

# Model of Contingency Strategic Management in Higher Education

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## ABSTRACT

Traditional concept of management is not as efficient as before in order to manage present organizations. In other words, characteristics of the present era have made “management” meaning different; a new concept which is used in frame of “strategic management” instead of traditional management. In this research we response to these questions: How is the operation of higher education system at the present?, Regarding to university perspective, duties and goals, what is the principals’ and university professors’ idea about the operation of higher education system?, What is the principals’ and university professors’ idea about existing threatens and opportunities, affect higher education system?, What is the principals’ and university professors’ idea about strength points and weak points, existing in inner environment, affect higher education system?, According to present situation, which model of strategic management approach could be offered? and, What is principals’, university professors’ and professionals’ idea about the offered model?

**KEY WORDS:** Contingency strategic management; higher education; organizations; management; traditional management.

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## 1. INTRODUCTION

Traditional concept of management is not as efficient as before in order to manage present organizations. In other words, characteristics of the present era have made “management” meaning different; a new concept which is used in frame of “strategic management” instead of traditional management. In order to success in strategic management approach, all employees have to participate in process of strategic plans codification in an organization. In other words, this approach must be regarded as a public approach; because just through participating in this approach, both managers and employees could be informed about organization support and improvement needed to achieve goals, and they could try to compete with others in this field and improve products quality (Davari, Shanesaz zade, 1380). Moreover, managers cannot determine company goals based on past experiments, just for the reason of changes process type. Past experiments cannot always be used for future decision. Through a good planning, managers should arrange their future strategies in a way which is compatible with future situations. Regarded to wonderful changes during recent years, executives have found that by determining university missions and means in a limited time (short term, mediate term, long term) they could achieve their goals. Since in such situations, university operation is more efficient, and reacts properly toward the environment, it is expressed to use a strategic planning as a necessity in universities. According to Hashemi fard’s idea (1380), one of the reasons of tendency to strategic planning in universities is quick and wonderful changes of present society. Generally, some components are inevitable for present universities, as follows: technologic changes in the world, mutual effect of university and society in the frame of university connections with environment, and extension of most plans and their time limit; these fields are necessary when the organization does not have an obvious goal to achieve, or the outer environment of company is dynamic, or the organization focuses on details and short-term problems very much; contingency strategic management facilitates these situations.

## 2. Necessity of Problem Discussion

Today, the environment changes continuously. The universities, in order to survive, must get compatible with these changes, and use strategic management approach as a managerial process to get compatible with these changes. Strategic management planning should be included in university executives’ plans. Managers should have a lot of information about applications of strategic planning and strategic management. It is one of the necessary devices of management. Moreover, nowadays universities must be ready to get compatible with changes and arrange them. In such situation, strategic intuition and short-term, long-term designs facilitate ordered thinking and making decisions. So, the organization could get compatible with changing environment and provide the environment evaluation possibility.

### 3. Investigated Cases

- a) How is the operation of higher education system at the present?
  - 1) Regarding to university perspective, duties and goals, what is the principals' and university professors' idea about the operation of higher education system?
  - 2) What is the principals' and university professors' idea about existing threatens and opportunities, affect higher education system?
  - 3) What is the principals' and university professors' idea about strength points and weak points, existing in inner environment, affect higher education system?
- b) According to present situation, which model of strategic management approach could be offered?
- c) What is principals', university professors' and professionals' idea about the offered model?

### 4. Methodology of strategic Management

Differences in opinion in the philosophy and methodology of strategic management are divided into two groups, as follows:

- 1) Prescriptive schools which recommend strategy use through rational analysis and has assigned some titles such as design schools, strategic choice, analytical approach, deliberate approach, etc to itself.
- 2) Descriptive schools which recommend strategy use through emerging strategy and an informal process, step by step. In this theory, strategy is not designed, but is created.

In Mirsepasi's idea (1377), authors and theorists have expressed their ideas about the validity of each school, discussed at the top. One of the articles which have criticized strategic planning, because of quick environmental changes and not being able to predict future, is "The Rise and Fall of Strategic Planning" by Henry Mintzberg.

Ansoff, one of the critics of strategic management, rejects Mintzberg's idea about prescriptive schools, according to the premises he has considered in design schools. Ansoff criticizes Mintzberg's idea, especially from methodology point.

Ansoff believes that when a product is offered to market, in emerging strategies frame, it has been brought in market long ago by the companies which have had accurate strategic planning.

