The findings highlight the intricate interplay of historical, cultural, political, and economic factors that shape educational policies and practices (Inayatullah, 2005, 2009, 2019). While centralization and the prioritization of national values introduce unique considerations, strategically managed knowledge diplomacy has the potential to significantly enhance K-12 educational quality, foster innovation, prepare globally competent students, and strengthen constructive international relations. The CLA framework reveals that observable trends (Litany) are deeply connected to systemic factors such as political structures, economic constraints, and bureaucratic inertia, further reinforced by dominant worldviews centered on national sovereignty and cultural preservation. These realities are underpinned by deep-seated myths and metaphors regarding external influence and knowledge exchange, which must be considered in policy planning (Davidson, 2020).

The study outlines four distinct scenarios for the future of educational leadership, each presenting unique challenges and opportunities. The **Increased Engagement** scenario offers substantial advancements in global collaboration but requires navigating ideological sensitivities and implementing supportive policies. The **Selective Engagement** scenario ensures moderate progress but risks perpetuating systemic challenges and missing valuable international opportunities. The **Internal Focus** scenario allows for addressing pressing domestic concerns, such as resource allocation and teacher training, yet risks educational isolation and declining comparative standards (OECD, 2025-a, 2025-b). The **Collaborative Excellence** scenario, while ambitious, represents a transformative approach requiring visionary leadership, sustained investment, and systemic commitment. Successfully navigating these scenarios necessitates a nuanced, context-sensitive strategy from educational leaders and policymakers at the national, provincial, and school levels (Hazari, 2015; Moinipour, 2021).

The current discourse on knowledge diplomacy in Iran's K-12 education system has predominantly centered on macro-level policies and international engagements. However, as our analysis indicates, the translation of these overarching strategies into meaningful change largely depends on the

effectiveness of school-based leadership. School principals and administrators serve as pivotal agents in interpreting and operationalizing national policies within their local contexts. They are uniquely positioned to integrate centralized mandates with the specific needs of their communities, thereby ensuring that strategic international collaborations and domestic reforms are effectively realized at the school level (Zeinabadi et al., 2023).A critical implication for educational leaders is the necessity to develop robust leadership competencies that are responsive to both internal and global demands. Beyond navigating bureaucratic constraints, school-based leaders must be adept in cross-cultural negotiation, strategic change management, and innovative problem-solving. Professional development programs should therefore focus on building these skills, enabling leaders to bridge the gap between high-level policy objectives and the practical exigencies of daily school operations. Such targeted capacity building is essential to transform classroom environments into hubs of knowledge exchange and dynamic learning (Moinipour, 2021).

For policymakers, the findings underscore the importance of creating an enabling framework that actively supports school-level initiatives. National strategies should incorporate mechanisms that facilitate direct support for school-based leadership—such as decentralized decision-making, resource allocation tailored to local needs, and platforms for sharing best practices. Encouraging collaboration between schools and international institutions can further empower local leaders by exposing them to global educational trends and innovative pedagogical approaches. This bottom-up support not only reinforces the intended outcomes of knowledge diplomacy but also fosters a culture of adaptive learning and continuous improvement (Avery & Mostofi, 2025).

In summary, while macro-level policies establish the strategic vision for knowledge diplomacy in Iranian education, the implementation and success of these initiatives fundamentally depend on effective school-based leadership. Transformative change will require an integrated approach that combines systemic reforms with targeted support for local leaders. By prioritizing the development of school-based leadership capacities and creating policies that recognize their indispensable role, educational leaders and policymakers can work together to foster an adaptive, innovative, and globally competitive K-12 education system.

Although knowledge diplomacy is often associated with higher education institutions—such as research-driven collaborations exemplified by institutions like the London School of Economics—its principles are equally relevant to K-12 education. Early engagement with global knowledge networks, international partnerships, and student and teacher exchanges can shape young learners into effective global participants (Knight, 2020a, 2022a; Wilton Park, 2024a). Schools can directly contribute to knowledge diplomacy through international collaborations, virtual and physical exchange programs, and joint initiatives addressing global challenges such as climate change and sustainable development (Knight, 2018; NEQMAP, 2025). These interactions not only enrich the quality of education but also cultivate intercultural competencies, critical thinking, and mutual understanding between communities (Wilton Park, 2024a, 2024b).

