

Design of Quantum Leadership Model in Iranian State Universities

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Abstract

Purpose: The aim of the present study was to design a quantum leadership model in Iranian public universities.

Methodology: The research method was applied in terms of purpose and qualitative in terms of data collection method. The statistical population of the research in the qualitative section included university experts who were selected as the sample size using the snowball sampling method and the principle of saturation of 10 people. In the quantitative section, the statistical population was the available scientific research articles on the subject, from which 32 articles were selected. In this study, library method, observation, in-depth interview and semi-in-depth interview were used to collect data. In a small part, content analysis was used. The interview with the experts indicated that the interview was valid, and in order to calculate the reliability, the reliability method was used between the two coders, and the results indicated that the interview was stable and valid. For the analysis of research data in the qualitative section, point analysis of content and Delphi method, and in the quantitative section, interpretive-structural modeling was used.

Findings: The results of the study showed that the components of quantum leadership included quantum view, quantum thinking, quantum sense, quantum cognition, quantum operation, quantum trust and biocenology. On the other hand, the results showed that there is a significant difference between the existing leadership and the desired leadership.

Conclusion: Attention to quantum thinking and Its point of view is necessary to achieve quantum leadership, therefore the four main factors can be explained in explaining why quantum leadership includes: uncertainty phenomena, environmental complexities, extensive and reciprocal interactions and continuous and rapid changes that Taken from the characteristics of the quantum paradigm, it is a phenomenon and necessitates the use of a certain style of leadership as quantum leadership in the organization.

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1. Introduction

The beginning of the twenty-first century can be called quantum age in terms of technology. The key to organizational excellence is top leadership. Seven Quantum Skills can activate 21st century leaders to create a new level of organizational excellence to harness the world's most powerful energy, the energy of the mind. If leaders and their organizations want to thrive in the new age, a new leap of thought and skill in managers must emerge with this leadership style. Quantum changes and reverses managers' perspectives on phenomena from top to bottom and from the outside in (Scholten, 2011). Recently, in the literature of management, there is talk of a new model in the field of organization and management; A paradigm known as quantum theory. Quantum's theory establishes a new paradigm based on complexity, uncertainty, randomness, non-spontaneous causality, idealism, participatory collusion, complementarity, and multiverse interpretation (especially, 2018).

Research in the fields of neuroscience, biology, and neuroscience shows that humans are in fact quantum beings. Although in the first place each person appears to be a material being, he has an intangible and immaterial dimension (called mind, consciousness, or soul), the function of which seems to be influenced by quantum principles (Azimi and Razavi, 2014). The New Science Principles Project requires an awareness of leadership practices in modern organizations, as these technologies and principles provide a new metaphor for organizational life and leadership work. However, traditional developmental development models have given way to new intervention models and methods in times of uncertainty, complexity, globalization, and rapid change (Watson, Porter-O'Grady, Horton-Deutsch and Malloch, 2018).

There are two elements involved in comprehensive leadership; Management and Quantum each element alone is not enough for the success of the organization. In the comprehensive leadership, there is a balance between management and quantum. The principles of quantum mechanisms place great emphasis on characteristic, behavioral, and contingency approaches. Porter-Ogridi states that quantum leadership is based on the concepts of disorder theory (Raymer and Monroe, 2019). Irregular theory states that the fate of a fixed organizational structure is doomed. The role of leadership in these changed organizations is to maintain a balance between tension and order, which on the one hand promotes creativity and on the other hand prevents instability (Sullivan and Decker, 2005). The quantum approach has good results in today's complex world; an approach that is effective in changing the environment in the future. Creativity and knowledge is the key to organizational success. Employee participation has a significant impact on organizational performance. To make many of the changes needed in disorder, the leader's main role is to help employees adapt to new trends and strategies (Normor Javidi and Lang, 2019).

The quantum skills model shows the interrelationships between the seven skills. The three triangular skills of quantum vision, quantum thinking, and quantum feeling are psychological in nature. The skills of the triangle of quantum knowledge, quantum action, and quantum trust are spiritual skills. Central skill, the existence of a quantum, is related to each of the other skills in a complex and intertwined way (Shelton and Darling, 2003).

The aim of the present study is to use these seven skills that managers in organizations can create quantum organizations; That is, organizations that are learners; Where continuous improvement and continuous learning is a cultural norm, these seven quantum skills do not operate independently but are presented in an integrated set of skills and provide a model for greater efficiency and effectiveness in the organization according to quantum skills. Given the importance of this issue, the analysis and study of quantum leadership and providing a practical model for its promotion play a key role in the strategic plans of organizations. Therefore, in this research, an attempt is made to design a model for it in public universities. This research is of the mixed type, which does not have a similar sample in the field of model presentation with the researcher's research, and will be done by simultaneous integration of two quantitative methods (internal and external research) and qualitative (semi-structured interview of experts). Its presence is one of the

necessities for working on it. Organizations are constantly compromising between opposing forces that lead the organization and the leadership that leads to it in different and contradictory directions. Among the various models designed based on the organizational leadership framework, several organizational leadership models and management leadership models and quantum skills (Shelton and Darling, 2001; and Shelton and Darling, 2003) and comprehensive leadership will be used.

