#### Article

# Leverage Quantum Management as a Leadership Instrument for Revitalizing a Learning Organization -- A Case Study of an Off-Site Expanding Library

Xiaoyu Li 1, \*



\* Correspondence: Xiaoyu Li, Qingdao Hengxing University, Qingdao, Shandong, China

Abstract: In the context of the rapid development of the education industry in the new era, quantum management, as an emerging leadership tool, is of great significance for adapting to the rapidly changing market environment. In view of the lack of specific case studies on the application of quantum management in the field of education, this study analyzes the role of quantum management as a leadership instrument in revitalizing the learning organization through the case study of an overseas education group's remote expansion reading library. The paper draws on the three core theories of quantum and the organizational change cases of the world's leading enterprises. The study found that the greater the intervention, the less space for individuals to exert their abilities. External intervention and observation change outcomes, corporate culture and vision are critical to personal development. In addition, individual self-intervention and inner motivation are seen as key to realizing creative potential. This paper provides a new perspective and practical framework for quantum management in educational organizations and emphasizes the importance of innovative management methods and implementation strategies for learning organizations in the context of globalization and dynamic competition.

Keywords: quantum management; innovative leadership; learning organization

# 1. Introduction

An overseas education group headquartered in Beijing has cooperated with Foreign Languages Books Press to build five offline reading libraries in Beijing, and achieves gratifying results. They decide to expand into third-tier cities by opening new reading libraries. The headquarters provides three guarantees: sending personnel from the Beijing headquarters, providing initial financial support, and ensuring the supply of books. The team's organizational structure is shown in Figure 1.



Figure 1. Organizational Chart of the Reading Library.

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The project, after six months of implementation, ultimately proves unsuccessful. Subsequently, the team conductes a comprehensive review to identify the primary causes for this outcome, which primarily encompasses three points, including the traditional organizational structure is not suitable for market management in other cities, the headquarters management is strict, subordinate team shave little decision-making power, and the vision does not resonate with local employees.

#### 2. Methodology

Everything in the universe is essentially an invisible, highly active, uncertain, and energetic indivisible whole, which is the "quantum state" (Cox & Forshaw, 2011; Tegmark, 2014). Becker (2018), moreover, believes that it is necessary to go beyond traditional mechanical thinking and re-examine the philosophical significance of quantum physics, because the VUCA era is exactly characterized by the quantum era. As articulated by Stephen Hawking, 'Quantum mechanics has become foundational across nearly all contemporary scientific disciplines'. Quantum management is the management of organisations using conceptual approaches with a quantum worldview. The profound interconnection between Haier's holistic worldview and principles derived from quantum physics underscores their shared emphasis on transcending dualistic paradigms while highlighting overarching correlations, offering significant implications for humanity today (Zohar, 1990). In this case, I intend to apply the three core theories of quantum mechanics in conjunction with the transformational experience of Haier Group, a Fortune Global 500 company, to restructure and redesign.

Firstly, the double-slit interference experiment is a fundamental quantum mechanical demonstration employed to illustrate the wave characteristics of light or particles (cites to Figure 2). This experiment proves that the particle is also a wave, and the wave is also a particle, with 'wave-particle duality' (Thomas Young, 1801). Physicists developed this theory into the formula: P? +V?  $\leq$ 1, Particles have a degree of fixity (represented by P), it is Visible (localization). Waves have a degree of non-determinism (represented by V), It is Invisible(non-locality). P and V are negatively correlated, that is, the larger one is, the smaller the other is.

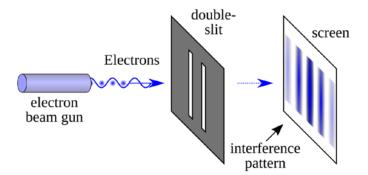


Figure 2. The double-slit interference experiment.

Secondly, the wholeness, the energy that constitutes everything in the universe is an indivisible whole, an infinite quantum field, and all the subatomic particles manifested by the energy are also holistic (Bohm, 1980).