A holistic approach to integrating knowledge diplomacy into K-12 education is imperative for preparing students to engage in global conversations and contribute meaningfully to international cooperation (OECD, 2025-b). This requires curriculum development that embraces global perspectives, teacher training programs designed to enhance intercultural teaching methodologies, and pedagogical innovations that create inclusive learning environments (Agharezaei, 2024; Mohammadi & Zare, 2024). In the Iranian context, policymakers and educational leaders can proactively promote global citizenship and intercultural understanding by embedding international perspectives within national curricula and facilitating strategic partnerships with international institutions (Avadiplomatic, 2016; Nami, 2016). By establishing collaborations with global organizations, Iranian schools can offer students firsthand opportunities to participate in knowledge diplomacy, fostering skills that enhance both national development and global engagement (Obst & Banks, 2015; Webster University, 2021; Pmas-aaur, 2021).

The future of knowledge diplomacy within Iran's K-12 education system depends on the foresight and commitment of educational leaders and policymakers. Emphasizing mutual benefit, reciprocity, and sustainable collaboration while aligning knowledge diplomacy with national priorities is crucial for leveraging international cooperation in strengthening educational outcomes (Knight, 2022a; Wilton Park, 2024a). A visionary and strategic approach—grounded in a thorough understanding of the evolving landscape and anticipating future challenges—can harness the transformative potential of global knowledge exchange. This leadership mindset will be instrumental in shaping a resilient, innovative, and internationally connected education system that advances both Iranian development goals and constructive global collaboration (Ghanbarian Ghalandar et al., 2024; Zeinabadi et al., 2023). Thoughtful engagement with international knowledge networks will ultimately position Iranian students and educators as key contributors to global educational and diplomatic initiatives, ensuring long-term educational progress and fostering

meaningful international relationships.

This study harnesses the Causal Layered Analysis (CLA) framework to critically examine the dynamics of knowledge diplomacy within Iranian K-12 education and its implications for leadership. At the macro level, observable trends—such as centralized control by the Ministry of Education (Bakhshalizadeh & Karimi, 2015), an unwavering commitment to Islamic values (Avery & Mostofi, 2025), and the high-stakes influence of the CONCUR exam on educational trajectories (Hazari, 2015)—highlight a system that, while robustly defined, is also constrained by rigid policy mandates. The integration of systemic factors like political priorities, economic constraints (Agharezaei, 2024; Obst & Banks, 2015), and entrenched bureaucratic structures (Tohidian et al., 2023; Rasian, 2009) with deeper cultural and ideological layers—reflected in pervasive myths of national self-reliance and the safeguarding of a glorious Islamic past (Zaker Salehi, 2019; Nobakht et al., 2022)—illustrates a complex landscape. This multifaceted analysis led to the identification of four distinct future scenarios: Alternative, Trend-Based, Exploratory, and Back-casting. The Alternative and Back-casting scenarios advocate for transformative change and proactive international engagement, emphasizing the need for visionary leadership and broad, strategic policy reforms (UNESCO, 2017; Knight, 2021, 2022, 2023). In contrast, the Trend-Based scenario maintains the current cautious approach marked by selective engagements, while the Exploratory scenario suggests an inward shift of focus in response to rising nationalistic sentiments and deteriorating international relations. Collectively, these findings not only advance our theoretical understanding but also call for an immediate rebalancing of top–down directives and localized, adaptive leadership (Mohammadi & Zare, 2024; Moinipour, 2021).

Translating these insights into practice requires that educational leaders—particularly school principals and administrators—develop robust competencies in cross-cultural negotiation, innovative change management, and evidence-based policy implementation. The study underscores that sustainable transformation hinges on empowering local leadership to interpret and operationalize national policy within their specific contexts. This calls for enhanced professional development programs that bridge the gap between theoretical aspirations for knowledge diplomacy and the practical exigencies of everyday school management. By fostering environments where strategic international partnerships can be effectively integrated with indigenous educational priorities, school-based leadership can become the conduit through which macro-level reforms are meaningfully realized, thereby transforming classrooms into centers of global knowledge exchange.