In line with the present study, Tavakoli, et al (2017) in a study concluded that quantum leaders have six strategies and main action including: participatory decision making, creating an atmosphere of trust and support for individuals, creating a positive interactive space and teamwork, facilitating the flow. Information is used to encourage self-organization and self-control, to support creativity, and to create excitement. Also, Mohammad Hadi (2016) in a study concluded that the application of the concepts of quantum physics theory in explaining practical and conceptual issues is the core of these educational systems, ie learning and focused learning. This study showed that the quantum approach is an effective way to optimize the performance of educational systems in complex and ambiguous situations, so this approach can be used to improve human resource training, In addition, Dargahi and Razghandi (2016) state that today's organizations are changing rapidly, so in order to deal with these rapid developments, it is necessary to recognize the complexities and learn ways to deal with it. Quantum management, with a new and innovative scientific approach, enables organizations to make the most of their knowledge and learning capital. Of course, doing so depends first and foremost on eliminating the view of toxic management in organizations, which may be due to the wrong choice or appointment or inappropriate performance and excessive insistence on inefficient and ineffective policies and programs, To do so, and thus to pave the way for quantum management.

Najarian (2016) also reports that with the help of new philosophical features of complexity theory, it is possible to take steps to correct the current curriculum. Some of the implications of theory in curriculum include: assessing the complex dimensions of man and his interactions with the universe, realizing a problem-oriented approach and curriculum approach, promoting background knowledge, and selecting resources and teaching materials related to indigenous issues, replacing distributed knowledge. , Partnership, and Korean Negotiation Instead of Controlling Knowledge and Symbolic Series, Supporting Lifelong Learning and Distance Learning, Emphasis on Learning through Feedback, Linking, and Multilateral Interaction of Networks Using Newly Complex Basic Network Technologies Training, and readiness to deal with unexpected developments and situations. In a study, Kranian and Parvizi (2016) concluded that quantum management, by acknowledging the role of uncertainty and turmoil in systems, assessed the role of technological shortcomings and the problems caused by ideal devices as more important than the disorders caused by attackers and listeners. Therefore, in order to improve the quality of communication equipment and devices in managing confidential and security information, it is better to focus the organization on financial and human resources instead of confronting the listeners. Afjeh and Hamzhepour (2015) in an article in their research, in addition to examining the concepts and reviewing theories related to leadership literature and quantum organizations, the paradigmatic effects of quantum theory on organizational theories and models related to quantum theory have also studied and theories. Management and leadership patterns, like other disciplines, are influenced by scientific paradigms. Two important paradigms, the Newtonian paradigm and the quantum paradigm, have seriously influenced organizational theories and patterns.

Among foreign studies, Kleiman (2011) concluded in a study that the use of quantum management skills in organizations by senior managers can lead to increased organizational performance and greater productivity in the organization. Vargas (2010) in a study aimed at; Understanding the concept of intellectual capital and organizational learning also provides a new perspective for creating competitive strategies such as quantum strategies. Follow contemporary issues. In an article entitled "Spirituality, Mental Health and New Physics", Charlotte Shelton (2010) examined the integration of science and spirituality and the effect of this integration in the field of mental health. He studied the scientific concepts of world change and the

traditional theory of psychological theory and universal spiritual principles, and presented a set of quantum skills that combined the new sciences with infinite spiritual principles and, more broadly, mental health practices. In the present study, in addition to examining the concepts and reviewing theories related to leadership literature and quantum organizations, the paradigmatic effects of quantum theory on organizational theories and models related to quantum theory will be examined and finally a model will be presented. The purpose of this study was to design a quantum leadership model. The research question is which model is suitable for designing a quantum leadership model in Iranian public universities.

2. Methodology

Since the present study sought to design a quantum leadership model in Iranian public universities, the research method is purposeful, applied and in terms of data collection method, descriptive modeling and in terms of method based on the nature of the data mixed (quantitative and qualitative), Was exploratory. The statistical population of the research in the qualitative section included 10 academic experts and higher education specialists who were at least assistant professors and had two articles and a book and had teaching experience in this field and were prominent in terms of knowledge and information in quantum leadership, were chosen. In this qualitative study, a targeted and targeted bullet method was used to determine the samples, and 10 people were considered as the sample size of the interviewee. In the quantitative section, the statistical population was determined by scientific-research articles related to the subject in the world, which numbered 32 articles.