Ansoff believes that organizational learning which is usually achieved by trial and error could be a good alternative for learning analytical approach. Moreover, emerging school is an appropriate choice for non-profitable organizations, and also for the organizations which are positioned in environmental conditions that environment changes speed is less than flexibility of organization in reacting toward the changes.

Till now, it is obvious that main hypothesizes of strategy linear model is not efficient in universities. Universities are discrete-structured, and do not produce objective products. Instead, they are knowledge-centered. Besides, tasks separation and knowledge standardization makes the changes of market and university product so difficult. Nevertheless, most of universities use this model to design their strategy.

Emerging strategy is the most common model in universities to describe strategy. Unlike the main hypothesis of this model, universities do not have extensive relation with the environment. In such systems, knowledge partly separates different units from outer environment. Activities separation makes changes difficult. In Accordance with universities functional reality, using this strategy model may not be appropriate in order to respond their strategic needs.

Strategy phrasal model could be more harmonic with university nature. Some characteristics of university cause to develop motivation and improve interactions.

- 3) We debated that the top-discussed models are not suitable models to satisfy the main needs of higher education systems. Now the key question is that how an organization could develop motivation for behavioral changes and organizational compromise, according to different goals, complicated technology, non-monotonic activities, new strategies creation, and quick decision in federal and discrete structure of universities. This question could be answered regarding the effect of contingency view in higher education management.

### 5. Contingency View in strategic Management

In Mirsepasi's idea (1377), dissension in prescriptive and descriptive school of strategic management makes some new schools, in which strategist could choose the appropriate school according to conditions. It should be expressed that this choice has also special rules, and managers can not apply individual idea as a contingency model. In contingency models, choosing strategy is harmonized with organizational outer conditions (political, social, cultural, and technological). This approach is more emphasized in strategic planning view, and is superior to organizational structures and human resources structures. Moreover, organizational outer conditions has considered about organizational inner limits and abilities, such as technology and the method of doing something, organizational structure, human resources structure, and organization culture, as a significant factor in making decision. This may not be superior strategy to technology and organizational structures, according to conditions. Now it is necessary to investigate contingency view. Moving toward more

active systems caused to consider “conditional design” view in 1970s. Fig. 1 demonstrates how this contingency view was created about designing organizations and management. Systematical investigation of organization theory is affected by classical theorists’ idea in scientific management, bureaucracy and official management field. Some other parts of needed data for systems theory is provided by new classic school theorists, economical theorists and quantities models experts. Contingency view is affected by systems theory or system-oriented theory. This theory could be expressed in this way that different environments need different organizational relations, in order to achieve the most efficiency.

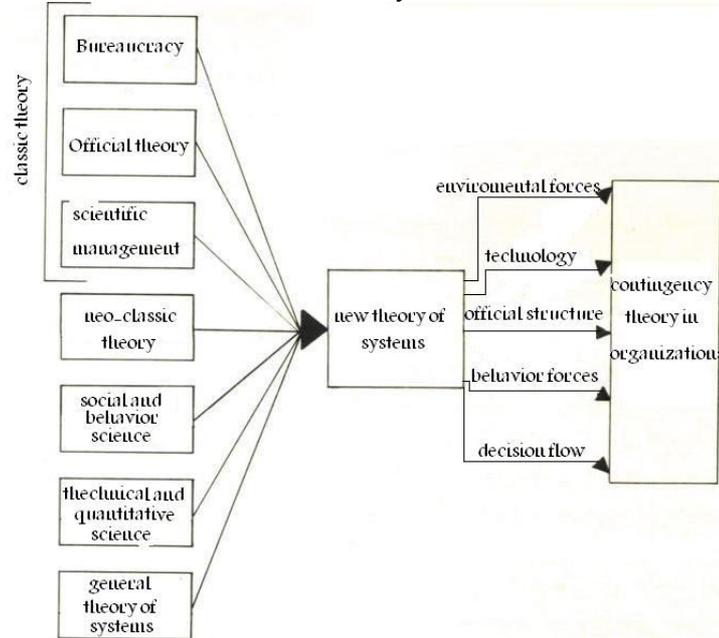


Fig.1. a view of growth and development of organization and management theories.