Despite its comprehensive analytical framework, this study has several limitations. The primary reliance on qualitative document analysis and existing literature may have limited the capture of nuanced, on-the-ground realities (Nami, 2016; Rasian, 2009). Future research should integrate empirical field studies and quantitative measures to validate and expand upon our findings. Incorporating longitudinal studies would also help in understanding how the identified future scenarios unfold over time across various regions in Iran. Additionally, while the CLA framework offers profound multi-layered insights, the absence of direct input from educational practitioners may limit the understanding of practical challenges in translating policy into practice.

Future investigations are encouraged to adopt comparative case studies that focus on schools exemplifying leadership practices aligned with the Alternative and Back-casting scenarios (UNESCO, 2017; Knight, 2021). Evaluating the impact of strategic capacity-building initiatives and innovative policy reforms on educational outcomes can provide granular, actionable evidence to refine the proposed scenarios. Moreover, expanding the scope to include regional disparities and contextual adaptation of international knowledge diplomacy strategies will further enhance the robustness of current recommendations, offering more precise guidance for both policymakers and school-based leaders aiming to foster an adaptive, innovative, and globally competitive K-12 education system in Iran.

References

Agharezaei, Z. (2024). Iran's education: Constructive or destructive? *WANA News Agency*. Retrieved April 20, 2025, from https://wanaen.com/irans-education-constructive-or-destructive/

Alipour Hafezi, M. (2024). Expectations of upstream documents from the higher education system. *Quarterly Journal of Research and Planning in Higher Education, 30*(2), 1-15. [In Persian]. https://journal.irphe.ac.ir/article_713430.html?lang=en

Amini, E., Yari Haj Ataloo, J., & Daneshvar Haris, Z. (2022). Identify and prioritize the dimensions and components of transformational leadership in education based on Fundamental Change Document, *Journal of School Administration,* 10(2), 118-146. [In Persian]. https://jsa.uok.ac.ir/article_62378.html

Asadi, M., Gholami, K., Salimi, J., & Khorsandi Taskoh, A. (2021). Knowledge Diplomacy Development Model in the Context of Internationalization of Educational Studies in Iranian Higher Education System. *Journal of*

Educational Planning Studies, 9 (18), 39-75. [In Persian] https://eps.journals.umz.ac.ir/article_3385.html

Avadiplomatic. (2016). UNESCO and UNICEF support high-level national consultation meeting on SDG4. Retrieved April 18, 2025, from https://avadiplomatic.com/en/archive/10321

Avery P. W. & Mostofi Kh. (2025). Iran - Education, literacy, schools. *Britannica*. Retrieved April 19, 2025, from https://www.britannica.com/place/Iran/Education

Bakhshalizadeh, Sh. & Karimi, A. (2015). Iran, Islamic Rep. of – TIMSS 2015 Encyclopedia. TIMSS & PIRLS International Study Center. Retrieved April 19, 2025, from https://timssandpirls.bc.edu/timss2015/encyclopedia/countries/iran-islamic-rep-of/

Bazoobandi, S. (2024). Purification of the higher education system and jihad of knowledge in Iran. *GIGA Focus Middle East, 2024*(1). German Institute for Global and Area Studies. Retrieved June 19, 2025, from https://www.giga-hamburg.de/en/publications/giga-focus/purification-of-the-higher-education-system-and-jihad-of-knowledge-in-iran

Broken Chalk. (2025). *Educational challenges in Iran*. Retrieved April 19, 2025, from https://brokenchalk.org/educational-challenges-in-iran-2/

Conway, M. (2012). Using causal layered analysis to explore the relationship between academics and administrators in universities. *Journal of Futures Studies*, *17*(2), 37-58. Retrieved April 19, 2025, from https://www.researchgate.net/publication/290741168_Using_causal_layered_analysis_to_explore_the_relationship_between_academics_and_administrators_in_universities