In this study, library method, observation, in-depth interview and semi-in-depth interview were used to collect data. In a small part, content analysis was used. In this study, semi-constructed interviews were used in the qualitative section. In solo interviews with the interviewees, five interview questions were used for preliminary review. In addition, there were other sub-questions along with each question to understand the participants' experiences during the interview. While conducting the interview, the researcher asked the supervisor questions to check the accuracy of his / her interpretation of the interviewee's statements. In the sampling process, the researcher analyzed the data of the participants to complete the incomplete items by receiving new information from the new participant. After 10 interviews, the main and secondary factors were repeated in previous interviews and the researcher was saturated. During the interview, opinions were collected on appropriate indicators to determine the components of quantum leadership, and the main and secondary factors were considered and finalized. The interview lasted between 30 and 60 minutes.

In order to ensure the validity of the research and to ensure the accuracy of the findings from the researcher's point of view, the valuable opinions of professor's familiar with this field and higher education specialist who were experts in this field were used. Participants were also assisted in simultaneously analyzing and interpreting the data. The reliability method between the two coders was also used to calculate the reliability. In an interview with two coders on intra-thematic agreement, one of the professors of educational management familiar with coding was asked to participate in the research as a secondary codec. Which was used as the reliability index of the analysis, calculated that the reliability obtained from the two coders was 75.1% according to the calculations, which indicated the appropriate reliability?

To analyze the qualitative data of the research was used through content analysis and Delphi technique. In this plan, the analysis steps, the collected qualitative data were collected through open coding and central coding.

3. Findings

In this section, first questions were asked about the qualitative interview, which was about the main research question (What are the components and indicators of quantum leadership in public universities?). Four other questions of the interview were: 1. what is your definition of quantum leadership? 2. In your

opinion, what are the constituent factors of quantum leadership in Iranian public universities? 3. In your opinion, is there a gap between the quantum leadership in universities and the desired situation? 4- In your opinion, what model can be provided for the quantum leadership of public universities? Based on this, Table 1, which is a checklist of the results of the interview content analysis, shows the coding results.

Table1. Checklist for interview content analysis results

Variable name	Context sample	Components
Quantum view	James Gilk offers new perspectives on emerging realities, new approaches, understanding of cause and effect, and the organization of complexity (complexity theory).	Outlook - Complexity - Lack of ambiguity and certainty - Interactions - Creativity and initiative - Change
Quantum thinking	Quantum in management has tremendous analytical capabilities and can be useful in understanding and improving the organization, leadership and management in very complex situations.	
Quantum sense	Quantum managers try to create conditions in which people can feel ownership of work and the organization.	
Quantum Cognition	Members of the organization do not feel valued and want to contribute to the success of the organization.	Creativity - Self-organization - Flexibility - Trust - Creative thinking -
Quantum operation	Quantum leaders strive to gain inner energy through positive thinking and to look at opportunities that feel negative if they look at negative events in a positive light.	Inspiration - Positive Thinking - Guiding - Creating Excitement - Supporting and Trusting People - Continuous Changes - Variability - Solidarity
Quantum trust	It creates deep trust and cohesion between the leader and the members of the group, enabling each individual to seek knowledge and innovation.	Organizational Alliance - Decision Making - Servant - Intuitive and Sensory Understanding - Deep Trust and Cohesion - Knowledge and Innovation - Jetting - Creating Change - Situations - Contingency Thinking
Bio Quantum	Fundamental quantum principles provide meaningful insight for a timeless world that is objective and subjective, logical and rational, linear or nonlinear, and orderly or chaotic.	Empowering people - Effectiveness - Achieving the goals of the organization

In the table above, the basic concepts derived from content analysis are presented. The information in the table above indicates the basic focus of the research questions. In some tables, a number of interviewees did not answer any questions or, in response to some questions, cited several factors, such as the gap analysis between the existing leadership and the organization's desirable leadership in terms of organizational leadership components at the university. In this section, in order to examine the difference between the mean of the research variables between the existing leadership and the desired leadership, the test was used in order to study and compare between the existing leadership and the desired leadership.

Table2. Average test results between existing leadership and optimal leadership

	Leven test		T test for average equality							
	F	Sig	T	Degree of freedom	Sig(2-tailed)	Leadership		Mean differences	95%confidence interval for average difference	
						Invalid	Valid		High	Low
Equality of variances	0.137	0.712	0.353	274	0.192	3.20	3.90	0.027	-0.124	0.178
Inequality of variances			0.365	224.42	0.715			0.027	-0.119	0.173

Since the equality of variances precedes the mean equality test, the results of the Levine test were used to test the equality of the variances of the two communities. Based on the findings, it can be concluded that there is a significant difference between the existing leadership and the desired leadership. There is a significant difference between the existing leadership and the desired leadership. To determine the type of relationship, it was predicted that experts and experts would use it based on various management techniques, including brainstorming and nominal group techniques, and so on. To adapt the access matrix, the trajectory mode between the factors must be examined. If i leads to j and j leads to k, then i must lead to k. Huang et al. Used mathematical laws to create compatibility so that the $K + 1$ power matrix was reached ($K \geq 1$).