The first research about contingency view-based designing was carried out in 1965 by “Wood Ward”. Wood Ward believes that there is a positive correlation between organization economical function and organizational structure. The more compatible organization structure is with used technology type, the more desirable is economical function, which is a contingency view. Maybe “Fidler” called this approach “contingency view”, with his studies in leadership field. He showed that effective leadership pattern depends on mutual effects of variables such as labor division structure and leadership situation. Generally, when conditions are desirable or undesirable, from managerial point of view, classic design functions effective. But in averaged desired conditions, behavioral design will work. What is usually observed in organizations is averaged desired situation. “Lawrence and Lorsch” investigated contingency view in changing and dynamic environment. So, it is concluded that in some special changing environment, classic frame is more effective. In changing situations and environments, vice versa is true. In some situations in which organization could effectively respond changing situations and environments, contingencies models are needed.

**6. Strategic Management of higher Education with Contingency Approach**

Considering difference between outer organization and inner organization environment conditions and its effects on organization behavior demonstrates that there is not just one method to manage an organization, and in each special condition it is more effective to apply a method compatible with those conditions. If managers could achieve that appropriate method and utilize it in managing the company, the organization function will be more effective. Fermont E.Kast calls this approach “contingency view”. Outer and inner organizational environment is also one of determinant factor in contingency view. Environmental conditions are divided and analyzed in different ways. One of the common divisions is what comes below:

- 1-Unstable environment (there are a lot of changes and their deformation factors).
- 2-Complicated environment (there are a lot of difference and variety in environmental factors and competition conditions).

Different environmental conditions have different effects on individual and organizational behavior; this has been focused by multinational organizations. Various studies and researches results demonstrate that special managerial method is effective in different environmental conditions.

If conditions expressed below exist in every organization, according to Mirsepasi’s idea (1377) it is better for an organization to be formed in an organic and flexible way:

- Organization environment is almost indeterminate and changing.

- There are various goals which always face with change.
- The technology is complicated and changing.
- The activities are non-monotonic, and creativity is a significant factor.
- Quick decision, harmony and control is based on compromise; The system is more flexible and less based on hierarchy.

**7. Findings**

**First Question: How is higher Education System's function?**

- 1- According to managers' and university professors' ideas about higher education systems function, 53% of university professors and 56% of managers believe that the function was desirable. It should be expressed that the most positive ideas are about the effects of inner factors on present and future function of university (78.9%), and the least ones are related to feedback effect of present information system on university function and executive activities. Managers average points (14.7) is more than university professors average points (14), and professors have a higher standard deviation (3.3), in comparison with managers'.
- 2- Regarding managers' and university professors' ideas about threatens and opportunities existing in outer environment which affect higher education system, 53.7% of professors and 57.6% of managers and totally 55.65% believe that effect percent of outer environment (threatens and opportunities) on higher education system is high. The most positive idea related to economical factors effect as a present or future threaten in university is 67.3%, and the least ones related to effect of other public and private higher education systems existence as an opportunity is 38.7%. Managers average points (16.2%) is higher than university professors average points (15.2%), and professors have higher standard deviation (3.3), in comparison with managers.
- 3- According to managers' and university professors' ideas about weak points and strong points in inner environment which affect higher education system, 47.7% of professors and 50.5% of managers and totally 49% believe that effect percent of inner environment (weak points and strong points) on higher education system is high. The most positive idea related to managerial information systems which causes university competitive privilege s 79%, and the least ones related to use of informational systems managers of appropriate methods to evaluate and improve university function is 30.6%. Managers average points (14.9%) is higher than university professors average points (14.6%), and professors have higher standard deviation (4.2), in comparison with managers.

**Second Question: Which Method could be offered by strategic Management Approach?**

In previous sections, some factors were investigated, such as present situation, weak points and strong points, opportunities and threaten in 30 higher education centers. We also analyzed SWOT, in order to have a perspective of a desirable future. Main and secondary components were made model, and then with the use of statistical tests results, such as variance analysis and correlation coefficient of main and secondary factors, were calculated in frame of six main factors.

**8. Factorial Analysis**

In factor analysis, in order to determine factor loading of main and secondary components in each group, first factor loading of research variables are arranged from large amount to small amounts which shows changes ratio proportion of each component in their common factor change, which are demonstrated in table 1 and table 6, respectively. Then, table 2 and table 4 show the main factors amount extracted of main and secondary variables, achieved by main components method in statistics. Their proportion has been recorded in changes of all expressed variables. Based on them, the most important factors numbers will be determined

Table 1. Calculated Variance of main Factors.

Factor	Special value		
	Total	Variance percentage	Density percentage
1	4.22	70.30	70.30
2	0.71	11.79	82.09
3	0.49	8.09	90.17
4	0.41	6.77	96.94
5	0.13	2.12	99.07
6	0.06	0.93	100.00

According to the above table, the special values of first factor to 5th factor are larger than 1, which totally include 97.5% of total changes achieved of research secondary components. Special value means sum of factors loading square which lie on each factor.