Thirdly, external intervention and observation change the result, matter is both particles and waves, the two properties exist at the same time, the specific manifestation of the nature of particles or waves, depending on the outside world on its observation and intervention, when you observe the way the particles, it will be manifested as particles, you observe the way the waves, it will be manifested as waves (Bohr, 1958; Heisenberg, 1958; Schrödinger, 1944).

# 3. Organizational Redesign

#### 3.1. Rebuild the Organizational Infrastructure with System Thinking

First, strategic leadership involves forward-thinking to position the organization for success, while simultaneously designing current activities to prepare for both anticipated and unforeseen outcomes (Walker, 2010). Decision capital is intertwined with structural conditions, signifying that a leader's decision-making ability shapes the environment that supports overall operations. Infrastructure encompasses practices and resources that connect diverse individuals and groups. The findings of quantum theory's double-slit experiment bear resemblance to the constraints of bureaucratic management on employees, stricter management leads to more meticulously organized processes and tighter restrictions, resulting in reduced employee activity and innovation. Haier's organizational changes are strategic measures aimed at transitioning enterprise development from being "instruction-driven" to "customer-driven". The creation of customer value and the alignment towards this goal form the fundamental basis for organizational design. I learned a lot of Organizational Infrastructure in class, including Parallel Structure Design, Cascading Development Design, Emergent Specialist Design. Strategic leadership is evidencebased and outcomes focused (Quong & Walker, 2010). Therefore, I believe that our priority should be to establish a customer-centric organization.

Establishment of such an organizational infrastructure, internally, customization involves treating organizational units and employees as internal customers to fulfill their needs (cites to Figure 3). This means that the three local departments are no longer solely under the jurisdiction of the vertical headquarters, but are interconnected to provide customer value services. The Beijing headquarters serves as a platform for providing brand support, initial capital investment, book resources, and other guarantees. Externally, customization entails establishing a "zero-distance" relationship with various stakeholders such as end customers, upstream suppliers, partners, and social resources in order to grant frontline personnel flexibility and decision-making autonomy. This is achieved through specific incentive and constraint mechanisms aimed at enhancing the initiative and creativity of frontline personnel.

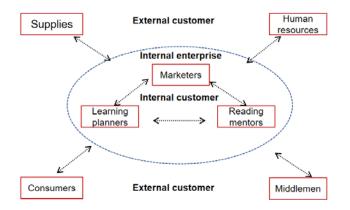


Figure 3. Rubuilding the organizational infrastructure with customer-centered.

Secondly, strategic leaders must deploy personnel by maximizing their talents and skills (Quong & Walker, 2010), and refrain from relocating management from the Beijing headquarters to local areas due to their lack of understanding of the local market. After identifying suitable project leaders from the local market, they will be tasked with recruiting three key positions for the local reading library. Leveraging the longboard effect theory of wooden barrels, it is essential to fully utilize employees' most advantageous abilities while also considering their collaborative skills. In particular, marketing and sales

staff should consider attracting top sales performers from competing organizations in order to rapidly build a customer base and achieve strong sales performance (Kotler & Keller, 2016). The role of reading mentors requires direct customer interaction, making experience and satisfaction crucial. Therefore, arrangements should be made for reading mentors to undergo training at the Beijing headquarters. Simultaneously, the headquarters should assign individuals in similar roles to provide initial support during the opening phase. The Learning Planner must develop plans and refine value propositions for marketing sales and reading mentors to convey to customers, thus this position necessitates a clear understanding of target customers' preferences and needs as well as an ability to integrate information effectively. Following local recruitment, substantial support should be provided by vertical position heads at the Beijing headquarters.

Finally, strategic leaders must effectively manage the financial and human resources of their unit (Quong & Walker, 2010). Following candidate selection, the next step involves establishing power structures, delineating responsibilities, and implementing systems including a basic management system, salary standards and reward systems, promotion protocols, and staff service criteria. A crucial aspect is defining approval authority and responsibility between local leadership and the Beijing headquarters. Clear delineation of authority and responsibility can enhance organizational performance, improve decisionmaking efficiency, and bolster risk control (Kang & Snell, 2009; Mikes, 2011; Okhuysen & Bechky, 2009). Local project leaders are required to devise monthly sales plans and promotional strategies aligned with annual sales targets for submission to the Beijing headquarters for approval. Additionally, local leaders need to establish quantitative performance metrics for each employee.