Table3. Access matrix

Joint Collection	Prerequisite Collection	Access Collection	
1	1	3 و 2 و 1	Quantum view
2	2 , 1	2	Quantum thinking
3	3 , 1	3	Quantum sense
4	4 , 1	4	Quantum Cognition
5	5 , 1	5	Quantum operation
6	6 , 1	6	Quantum trust
7	7 , 1	7	Bio Quantum

First, we sort the criteria from top to bottom based on the level. Using the matrix obtained from the matrix of sequence-based access, the structural model is plotted by groups and lines. If there is a relationship from i to j, it is marked with an arrow from i to j.

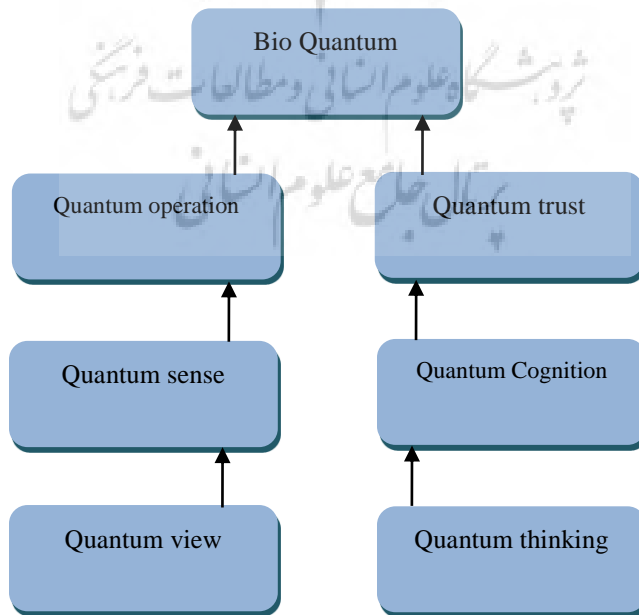


figure1. The main research model

Quantum leadership model in public universities

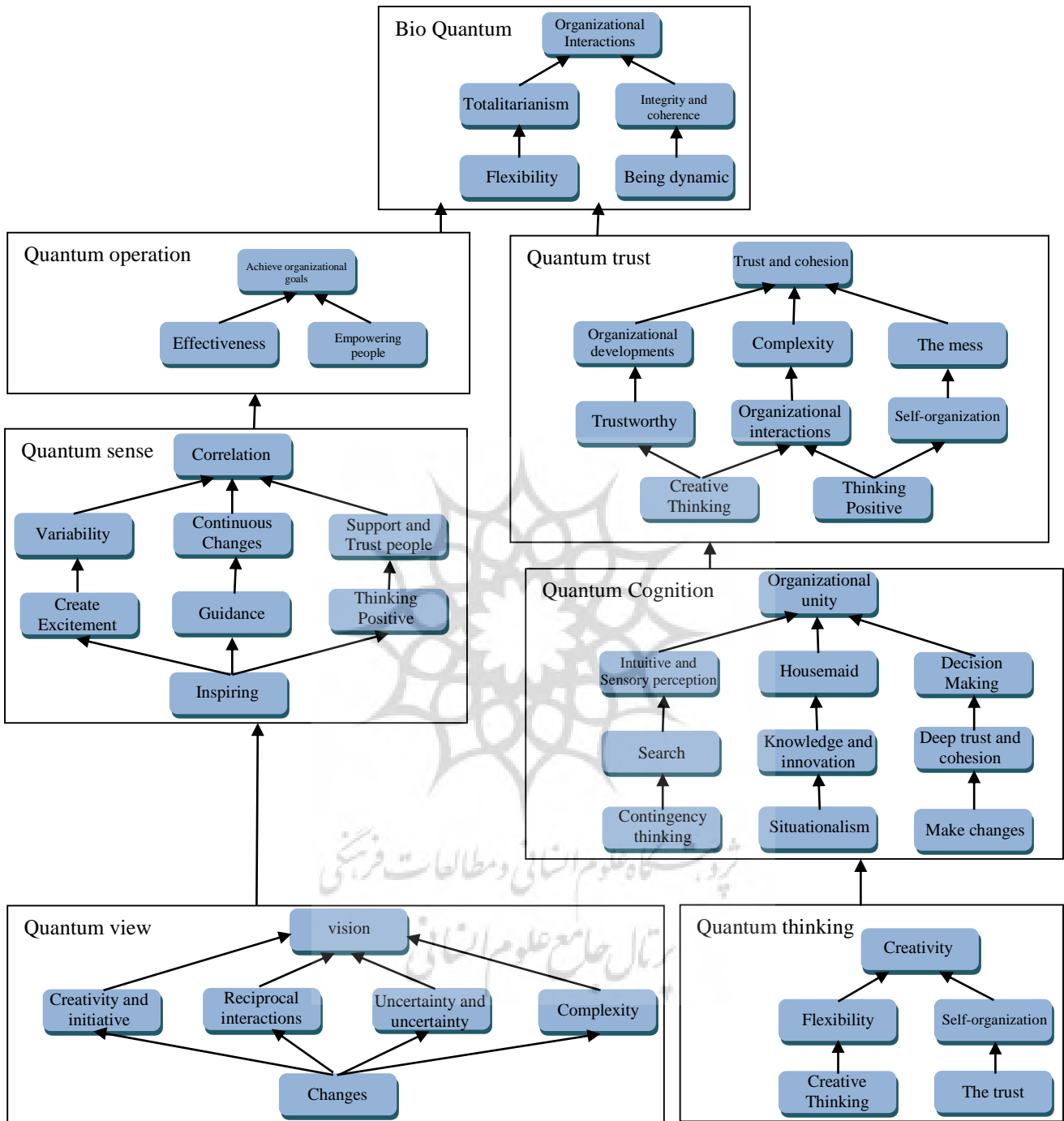


Figure2. Basic model developed by ISM method

In the next step, MICMAC analysis was performed with the aim of detecting and analyzing the power of penetration and dependence of variables. In this analysis, variables are divided into four categories according to the power of guidance and dependence. Automated variables: which have weak guiding power and dependence? These variables are relatively unrelated to the system and have little to no connection with the system. Dependent variables: which have low guidance but strong dependence? Communication variables: which have high conductivity and high dependence? These variables are non-static because any change in them

can affect the system, and eventually system feedback can change these variables again. Independent variables: which have a strong guiding power but a weak dependency? In this analysis, the variables are divided into four categories based on the power of guidance (sum of the coefficients of a factor in a row) and dependence (sum of the coefficients of an action in a column), which are given in the leveling tables.

Table4. Charts of power and dependence of quantum gaze factors

raw	Future view	Complexity	Clarity	Interaction bilateral	Creativity	Changes
The power of guidance	4	5	2	5	5	3
Dependence power	1	6	6	4	4	5