Davidson, S. (2020). Intersectionality: A tool for using causal layered analysis in education. *Journal of Futures Studies*, *25*(2), 49-60. Retrieved April 23, 2025, from https://jfsdigital.org/articles-and-essays/vol-25-no-2-december-2020/intersectionality-a-tool-for-using-causal-layered-analysis-in-education/

Dokhtesmati, M., & Bousari, R. G. (2013). Knowledge sharing in Iranian academic institutions: meta-analysis approach. *Procedia-Social and Behavioral Sciences, 73*, 383-387. https://doi.org/10.1016/j.sbspro.2013.02.066

Fiveable. (2024). Future Scenarios and Strategic Foresight – Intro to International Relations. Retrieved April 23, 2025, from https://library.fiveable.me/introduction-international-relations/unit-12/future-scenarios-strategic-foresight/study-guide/ABNF27QsiiWXYx1P

Ghanbarian Ghalandar, P., Shirbagi, N., & Farahbakhsh, S. (2024). A Comparative Study of Educational Leadership Preparation Approaches with Emphasis on Standardization and Professionalism. *Iranian Journal of Comparative Education*, *7*(4), 3290-3311. [In Persian] Retrieved April 23, 2025, from https://journal.cesir.ir/article_198006.html

Hassanpour, A., Azizi, N., Ahmadi, A., Gholizadeh, I. & Ramezani, S.G. (2023). Diversity in Iranian upstream educational documents. Journal for Multicultural Education, 17 (3), 278-290. https://doi.org/10.1108/JME-06-2022-0079 https://www.emerald.com/insight/content/doi/10.1108/jme-06-2022-0079/full/html

Hazari, S. (2015). What does school education look like in Iran? *British Council Voices Magazine*. Retrieved April 23, 2025, from https://www.britishcouncil.org/voices-magazine/what-does-school-education-look-iran

Hernandez, A. M., (2021). *Knowledge diplomacy and the future(s) of global cooperation*. E-International Relations. Retrieved April 23, 2025 from https://www.e-ir.info/2021/04/05/knowledge-diplomacy-and-the-futures-of-global-cooperation/

IEA.nl. (2025-a). *TIMSS 2023*. Retrieved April 18, 2025, from https://www.iea.nl/studies/iea/timss/timss2023

Inayatullah, S. (2005). *Causal layered analysis — Deepening the future*. Metafuture.org. Retrieved April 23, 2025, from https://www.metafuture.org/cla%20papers/Inayatullah%20Causal%20layered%20analysis%20-%20%20Deepening%20the%20Future.pdf

Inayatullah, S. (2009). Causal layered analysis: An integrative and transformative theory and method. *Futures research methodology, version 3*, 1. Retrieved April 23, 2025, from https://www.metafuture.org/wp-content/uploads/2016/01/Causal-Layered-Analysis-FRM-version-3-2009.pdf

Inayatullah, S. (2019). *Causal layered analysis: A four-level approach to alternative futures relevance and use in foresight*. McGuinness Institute. Retrieved April 23, 2025, from https://www.mcguinnessinstitute.org/wp-content/uploads/2024/11/CLATOOLBOXNEWCHAPTER2017FORFUTURIBLES.pdf

Inayatullah, S. (2023, April 28). *CAUSAL LAYERED ANALYSIS: Poststructuralism as a method*. Metafuture.org. Retrieved from https://www.metafuture.org/2023/04/28/causal-layered-analysis-poststructuralism-as-method/

Iran News Update. (2025). *The growing concern of education monetization in Iran*. Retrieved April 18, 2025, from https://irannewsupdate.com/news/society/the-growing-concern-of-education-monetization-in-iran/

Kabiri, M. (2023). Islamic Republic of Iran. In *TIMSS 2023 Encyclopedia*. IEA. Retrieved April 23, 2025, from https://timss2023.org/wp-content/uploads/2024/10/Iran-Islamic-Rep.-of.pdf