Table 2. Calculated variance of main factors for 28 secondary (minor) components arranged by their special values.

Factor	Special value		
	Total	Variance percentage	Density percentage
1	14.31	51.10	51.10
2	2.93	10.47	61.57
3	2.31	8.26	69.83
4	1.72	6.16	75.99
5	1.48	5.28	81.27
6	0.96	3.43	84.70
7	0.80	2.86	87.56
8	0.78	2.79	90.35
9	0.72	2.55	92.90
10	0.60	2.14	95.04
11	0.38	1.36	96.40
12	0.31	1.10	97.50
13	0.25	0.89	98.39
14	0.16	0.56	98.95
15	0.14	0.50	99.46
16	0.11	0.40	99.85
17	0.04	0.15	100.00
18	0.00	0.00	100.00
19	0.00	0.00	100.00
20	0.00	0.00	100.00
21	0.00	0.00	100.00
22	0.00	0.00	100.00
23	0.00	0.00	100.00
24	0.00	0.00	100.00
25	0.00	0.00	100.00
26	0.00	0.00	100.00
27	0.00	0.00	100.00
28	0.00	0.00	100.00

Table 3. Coefficients (weights) greater than 0.4 pertaining to minor variables (components) in combination of 5 major factors.

Variables (minor components)	First factor	Second factor	Third factor	Fourth factor	Fifth factor
Analyzing mission, goals, and vision of university considering the changes in environmental factors	0.77				
Relations of university with other universities inside and outside the country				0.84	
Analyzing the values, beliefs, ideals, and expectations of university		0.42	0.68		
Future study considering the global growth of science and knowledge	0.53		0.55	0.50	
Work environment (considering the quantitative and qualitative changes)			0.63		
Scientific environment (considering the bases of advancement in science and technology)	0.57	0.42	0.63		
Organizational environment (considering cultural, social, and economic changes)			0.89		
Area and educational, research and welfare facilities		0.79			
Administrative systems and support services		0.83			
Human resource (faculty members and staff)		0.49			-0.46
Financial resources		0.93			
Quantity and quality of students		0.44	0.74		
Scientific and information resources		0.48			0.61
Workshop and laboratory equipments	0.81				
Harmonization of skills and forming common values	0.71				
Leadership				0.84	
Appropriate organizational structure			0.41		0.67
Increasing the facilities and economic resources	0.63	0.54			
Employing knowledge and technological advances in educational and research activities for the purpose of generating science	0.55		0.45		
Establishing and reinforcing science parks and centers for research and entrepreneurship	0.46	0.69			
Promotion of human resource qualitative level and improvement of living conditions	0.47	0.68		0.44	
Increasing the international scientific collaborations and cooperation of university	0.67	0.52			
Reinforcement and improvement of activities in cultural, political, and social issues with international societies		0.53			0.48
Promotion of qualitative level of educational and research resource		0.85			
Assessment of processes	0.72				
Assessment of inputs	0.87				
Assessment of outputs	0.68			0.57	
Assessment of outcomes	0.46	0.41		0.54	

Table 3 depicts the minor variables along with their coefficients (weights) in combination of common factors in order of magnitude for coefficients greater than 0.4, and based upon this, grouping of minor variables can be performed in 5 common factors shown in Table 4.

Table 4. Grouping minor components in 5 common factors.

Variables (minor components)	First major factor	Second major factor	Third major factor	Fourth major factor	Fifth major factor
Establishing and reinforcing science parks and centers for research and entrepreneurship	*	*			
Assessment of outcomes	*	*		*	
Promotion of human resource qualitative level and improvement of living conditions	*	*		*	
Future study considering the global growth of science and knowledge	*		*	*	
Employing knowledge and technological advances in educational and research activities for the purpose of generating science	*		*		
Scientific environment (considering the bases of advancement in science and technology)	*	*	*		
Increasing the facilities and economic resources	*	*			
Increasing the international scientific collaborations and cooperation of university	*	*			
Assessment of outputs	*			*	
Harmonization of skills and forming common values	*				
Assessment of processes	*				
Analyzing mission, goals, and vision of university considering the changes in environmental factors	*				
Workshop and laboratory equipments	*				
Assessment of inputs	*				
Relations of university with other universities inside and outside the country				*	
Analyzing the values, beliefs, ideals, and expectations of university		*	*		
Work environment (considering the quantitative and qualitative changes)			*		
Organizational environment (considering cultural, social, and economic changes)			*		
Area and educational, research and welfare facilities		*			
Administrative systems and support services		*			
Human resource (faculty members and staff)		*			*
Financial resources		*			
Quantity and quality of students		*	*		
Scientific and information resources		*			*
Leadership				*	
Appropriate organizational structure			*		*
Reinforcement and improvement of activities in cultural, political, and social issues with international societies		*			*
Promotion of qualitative level of educational and research resource		*			