As is clear, it is the cause of the ambiguity and dependence of the dependent; That is, the disabled variable is more disabled than the causal factor. This influence is more of an independent (perspective) variable than a self-governing variable, which is the underlying and fundamental constructor of quantum perspective factors.

Table5. Power and dependence diagrams of quantum thinking factors

raw	Future view	Complexity	Clarity	Interaction bilateral	Creativity	Changes
The power of guidance	4	3	2	2	2	4
Dependence power	1	2	2	3	5	1

As it turns out, the creative thinking factor is a dependent variable; That is, the disabled variable is more disabled than the underlying cause of quantum thinking. This influence is more of an independent variable (creativity) than a self-governing variable (self-organization, flexibility, trust, creative thinking), which is the foundation of the main factors of quantum thinking.

Table6. Power Charts and Quantum Feeling Factors

raw	hopeful	positivistic	Leadership	Create excitement	Support and trust people	Continuous changes	Changeability	Correlation
The power of guidance	4	3	3	4	1	5	3	6
Dependence power	4	5	5	4	7	3	5	2

As is clear, it is a factor in supporting and trusting dependent variables; That is, the disabled variable is more of a disability itself than a cause of quantum sensory factors. This influence is more of an independent variable (correlation) than the variables of self-government (positive thinking, guidance, creating excitement, constant change), which is the foundation and main context of the factors of quantum sense.

Table7. Power Charts and the Dependence of Quantum Cognition Factors

raw	Organizational unity	Decision making	Household aid	Intuitive and sensory perception	Trust and cohesion	Knowledge	Search	Make changes	Situationalism	Contingency thinking
The power of guidance	1	8	6	4	5	6	7	5	3	4
Dependence power	9	2	4	6	5	4	3	5	7	6

As is clear, the factor of organizational unity is the dependent variable; That is, the disabled variable is more disabled than the underlying cause of quantum cognition. This influence is more of an independent

(decision-making) variable than a self-governing (searching) variable, which is the underlying and mainstay of quantum cognitive factors.