Khoshraftar Somee Sofla, E. (2015). History of education in Iran. *Research Journal of Humanities and Social Sciences, 6* (1), 45-49. Retrieved Retrieved April 23, 2025, from https://rjhssonline.com/HTMLPaper.aspx?Journal=Research%20Journal%20of%20Humanities%20and%20Social%20Sciences;PID=2015-6-1-9

Knight, J. (2015). The potential of knowledge diplomacy: Higher education and international relations. In *A Wealth of Nations* (pp. 37-45). European Association for International Education (EAIE). Retrieved April 23, 2025, https://www.researchgate.net/publication/350671487_The_potential_of_knowledge_diplomacy_Higher_education_and_international_relations

Knight, J. (2018). Knowledge Diplomacy: A bridge linking international higher education and research with international relations. *British Council*. Retrieved April 18, 2025, from https://www.researchgate.net/publication/350671223_Knowledge_Diplomacy_-_A_bridge_linking_international_higher_education_and_research_with_international_relations

Knight, J. (2020a). Knowledge diplomacy: What are the key characteristics? *International Higher Education*, (100), 38-39. https://ejournals.bc.edu/index.php/ihe/article/view/14243

Knight, J. (2020b). View of knowledge diplomacy. *International Higher Education, (102)*, 8-10. https://doi.org/10.36197/IHE.2020.102.03 Retrieved April 18, 2025, https://ejournals.bc.edu/index.php/ihe/article/view/14243/10697)

Knight, J. (2021). *Towards a knowledge diplomacy framework: an analysis of the role of international higher education, research and innovation in international relations* (Doctoral dissertation, University of Antwerp). Retrieved April 18, 2025, from https://repository.uantwerpen.be/link/irua/180864

Knight, J. (2022a). *Understanding and applying the key elements of knowledge diplomacy: The role of international higher education, research and innovation in international relations*. ERIC. (2025, April 18). https://files.eric.ed.gov/fulltext/EJ1350634.pdf

Knight, J. (2022b). *Knowledge diplomacy vs. soft power*. NAFSA. Retrieved April 25, 2025, from https://www.nafsa.org/ie-magazine/2022/10/11/knowledge-diplomacy-vs-soft-power

Knight, J. (2022c). *Knowledge diplomacy in international relations and higher education*. Springer. Retrieved April 25, 2025, from https://www.journals.uchicago.edu/doi/10.1086/726912

Knight, J. (2022d). Knowledge diplomacy: A definition and conceptual framework. In *Knowledge Diplomacy in International Relations and Higher Education* (pp. 99-111). Cham: Springer International Publishing. Retrieved April 25, 2025, from https://www.researchgate.net/publication/365723458_Knowledge_Diplomacy_A_Definition_and_Conceptual_Framework

Kolonko, T. (2025). Prepared for the future with alternative scenario construction. 4start. Retrieved June 3, 2025, from https://www.4strat.com/strategy/alternative-scenario-construction/

Lingrün Jana (2025). *Causal layered analysis (CLA)*. Retrieved April 18, 2025, from https://www.4strat.com/analysis/causal-layered-analysis-2/

Lorenzi, D. (2023). How does Iran's education system look like? *SURFIRAN*. Retrieved April 18, 2025, from https://surfiran.com/mag/how-does-irans-education-system-look-like/

Maghsoudi, M; Khodamoradi, A. (2023). An Evaluation of the English Language Textbooks for Iranian Junior High Schools Based on the Objectives of Fundamental Reform Document of Education (FRDE), The International Journal of Humanities. 30 (2): 98-122. https://ensani.ir/fa/article/540696/an-evaluation-of-the-english-language-textbooks-for-iranian-junior-high-schools-based-on-the-objectives-of-fundamental-reform-document-of-education-frde-

Mahdi, R., Keykha, A., Moradpour, S., & Shafizade, F. (2025). Seeing through the eyes of global learners: unveiling pedagogic quality at the university of Tehran. Globalisation, Societies and Education, 1-20. https://www.tandfonline.com/doi/full/10.1080/14767724.2025.2468660?src=