Table 4 demonstrates that 14 minor variables (components) constitute the first major factor. Also 15, 8, 6, and 4 minor variables (components) constitute the second, third, fourth, and fifth major factors, respectively.

Table 5. Investigating correlation factors among major factors.

	Strategic analysis		Environmental studies		Organizational analysis		Making the strategy operational		Making strategy		Controlling and evaluating the strategy	
	Correlation coefficient	Probability value	Correlation coefficient	Probability value	Correlation coefficient	Probability value	Correlation coefficient	Probability value	Correlation coefficient	Probability value	Correlation coefficient	Probability value
Strategic analysis	1.00											
Environmental studies	0.69	0.00	1.00									
Organizational analysis	0.59	0.00	0.50	0.01	1.00							
Making the strategy operational	0.59	0.00	0.60	0.00	0.54	0.01	1.00					
Making strategy	0.67	0.00	0.48	0.02	0.88	0.00	0.71	0.00	1.00			
Controlling and evaluating the strategy	0.81	0.00	0.57	0.00	0.53	0.01	0.73	0.00	0.74	0.00	1.00	

Table 6. Variables of major and minor components with factor loadings and coefficients (weights).

Major components			Variables (minor components)	
	Factor loading	weight		Factor loading
<b>Strategic analysis</b>	0.749	0.87	Analyzing mission, goals, and vision of university considering the changes in environmental factors	0.898
			Relations of university with other universities inside and outside the country	0.874
			Analyzing the values, beliefs, ideals, and expectations of university	0.741
			Future study considering the global growth of science and knowledge	0.652
<b>Environment al studies</b>	0.566	0.75	Work environment (considering the quantitative and qualitative changes)	0.943
			Scientific environment (considering the bases of advancement in science and technology)	0.838
			Organizational environment (considering cultural, social, and economic changes)	0.627
<b>Organization al analysis</b>	0.645	0.80	Area and educational, research and welfare facilities	0.938
			Administrative systems and support services	0.867
			Human resource (faculty members and staff)	0.867
			Financial resources	0.842
			Quantity and quality of students	0.840
			Scientific and information resources	0.821
			Workshop and laboratory equipments	0.633
<b>Making the strategy operational</b>	0.687	0.83	Harmonization of skills and forming common values	0.818
			Leadership	0.781
			Appropriate organizational structure	0.637
<b>Making strategy</b>	0.800	0.89	Increasing the facilities and economic resources	0.930
			Employing knowledge and technological advances in educational and research activities for the purpose of generating science	0.887
			Establishing and reinforcing science parks and centers for research and entrepreneurship	0.879
			Promotion of human resource qualitative level and improvement of living conditions	0.858
			Increasing the international scientific collaborations and cooperation of university	0.797
			Reinforcement and improvement of activities in cultural, political, and social issues with international societies	0.760
			Promotion of qualitative level of educational and research resource	0.689
<b>Controlling and evaluating the strategy</b>	0.770	0.88	Assessment of processes	0.921
			Assessment of inputs	0.909
			Assessment of outputs	0.831
			Assessment of outcomes	0.679

In the above table, linear correlation coefficients among the 6 major components are shown along with their respective probability values in the test for their being zero, which indicates the linear correlation among all 6 components since all probability values are less than 0.05 and also shows that the coefficients are valid. The highest correlation value is observed between "making strategy" and "organizational analysis". In analysis of factors, factor loadings higher than 0.4 were utilized. In other words, the correlation coefficient 0.4 was determined as the minimum acceptable correlation degree between each item and the extracted factors.

Making use of the results of factorial analysis together with analysis of variance, 6 factors were determined as major components while 28 factors were determined as minor components, considering their factor loading and coefficients (weights) whose results are depicted in Table 6.