Table8. Graphs of strengths and dependence of quantum action factors

raw	Empowering people	Effectiveness	Achieve organizational goals
The power of guidance	2	1	3
Dependence power	3	2	1

As is clear, it is a factor in empowering dependent people; That is, the disabled variable is more disabled than the underlying cause of quantum action. This influence is more of an independent variable (achieving the goals of the organization) than a self-governing variable, which is the foundation and mainstay of quantum action.

Table9. Power Charts and the Dependence of Quantum Trust Factors

raw	Organizational unity	Decision making	Household aid	Intuitive and sensory perception	Trust and cohesion	Knowledge	Search	Make changes	Situationalism	Contingency thinking
The power of guidance	4	3	2	2	2	3	5	5	5	4
Dependence power	1	2	2	3	5	4	3	4	2	1

As is clear, the dependent factor is considered reliable; That is, the disabled variable is more disabled than the underlying cause of quantum trust factors. This influence is more of an independent variable (creative thinking) than the self-governing variables (trust and coherence, confusion, complexity, organizational change), which is the foundation and main context of the factors of quantum trust.

Table10. Power Schemes of Power and Dependence of Bio-Quantum Factors

raw	Organizational interactions	Integrity	Holism	Being dynamic	flexibility
The power of guidance	1	3	3	4	3
Dependence power	4	3	3	1	2

As it turns out, the dynamic factor is dependent; That is, the disabled variables themselves are more likely to be affected than the underlying biochemical factors themselves. This influence is more of an independent variable (integration, totalitarianism, dynamism and flexibility) than an autonomous variable (organizational interactions), which is the basis and mainstay of the biochemical factors. After leveling the factors of successful implementation of the quantum leadership style, the factors are classified into 7 levels. You can see in Figure 3.

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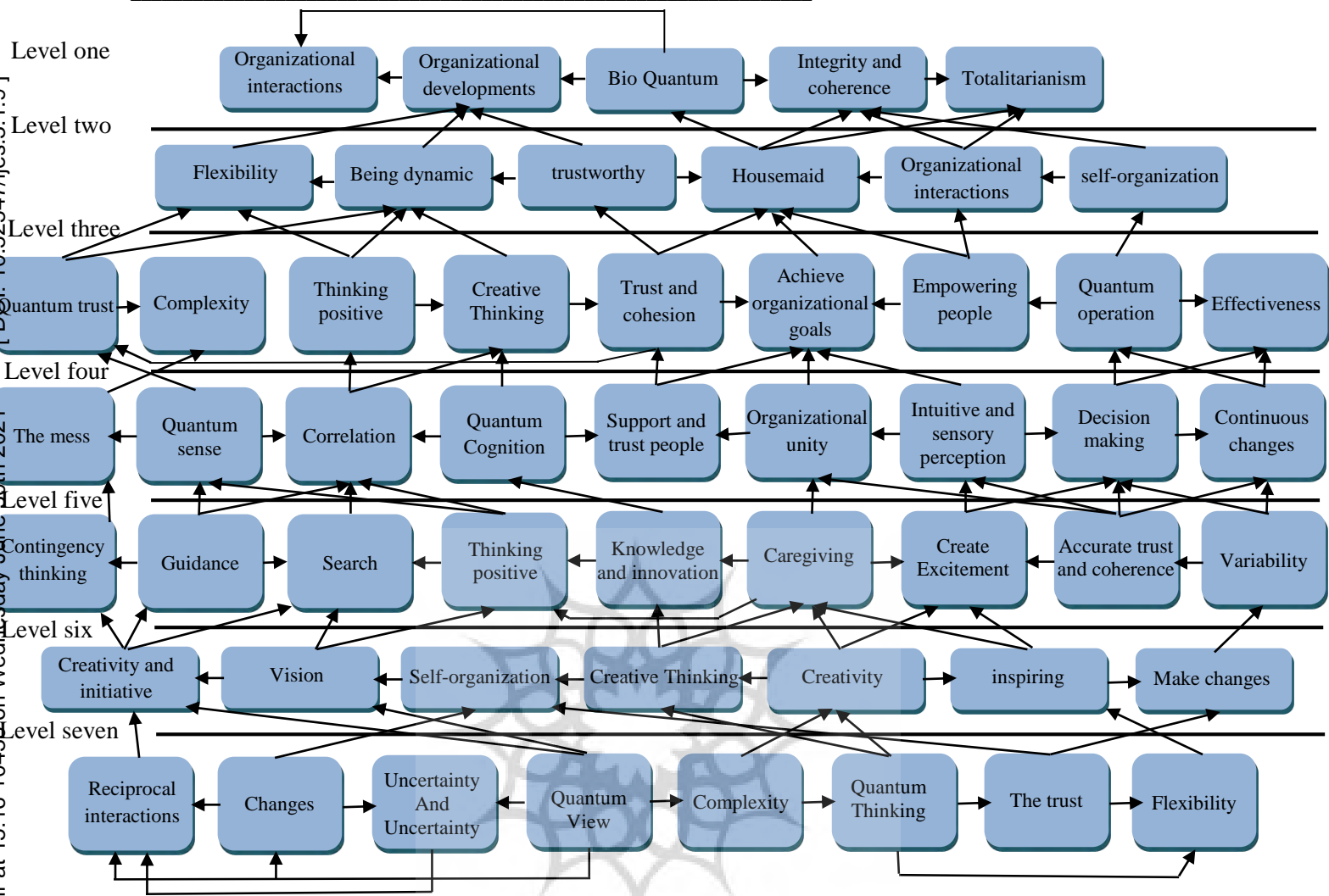