Malaki, H., Salmani, B., Abbaspour, A., Hakimzadeh, R., & Amir Tiemouri, M. H. (2018). A model for curriculum leadership in the primary education of Iran. *Journal of curriculum studies*, *13*(48), 5-38. [In Persian]. https://www.jcsicsa.ir/article_82612.html?lang=en

Medadi, A., & Mahdavi, A. H. (2025). Teacher unions involvement in education policy: lessons from the Iranian teachers movement. *Globalisation, Societies and Education*, *23*(1), 125-144. https://www.tandfonline.com/doi/full/10.1080/14767724.2024.2305225

Mercer, R. (2022). CLA special issue introduction. *Journal of Futures Studies*, *27*(2), 1-3. Retrieved April 23, 2025, from https://jfsdigital.org/2022-2/vol-27-no-2-december-2022/cla-special-edition-introduction/

Mohammadi, S., & Zare, M. N. (2024). Scientific Paradigms in Iran's Educational Administration: A Critical Exploration. *Research in Educational Administration and Leadership*, *9* (4), 475-511. https://dergipark.org.tr/en/download/article-file/4177058

Moinipour, S. (2021). The Islamic Republic of Iran

and children's right to education: acceptability and adaptability. *Human Rights Education Review, 4*(2), 26-48. https://doi.org/10.7577/hrer.3929 Retrieved June 3, 2025, from https://www.tandfonline.com/doi/full/10.7577/hrer.3930)

Mullis, I.V.S., Martin, M.O. Dana L. P. F., & Fishbein K. B. (2021). *TIMSS 2019 - International results in mathematics and science*. Retrieved April 25, 2025, from https://www.iea.nl/sites/default/files/2021-01/TIMSS%202019-International-Results-in-Mathematics-and-Science.pdf

Nami, S. (2016). School-Based Policies in Iran. *Modern Applied Science*, *10*(12), 1-90. Retrieved June 3, 2025, from https://www.researchgate.net/publication/305787089_School-Based_Policies_in_Iran

National Academy of Education. (2025). *International education assessments*. Retrieved April 18, 2025, from https://naeducation.org/wp-content/uploads/2018/08/International-Education-Assessments-NAEd-report.pdf

NCEE. (2016-a). *2015 Trends in international mathematics and science study (TIMSS)*. Retrieved April 18, 2025, from https://ncee.org/quick-read/2015-trends-in-international-mathematics-and-science-study-timss/

NCRI Women Committee. (2024). *Iran's education system: A glimpse into new academic year*. Retrieved April 26, 2025, from https://wncri.org/2024/09/19/irans-education-system/

Nemati, T., & Ghaffarian Panahi, Ali., (2019). "Problems of Fundamental Reform Document of Education (FRDE) in the Education System in Iran , A Meta-Analysis," Journal of financial analysis, IJFADaghani, 2(1), 45-56. Retrieved June 17, 2025, from https://ideas.repec.org/a/adw/journl/y2019v2i1p45-56.html

NEQMAP. (2025). *Factors influencing changes in learning achievement: Iran's performance in TIMSS and PIRLS (2003 – 2011)*. UNESCO Bangkok. Retrieved April 18, 2025, from https://neqmap.bangkok.unesco.org/wp-content/uploads/2019/12/15_08_05_TIMSS_Iran.pdf

Obst, D. & Banks, C. (2015). *Reinventing academic ties: Opportunities for US-Iran higher education cooperation*. Institute of International Education (IIE). Retrieved April 23, 2025, from https://www.iie.org/wp-content/uploads/2022/12/Reinventing-Academic-Ties-Opportunities-For-US-Iran-Higher-Education-Cooperation-NMOU.pdf

OECD. (2025-a). *PISA 2022 results (Volume I)*. Retrieved April 18, 2025, from https://www.oecd.org/en/publications/pisa-2022-results-volume-i_53f23881-en.html

OECD. (2025-b). *PISA: Programme for international student assessment*. Retrieved April 18, 2025, from https://www.oecd.org/en/about/programmes/pisa.html