# 3.2. Rebuilding Identity through Appropriate Vision and Dialogue

Firstly, corporate culture embodies a self-organizing energy with the capacity for self-selection, self-generation, self-replication, and duplicity. Vision constitutes a pivotal element of culture that unites individuals to form a cohesive whole (Klein, 2013; Schein, 2007). In the context of the double-slit experiment, this invisible 'V ' symbolizes corporate culture's ability to shape employees' attitudes and thoughts. I will leverage social capital and cultural conditions to reconstruct the vision for the organization.

Secondly, all organizations possess a vision, but the key lies in whether employees comprehend and can effectively integrate it into their work. I believe the issue lies in effectively communicating with employees at all levels using different dialogue "languages" that resonates with them and presenting a compelling vision they can readily embrace (As shown in Figure 4). Transitioning from lower-level to higher-level roles involves shifting from tactical to strategic thinking (Senge, 1990). Therefore, I will emphasize more on personal development and organization cash for grassroots staff, and more on platform long-term development planning for senior staff. Establishing a shared identity within the organization, fostering common conceptual values, and participating in a unified 'ecosystem' will facilitate the cultivation of a shared language, mode of thinking, and approach to tasks among individuals. This will lead to stronger neural connections between people as well as enhanced resonance and internal perception.

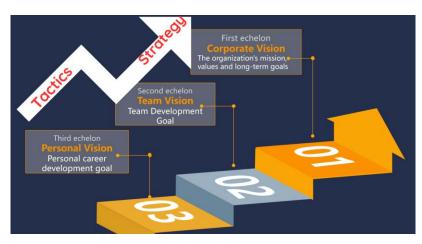


Figure 4. Emphasis of vision at different echelons.

#### 3.3. Integrating the External and Internal Driven to Foster Personal Mastery and Mental Model

To begin with, human capital and relational conditions are integrated factors in examining personal development. Personal refinement encompasses not only personal mastery but also mental model. both aspects hold particular significance for leaders who must avoid subjective assessments regarding employees' developmental progress. Drawing on Schrödinger's cat theory wherein an employee represents an uncertain outcome akin to opening a 'box', their potential for growth remains undetermined until observed directly through engagement involving provision of platforms, visionary guidance, and incentives—thus eliciting their passion and capabilities. Haier's implementation of 'Rendanheyi' model stands out as an exemplary application within quantum management principles, promoting individual empowerment under 'everyone as their own CEO' ethos, fostering self-organizing 'creators' while dismantling traditional hierarchical employment structures.

Secondly, beyond organizational interventions, self-intervention becomes imperative for creators, since actualizing one's creative potential hinges greatly upon introspective observation. When one identifies themselves as a creator, and holds themselves accountable accordingly, it triggers manifestation of traits aligning with this identity, resulting in genuine creativity. Failure ensues if mechanisms are provided without corresponding responses. In light of this, I aim to embrace Haier Group's advocacy for 'creator' culture that empowers individuals towards assuming roles akin to CEOs.

The last but not the least, developing mature mental mentor necessitates consistent practice involving comprehensive learning processes like reflective analysis of experiences amidst uncertainties coupled with open reception of feedback alongside fostering empathetic understanding. This approach fosters cultivation of a resilient mindset essential for effectively navigating intricate and dynamic contexts (Boyce, 1996; Dweck, 2006). Furthermore, acknowledging knowledge transfer between senior leadership and front-line staff underscores its value without stigma or hierarchy constraints given their direct interaction with customers which informs decision-making at higher levels within organizations. Additionally recognizing potential communication breakdowns across various organizational tiers underscores importance of outcome-driven approaches centered on customer needs while refining interpersonal skills, thereby enhancing overall team mental model maturity.