Figure3. Quantum Leadership Model

After studying the research, 7 factors affecting the design and explanation of the quantum leadership model in Iranian public universities were identified and provided to experts. In addition, from the heart of the questionnaire, the factors based on the introduction of factors affecting the design and explanation of the quantum leadership model in Iranian public universities were identified based on the experience of the research participants. Quantum View "Outlook, Complexity, Uncertainty, Interactions, Creativity and Innovation, Changes in" Quantum Thinking "Creativity, Self-Organization, Flexibility, Trust, Creative Thinking" Quantum Feeling "Inspirational, Positive Thinking, Guidance, Creation Excitement, support and trust in people, constant change, variability, correlation of "quantum cognition" of organizational unity, decision-making, service, intuitive and sensory perception, deep trust and cohesion, knowledge and innovation, searching, making changes, position Grammaticus, contingent thinking "Quantum action" Empowering people, effectiveness, achieving the goals of the organization "Quantum trust" Confidence and coherence, confusion, complexity, organizational developments, self-organization, organizational interactions, reliability, positive thinking, creative thinking "Bio Quantum "Organizational Interactions, Integrity and Integrity, Totalitarianism, Dynamics, Flexibility" After leveling the factors of successful implementation of the quantum leadership style, the factors were classified into 7 levels, which are: Level 1: Totalitarianism - Integrity and Cohesion - Bio Quantum - Organizational Developments - Organizational

Interactions. Level 2: Self-organization - Organizational interactions - Servant - Reliability - Dynamic and flexible - Flexibility. Level 3: Effectiveness - Quantum Practice - Empowering Individuals - Achieving Organizational Goals - Trust and Cohesion - Creative Thinking - Positive Thinking - Complexity - Quantum Trust. Level 4: Continuous change - decision making - intuitive and sensory perception - organizational unity - support and trust in people - quantum cognition - correlation - quantum feeling - confusion. Level 5: Changeability - Deep trust and cohesion - Creating excitement - Situationalism - Knowledge and Innovation - Positive Thinking - Physiology - Guidance - Contingency Thinking. Level 6: Creating change - inspiring - emptiness - creative thinking - self-organization - vision - creativity and initiative. Level 7: Flexibility - Trust - Quantum Thinking - Complexity - Quantum View - Uncertainty and Confidence - Change - Interactions.

4. Discussion

The aim of this study was to design a quantum leadership model in government organizations. The results of the research, according to the purpose, consist of two parts: In the first part, the factors of successful implementation of quantum leadership style were identified using exploratory studies. Thus, according to the research findings, the factors of quantum cognition, quantum thinking, quantum view, quantum sense, quantum trust, new approach to issues, creative and intuitive thinking, foresight and prediction, leadership based on democracy, quantum action, attitude A holistic system, creativity, initiative and transformation, interconnectedness of the leader, progress and development through self-construction, bio-quantum and creating a calculating and accurate organization are the components and factors of successful implementation of quantum leadership style. The research findings in the second part indicate the interpretive structural model of the research; Therefore, in describing the model developed in the present study, in line with previous findings (Baets, 2006), it should be said that leaders and managers in the organization to create a quantum leadership style should use quantum perspective and ability to see. Purposeful to place their style and way of thinking and attitude in parallel with quantum thinking and the ability to think in a contradictory way, thus paving the way for quantum cognition and intuitive cognition of issues in the organization. In this way, leaders and organizational managers can create a sense of quantum confidence among their employees, which in turn leads to a new and innovative approach to issues, creative and intuitive thinking, foresight and forecasting in the organization; Thus, with the emergence of creative and intuitive thinking along with foresight and foresight, quantum action or the ability to act responsibly in the organization, the main consequence of this bio-quantum or the ability to live in relationships, the leader's interaction, followers and employees through self-organization and self-organization Ultimately, the emergence of an organizational organization is calculating and accurate (Dargahi, 2013). Regarding the comparison of research findings with research conducted (Fairholm, 2004) and expressing their similarities, it should be noted that quantum cognition, quantum thinking, quantum view, quantum sense, quantum trust, and quantum biology and operation are influential factors in quantum leadership. The main consequence of the quantum leadership style is the interaction and fluidity of the follower leader and the creation of an accounting organization that is consistent with the results of the present study. Regarding the innovation aspect of the present study, it should be said that the concept of quantum leadership itself is a new and interdisciplinary concept that according to the review of theoretical foundations, the present study is the first research to design a native model related to this concept.