Pmas-aaur, F. (2021, January 11). *Education system of Islamic Republic of Iran* [PowerPoint slides]. SlideShare. Retrieved April 23, 2025, from https://www.slideshare.net/slideshow/education-system-of-islamic-republic-of-iran/83141525

Rabbani Khah, F., Khorsandi Taskoh, A., Tehranchi, M. M., Ghiasi Nodoohan, S., & Elyasi, M. (2024). Explaining the Dimensions and Components of Academic Governance. Iranian Higher Education, 15(3), 91-113. [In Persian] http://ihej.ir/browse.php?a_id=1989&slc_lang=en&sid=1&printcase=1&hbnr=1&hmb=1

Rasian, Z. (2009). Higher education governance in developing countries, challenges and recommendations. *Nonpartisan Education Review/Essays, 5* (3), 1-18. Retrieved April 23, 2025, from https://www.nonpartisaneducation.org/Review/Essays/v5n3.htm

Rumbley, L. E., Altbach, P. G., Reisberg, L., & Leask, B. (2023). Trends in global higher education and the future of internationalization: Beyond 2020. In The handbook of international higher education (pp. 3-22). Routledge. Retrieved April 18, 2025, from https://www.taylorfrancis.com/chapters/edit/10.4324/9781003447863-2/trends-global-higher-education-future-internationalization-laura-rumbley-philip-altbach-liz-reisberg-betty-leask

Scholaro. (2025). Education system in Iran. Retrieved April 18, 2025, from https://www.scholaro.com/db/countries/Iran/Education-System

Scupelli, P. (2022). Does When and How Design Students Learn Causal Layered Analysis Matter. *Journal of Futures Studies*, *27*(2), 28-41. Retrieved April 23, 2025, from https://jfsdigital.org/2022-2/vol-27-no-2-december-2022/does-when-and-how-design-students-learn-causal-layered-analysis-matter/

Scupelli, P. (2023). *Teaching to transfer causal layered analysis from futures thinking to design thinking*. IASDR Conference Paper. Retrieved April 18, 2025, from https://dl.designresearchsociety.org/cgi/viewcontent.cgi?article=1145&context=iasdr

Skelton, E. (2019). *Knowledge diplomacy*. British Council. Retrieved April 20, 2025, from https://www.britishcouncil.org/research-insight/knowledge-diplomacy

Stapleton, J. (2020). *How to use exploratory scenario planning (XSP): Navigating an uncertain future*. Lincoln Institute of Land Policy. Retrieved April 28, 2025, from https://www.jstor.org/stable/pdf/resrep29280.pdf

Tohidian, I., Abbaspour, A., & Taskoh, A. K. (2021). Iranian Students' Experience of K-12 and Higher Education: Use of Drawings to Convey the Difference Between Ideals and Reality. *The Qualitative Report, 26*(11), 3392-3424. https://doi.org/10.46743/2160-3715/2021.4911 Retrieved April 18, 2025, from https://www.researchgate.net/publication/355918478_Iranian_Students'_Experience_of_K-12_and_Higher_Education_Use_of_Drawings_to_Convey_the_Difference_Between_Ideals_and_Reality)

Tohidian, I., Khorsandi Taskoh, A., & Abbaspour, A. (2023). Urgent changes to be made in Iran's primary education: voices from teachers. *ECNU Review of Education, 6* (3), 485-497. https://doi.org/10.1177/20965311221120076 Retrieved April 18, 2025, from https://files.eric.ed.gov/fulltext/EJ1390126.pdf)

UN Global Pulse. (2023a). *Causal layered analysis*. Foresight Project. Retrieved April 18, 2025, from https://foresight.unglobalpulse.net/blog/tools/causal-layered-analysis/

UN Global Pulse. (2023b). *Causal layered analysis*. Strategic Foresight Project: Intergenerational Equity. Retrieved April 18, 2025, from https://foresight.unglobalpulse.net/intergenerational-equity/wp-content/uploads/sites/4/2023/04/Tool3.pdf