### 9. Model of contingency strategic Management in higher Education

Through identification and presenting three models of types linear, emerging, and interpretive, Chafee made the strategy concept applied in higher education organizations, and showed that the mentioned models do not desirably satisfy the strategic requirements of higher education, and without possessing a strategic programming pattern proportionate to expedite and unstable rate of changes in environment in third millennium, universities would not reach a fruitful future and face the future challenges. Therefore, a research was carried out in one of Iran's universities in order to reach an appropriate pattern in third millennium regarding how to design a research strategic management model. Hence, along with surveying the subject literature and using the concepts and studying different viewpoints on strategic programming and also performing comparative study of strategic programs of several credible universities inside and outside Iran, and collecting information from the fulfilled researches and scientific reports and documentations relating to practical experiences in programming and strategic management of higher education, and elucidation of the current status and employing contingency approach for the purpose of determining the pathway towards desired status, investigation of model components based upon research results using those obtained from factorial analysis and analysis of variance led to

determination of 6 factors as major components and 28 factors as minor components, considering their factor loading and coefficients (weights). Based on priorities and significance of each factor, the following factors were determined to constitute the model in a decreasing priority degree: "making strategy" with highest factor loading (0.800) and weight (0.89) as the first priority; "controlling and evaluating the strategy" with factor loading (0.770) and weight (0.88) as the second priority; "strategic analysis" with factor loading (0.749) and weight (0.87) as the third priority; "making the strategy operational" with factor loading (0.687) and weight (0.83) as the fourth priority; "organizational analysis" with factor loading (0.645) and weight (0.80) as the fifth priority; and "environmental studies" with factor loading (0.566) and weight (0.75) as the sixth priority. The mentioned factors are illustrated in Fig. 2.