In the twentieth century, with the introduction of Einstein's theory of relativity and his subsequent discipleship with Heisenberg, known as Quantum's theory, he said goodbye to Newtonian thinking (a definite view of phenomena). Guillory (2007) argues that rapid and continuous change has taken the world out of the state of stability and predictability in a complex way. In such a world, managers' ability to lead and lead, to monitor and control, and to coordinate is increasingly compromised. According to scientists, however, the beginning of the 21st century can be called quantum age in terms of technology and advances.

Computers, the Internet, barcodes, and laser surgeries are just a few examples of the new implications and innovations of twentieth-century physics theory, called quantum mechanics. Quantum in the simplest sense only means particle and quantity.

Hall (2008) has developed a new conceptual basis for a new set of management skills based on quantum physics and chaos theory. One of the new metaphors of the third millennium is quantum management. Some of the metaphors presented in modern management today include metaphor: spiritual management, clover organizations, multiplication organizations, two-faced organizations, mouse organizations, chameleon organizations, integral management, and quantum management. Quantum theory management is a quantum metaphor, and is a service to the effectiveness of managers; which leads him from machine and algebraic thoughts and behaviors to dynamic, creative and effective behaviors. Quantum's message is that all parts of the universe, including humans, are dynamic, conscious, and interconnected beings.

In complex and chaotic environments, the need to transform and move toward creative and learning organizations is a major challenge for leaders. In such environments, the tasks of leaders are different from those of traditional ones. As dynamism, the need for learning and continuous improvement are an integral part of the environment, organizational leaders must pursue tasks to keep the organization on the brink of turmoil, and employees must be most enthusiastic and creative in order to be effective and develop. Quantum leaders are always looking for new ways in which the organization's core competencies can interact more effectively with each other and enable more creativity (Porter-O'Grady and Mallocc, 2007). Quantum leaders allow people to work together to create dynamic performance and positive interaction. Quantum leaders ensure that the system has a purpose, a direction, a destination, and a plan of action. Without this, the components of the system will disintegrate. Leaders must ensure that the energy available is directed in a positive and purposeful way to achieve the organization's goal. The dimensions of quantum leadership and leadership strategies to achieve them are summed up in three dimensions: progress with the flow of the organization and the desire for self-organization, working with ambiguity and uncertainty about the future, and finally paying attention to different views and opinions.

In this study, based on the interpretive structural modeling, the quantum leadership model was developed in public universities. Attention to quantum vision and thinking was suggested before reaching quantum leadership. The results of this study show that four main factors can be expressed in justifying why quantum leadership is involved, including: uncertainty of phenomena, environmental complexities, extensive and reciprocal interactions, and constant and rapid changes. These four factors are derived from the characteristics of the quantum paradigm of phenomena, which necessitates the use of a specific style of leadership as quantum leadership in the organization. It has also been observed that quantum leaders need to have certain skills and characteristics (Shelton, 2010). A review of research in this area suggests that six skills can be expressed for quantum leaders, including creative thinking, systemic thinking, conscious intuitive thinking, contingency thinking, and positioning, the ability to inspire, and self-organization. Quantum leaders also need to adopt specific strategies and actions to achieve their goals in the organization, which have been discussed in how to conduct quantum leadership, and the results show that there are six main strategies and actions that quantum leaders use that Includes: participatory decision-making, creating an atmosphere of trust and support for individuals, creating a positive interactive space and teamwork, facilitating information flow, encouraging self-organization and self-control, supporting creativity and creating excitement.

Based on the findings of the study, suggestions can be made. Organizational managers are advised to guide the organization and its staff, given the quantum perspective and other skills in this style of leadership; Managers should solve the problems of the organization according to quantum thinking, because it causes creativity and innovation; Creating the capacity and ability to do things, identifying, assessing, evaluating and other sub-leadership-based processes for the community of actual, potential and claiming managers in

universities; Standardization of leadership criteria and attention to the experiences of other countries in this field; Using the Quantum Leadership Model to define and implement educational, training, and development programs specific to universities is another proposal that can be made. Like any other research, this research has limitations. For example, limiting the researcher's opinion despite the central coding stage and placing the information in the form of a theoretical model in the data theory of the foundation, and considering that in this research the snowball method has been used to select individuals, the next person may be introduced. The interviewee is selected on the basis of factions and not on the basis of fact.



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