UNESCO. (2017). *UNESCO country strategy for the Islamic Republic of Iran 2017-2021*. Retrieved April 18, 2025, from https://unesdoc.unesco.org/ark:/48223/pf0000260299

UNESCO. (2023). Empowering Afghan women refugee teachers in Iran. Retrieved April 18, 2025, from https://www.unesco.org/en/articles/empowering-afghan-women-refugee-teachers-iran

UNESCO. (2025a). Strengthening scientific diplomacy: The first UNESCO chairs meeting in Iran. Retrieved April 18, 2025, from https://www.unesco.org/en/articles/strengthening-scientific-diplomacy-first-unesco-chairs-meeting-iran

UNESCO. (2025-a). *UN Educational, Scientific and Cultural Organization (UNESCO)*. United Nations in Islamic Republic of Iran. Retrieved April 18, 2025, from https://iran.un.org/en/download/12466/48309

UNESCO. (2025-b). *UN Educational, Scientific and Cultural Organization (UNESCO)*. United Nations in Islamic Republic of Iran. Retrieved April 18, 2025, from https://iran.un.org/fa/download/73702/136723

UNICEF Iran. (2025-a). *Education for refugees*. Retrieved April 18, 2025, from https://www.unicef.org/iran/en/education-refugees

UNICEF. (2024). *1000 Iranian and refugee children and their families benefited from remedial and parenting classes*. UNICEF Iran. Retrieved April 18, 2025, from https://www.unicef.org/iran/en/press-releases/1000-iranian-and-refugee-children-and-their-families-benefited-remedial-and

UNICEF. (2025-a). *Iran (Islamic Republic of)*. Retrieved April 18, 2025, from https://www.unicef.org/iran/en/topics/iran-islamic-republic

UNICEF. (2025-b). *Protecting children with disabilities through education for earthquake preparedness*. UNICEF Iran. Retrieved April 18, 2025, from https://www.unicef.org/iran/en/press-releases/protecting-children-disabilities-through-education-earthquake-preparedness

University of London. (2025). *Knowledge diplomacy: Research, innovation and higher education*. Institute in Paris. Retrieved April 20, 2025, from https://www.london.ac.uk/institute-paris/research/research-themes/knowledge-diplomacy-research-innovation-higher-education-institutions-international-relations

University of Maryland, Baltimore County (UMBC). (2025). *Guidance on working with Iranian students and other Iranian collaborators*. Office of Research Protections and Compliance. Retrieved April 18, 2025, from https://research.umbc.edu/guidance-on-working-with-iranian-students-and-other-iranian-collaborators/

Webster University. (2021). *School of education receives NSA grant for teachers of Persian, Arabic languages*. Webster University News. Retrieved April 18, 2025, from https://news.webster.edu/2021/nsa-grant-persian-arabic-teacher-language-education.php

Wilton Park. (2024a). *Knowledge diplomacy: The role of international higher education in a new geopolitical era*. Retrieved April 18, 2025, from https://www.wiltonpark.org.uk/reports/knowledge-diplomacy-the-role-of-international-higher-education-in-a-new-geopolitical-era/

Wilton Park. (2024b). Understanding knowledge diplomacy. In *Knowledge diplomacy: The role of international higher education in a new geopolitical era*. Retrieved April 18, 2025, from https://www.wiltonpark.org.uk/reports/knowledge-diplomacy-the-role-of-international-higher-education-in-a-new-geopolitical-era/understanding-knowledge-diplomacy/

Zaker Salahi, G., & Keykha, A. (2019). A Comparative Study in Higher Education Goals of Certain Countries. Iranian Journal of Comparative Education, 2 (3), 346-361. [In Persian] Retrieved April 18, 2025, from https://journal.cesir.ir/article_103836_59803db5538a82946f6ac618fae5107a.pdf

Zeinabadi, H., Kouhsari, M., & Gurr, D. (2023).

Exploring instructional leadership in Iranian primary schools: Perspective of successful principals. *International Journal of Leadership in Education*, *26*(5), 819-836. Retrieved April 18, 2025, from https://www.researchgate.net/publication/34729756

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