# 4. Conclusion

The organizational restructuring incorporates key principles from Quantum's double-slit interference experiment, the interconnected wholeness, self-driven and externally driven change outcomes theories. Additionally, it draws inspiration from a leading industry player's transformational approach towards becoming a learning organization that prioritizes customer-centric infrastructural frameworks, "Rendanheyi" model, everyone is their own CEO, creator culture, etc.

This novel design paradigm dismantles conventional hierarchical structures in favor of establishing an inclusive network centered around customers, delivering vision and dialog based on language pairs at different echelons of employees, and enhancing the personal mastery and mental model of team members through external and internal driven.

Learning organization encourages joint ownership and responsibility, fostering a culture of innovation and engagement (Gage, 2004). Given the dynamic nature of today's landscape, some strategies may possess limitations necessitating continual adaptation, reflection, and ongoing innovation to effectively navigate market shifts. Within the quantum worldview, the emphasis is on the infinite interconnectedness of all things, where every particle is closely tied to all others, and each entity, including individuals, functions as a focal point in a system. The mechanism of infinite interconnectedness within the entire system will replace hierarchical structures. This perspective presents a promising methodological approach for continued exploration as we confront the growing complexities of the future.

# References

- 1. Becker, A. (2018). What is real?: The unfinished quest for the meaning of quantum physics. Basic Books.
- 2. Bohm, D. (1980). Wholeness and the implicate order. Routledge.
- 3. Bohr, N. (1958). Atomic physics and human knowledge. Wiley.
- 4. Boyce, M. E. (1996). Organizational story and storytelling: A critical review. Journal of Organizational Change Management, 9(5), 5-26.
- 5. Cox, B., & Forshaw, J. (2011). The quantum universe: Everything that can happen does happen. Allen Lane.
- 6. Dweck, C. S. (2006). Mindset: The new psychology of success. Random House.
- 7. Hawking, S. (1988). A brief history of time. Bantam Books.
- 8. Heisenberg, W. (1958). Physics and philosophy: The revolution in modern science. Harper & Row.
- 9. Kang, S. C., & Snell, S. A. (2009). Intellectual capital architectures and ambidextrous learning: A framework for human resource management. Journal of Management Studies, 46(1), 65-92.
- 10. Klein, G. (2013). Organizational culture: Theory, research and practice. China Renmin University Press.
- 11. Kotler, P., & Keller, K.L.(2016). Marketing management. Pearson.
- 12. Mikes, A. (2011). From counting risk to making risk count: Boundary-work in risk management. Accounting, Organizations and Society, 36(4-5), 226-245.
- 13. Okhuysen, G. A., & Bechky, B. A. (2009). Coordination in organizations: An integrative perspective. Academy of Management Annals, 3(1), 463-502.
- 14. Schein, E. H. (2007). Organization culture and leadership (4th ed.). Jossey-Bass.
- 15. Schrödinger, E. (1944). What is life?: The physical aspect of the living cell. Cambridge University Press.
- 16. Senge, P. (2006). The Fifth Discipline: The Art & Practice of the Learning Organization. Doubleday: New York
- 17. Tegmark, M. (2014). Our mathematical universe: My quest for the ultimate nature of reality. Knopf.
- Qian, H., Walker, A., & Xiaowei, Y. (2017). Building and leading a learning culture among teachers: A case study of a Shanghai primary school. Educational Management Administration & Leadership, 45(1), 101–122. https://doi.org/10.1177/1741143215623785
- 19. Quong, T., & Walker, A. (2010). Seven Principles of Strategic Leadership. International Studies in Educational Administration (Commonwealth Council for Educational Administration & Management (CCEAM)), 38(1), 22–34.
- 20. Walker A (2010) Building and leading learning cutres. In: Bush T, BellL and Midlewood D (eds) The Principles of Educational Leadership & Management (2nd ed.) London: Sage, pp.176-198.
- 21. Young, T. (1801). The Bakerian Lecture: On the Theory of Light and Colours. Philosophical Transactions of the Royal Society of London, 92, 12–48. <u>https://doi.org/10.1098/rstl.1802.0004</u>
- 22. Zohar, D. (1990). The quantum self: Human nature and consciousness defined by the new physics. William Morrow.

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