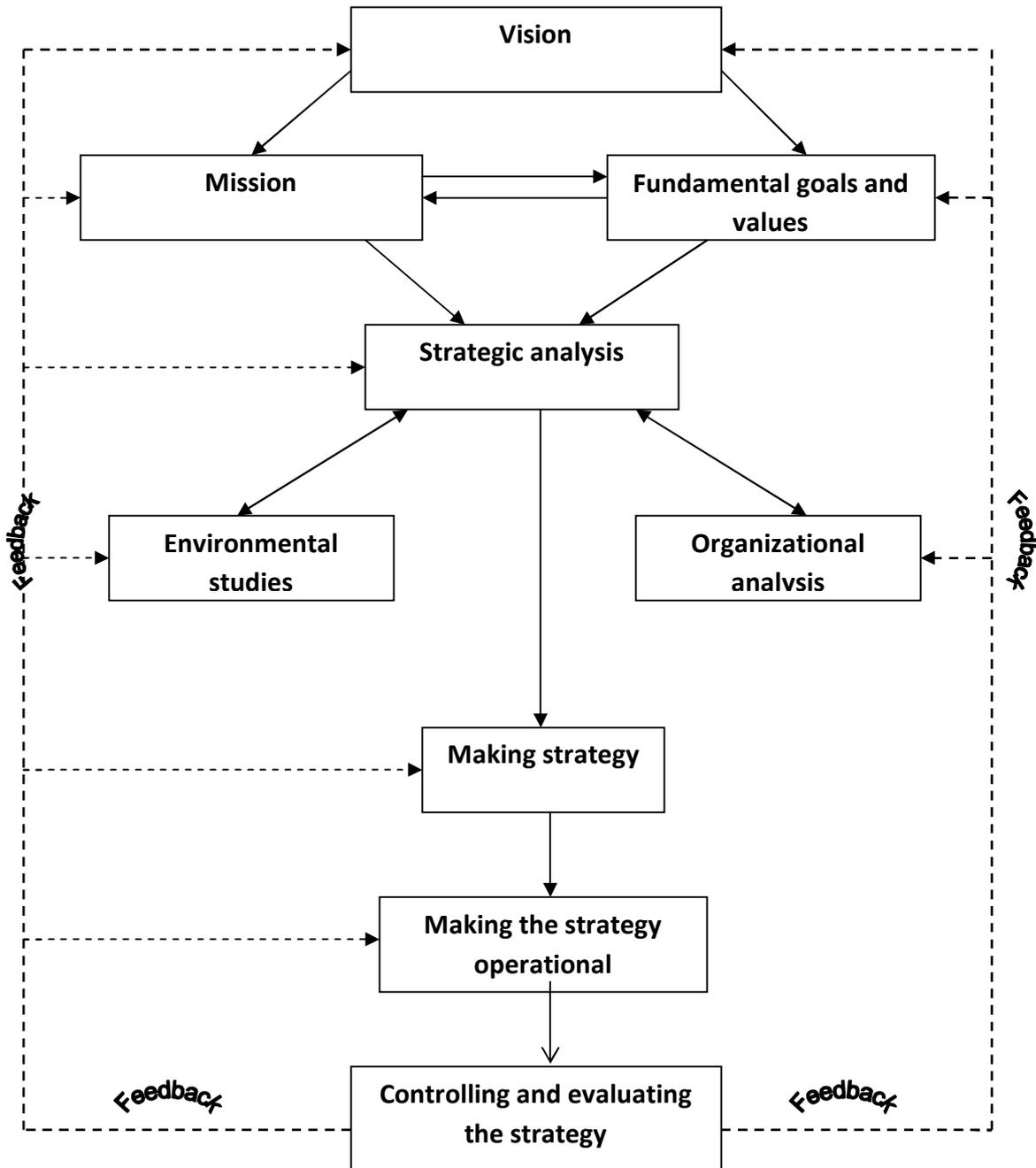


Fig. 2. Model of contingency strategic management in higher education.

### 10. Analysis of the Components constituting the Model of contingency strategic Management in higher Education

The strategic programming with contingency approach has been prepared based upon scientific principles and extensive analysis of environmental conditions inside and outside Iran and also based on determination of

goals and future-based strategic. Regarding the complex and unstable environmental conditions, this program can support university managers to be adapted to environmental changes and encounter the probable problems, since the environment is nowadays changing with an increasing and continuous rate and universities must be adapted to these changes for their survival and they should take advantage of the process of contingency strategic management as a specific management process so as to sustain the adaptation to these changes and acquiring competitive predominance. Also, the programming managers should consider strategic management as a part of their general management and should consider its implementation a requirement, because for years the managers have considered making a good strategy as the success key of their organizations in today's competitive and complex world. Nonetheless, what makes a good strategy successful is its correct implementation for the reason that, the main obstacles against strategies with hindrance role which in action prevents the organization from advancement and reaching its goals are 85% related to management obstacles and 15% related to not having a correct and clear understanding of vision, mission, and goals, and neglecting the long-term programs as human obstacle. On the other hand, universities relate their strategies to existing financial resources (tuition) and do not predict other financial resources through strategic programming. So it is essential for them to consider the process of strategic management with a specific significance and make effective and practical steps in making and implementing the strategies. The elements of the model are as follows.

**- Vision**

In designing a model or pattern of strategic management in organizations, the initial point for determining the goal is to define the "vision", which is made as ideal, long-term, and reachable goals in higher education system according to theoretical fundamentals, goals, fundamental values, and mission, and this factor has played the first role when surveying the strategic programs of higher education centers in Iran and the world. Also in the presented model reaching the vision is among the final goals of the model.

**- Theoretical Foundations**

A pattern will be stable based upon its theoretical foundations and theories and opinions of experts together with reasonable substructures and scientific principles. Therefore based on theoretical foundations, the models which are of enough richness in opinion of all strategic management experts have been utilized as the basic and fundamental bases of the present model.

**- Mission**

Based on the mission required by the society and environment they exist in, the organizations and higher education centers regulate their existence philosophy, beneficiaries, organization's advantages in competition, and short-term and long-term objectives in order to play the useful individual and social roles for national development in interaction with local and international environmental changes. Thus, this issue has also been proposed as another of the foundations of this model.

**- Goals**

In hierarchy of organizational objectives, the goals are determined subsequent to vision and mission, which indicate the interests and general intentions of the organization, such as satisfaction of clients, gaining profit, developing the activities, etc. Macro-programming determines the main pathways for environmental and inter-organizational studies in university, and in fact is utilized as the direction index of strategic programming activities. Macro-programming is mainly based upon intrinsic missions of higher education and analysis of relationships with other universities and paying attention to technological advances. The higher education centers are responsible for education and sustaining of expert resources, science generation, and fulfilling practical and effective research in social, economic, political, and cultural changes. Hence they must have a consistent and comprehensive macro-program so as to reach these objectives. This is not accomplished unless paying attention to human factor and educating in higher education centers the promising and expert human resources who are ready to perform their duties for society. The systems process has been therefore considered in this model for educating the human resources since in Woodward's opinion (1965) contingency viewpoint is originated by systems theory.

**- Strategic Analysis**

This component with factor loading 0.74 and weight 0.87 as one of the main steps of strategic management is related to trying for understanding the strategic status of the organization, required determination for making organizational changes, analysis of environmental events for judging and making decision on influence of these events on the organization, understanding the organization's capabilities and weaknesses, and drawing the desirable future; and in this main way, it emphasizes on environmental studies and fundamental values and goals and intrinsic mission of higher education and relationship with other higher education centers and future study and novel technologies. Strategic analysis depends on understanding the three factors, namely environment (technological advances), culture (values and goals, expectations and relationship, and potency), and is inserted into the model as one of the major components.

**- Environmental Studies**

The component "environmental studies" with factor loading 0.56 and weight 0.75 in relation with extrinsic environment factors (opportunities and threats) influence the organization's function greatly. So in order to gain

a better understanding of the events occurring inside and outside the organization from one hand and to increase the compatibility of the chosen strategies with organization's environment on the other hand, the managers carry out studies in scientific environments (indicating the macro-frameworks and paradigms governing human knowledge), work environment (indicating the general status of occupation and probable changes in this domain, identification and precise analysis of the two main issues: quantitative and qualitative changes), and organizational environment (analysis of population changes, cultural, social, and economic changes) so as to identify the opportunities and threat, which dramatically influence the function of organization. Therefore, "environmental studies" has been considered as one of the main factors.

#### **- Organizational Analysis**

This component with factor loading 0.645 and weight 0.80 serves as identification of strengths and weaknesses inside the organization. These studies are performed in different fields including human resources, financial resources, equipments, the educational, research, and welfare area, scientific and information resources, administrative and support systems, as well as quantity and quality of students and staff. Due to its high influence on function of the organization, it has been determined as one of major factors of the mentioned model.

#### **- Making Strategy**

This component with factor loading 0.800 and weight 0.89 is considered as the most significant step in process of strategic management. Emphasizing on the mission of determining reachable objectives, planning the strategies and their respective tactics, and determining the directives relating to policies, this factor surveys long-term plans, effective use of opportunities by organization's management and confronting environmental threats together with reinforcement of strengths and elimination of weaknesses of the organization. It is very essential to identify and know the current status and the present conditions so as to make strategies, since for finding the answer to the question of "where the organization goes?" it should be known that "where the organization has been?"

Based upon this, the mentioned component plays a key and critical role in every strategic programming and has been considered as one of the major components in this model.

#### **- Making the strategy operational**

In this component with factor loading 0.687 and weight 0.83, strategies and policies are considered and applied during all stages of preparing programs, budgets, and procedures. In order to implement a desirable strategy, it is necessary to make use of appropriate organizational structure as well as harmonization of skills, resources, and capabilities of the organization in executive issues as a fundamental concept. Furthermore, for the purpose of better efficiency and influence of implementing the strategy of collaboration and cooperation of staff, it is vital to provide them required training for understanding and admitting the strategies. Undoubtedly, good leadership is very crucial for implementation of this factor. This factor has therefore been selected as one of the major components of the model.

#### **- Controlling and Evaluating the Strategy**

This component with factor loading 0.770 and weight 0.88 is a process which continuously evaluates the executive activities of managers, specialists, faculty members, staff, and the higher education system to provide the possibility of comparing the real efficiency of the organization with the desirable efficiency, and subsequently perform modification activities and resolve the mistakes at all managerial levels using the information obtained from this factor. Although this factor is the last stage in the process of strategic management, it is again considered as the initial step through modification activities, i.e. feedback, and this procedure continues uninterruptedly so as to compare what occurs at present status with what has been predicted and made, and then modify it. Hence, this component is one of the main components constituting the model.

#### **- Feedback**

In the presented model, feedback includes reviewing, modification, and development, which has been considered for exhibiting the flexibility of components regarding inevitable effects of scientific, political, cultural, economic, and social environments on them and also forming a fundamental relationship among theoretical foundations, mission, goals, and vision in a variable and very complex environment. Via modification activities (feedback) this model dynamically and continuously evolves and adapts to unknown scientific concepts some of which are daily got identified. On the other hand, it provides future study by long-term macro-programs for survival of the organization and satisfies various requirements of the societies and its adaptation to present world with contingency approach, with the increase in human knowledge as well as technological advances and information technology.

### **11- Research Findings regarding the third Research Question**

How is the viewpoint and opinion of experts, managers, and faculty members about the provided pattern?

With the intention of determining the suitability degree of the designed model, the questionnaire of model's suitability degree was prepared and then distributed among specialists and managers in order to obtain their points of view. The model's suitability degree was subsequently calculated to be 88.64 using Krbach alpha and SPSS software, which is of enough reliability.

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