



# Investigating the Accordance of Strategic Plans of Iran's Medical Sciences Universities With the Components of the Third Millennium Universities

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## Abstract

**Objectives:** The present study aimed to adapt the strategic plans of medical science universities to the components of the third millennium universities.

**Materials and Methods:** This cross-sectional study included all the faculty members of 5 top universities of Tehran Province in Iran. To collect data, a reliable and valid researcher-made questionnaire was developed based on the characteristics of higher education institutions in the third millennium (content validity index >0.79, content validity ratio > 0.62,  $\alpha = 0.88$ ). Statistical analysis was conducted by SPSS.

**Results:** The highest mean score of the population's attitude was related to the visions of the universities (mean =3.44). Moreover, the highest mean score (the components of university headquarters) of the attitude belonged to environmental indicators (3.53) while the lowest mean score was related to administrative and financial indicators (3.4). Based on the results, there was a significant difference between the attitudes of faculty members ( $P < 0.01$ ).

**Conclusions:** Concerning the accordance between mission and headquarter activities, medical sciences universities were somewhat far from the third millennium universities and should be accountable for the quality of their actions. Finally, they need to show their merits and should work to promote themselves by acquiring necessary certificates and quality assurance.

**Keywords:** Universities, Medicine, Faculty, Attitude, Iran

## Introduction

Tremendous developments of the late 20th century and prediction of scientific, informatics, and management revolutions in the 21st century explain the substantial ambiguity of human being in confronting the future. The key role of organizations in shaping and leading these developments is undeniable. Nowadays, considering the growing role of organizations, especially higher education institutions in improving countries, they are required to permanently review and evaluate their needs and organizational structures in order to be accountable to their missions (1-4). In fact, using improved accountability systems to achieve the desired and constructive goals is one of the most important and fundamental activities in the organization for having positive accordance with the changes, and the potentiality of healthy competition in society (5-7). Higher education institutions are among the organizations that need to adapt to environmental changes. Given the considerable development of medical universities and higher education institutions in the country, fortunately, there are appropriate infrastructures for promoting the quality and quantity of higher education in the health realm. To benefit from this issue, designing

a fruitful road map based on evidence and definitive documents is indispensable. Therefore, higher education comprehensive program of the health system is a strategic document to achieve the goals of the health sector evolution plan which is provided based on definitive documents including the Perspective Iranian Year of 2025, National Comprehensive Scientific Plan, National Comprehensive Health Plan, and Health Sector Evolution Plan (8).

On the other hand, organizing and setting up organizations to implement the policies and plans outlined in the road map are also other vital steps to make the road map work. It seems that the implementation of the spatial planning document for higher education will be helpful for realizing this program (8). Winter et al suggested that tactical and operational management would not work appropriately without a strategic information management plan. This type of plan is the scheme of planning, directing, and monitoring the hospital information system, which is written and approved by hospital management. However, hospital information system will not meet the goals of information strategies without proper strategic planning (9).

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The mission of medical science universities and that of the health system (in terms of general principles) are closely related at the national level in Iran and the evaluation of indicators is considered as a major factor in the realization of objectives and missions of the university. Due to the close relationship between medical education, clinical medicine, and the health care system, on the one hand, it is necessary to develop the social accountability of medical education by the intervention of these three major components and their related issues. On the other hand, the internal relationship between educational and research functions and the other services of medical science universities is an encounter to accomplish their responsibilities more appropriately (10). Therefore, various evaluations were carried out on different aspects of higher education institutions. For instance, Arasteh et al conducted a study on the status of the universities of Tehran in the globalization age from students' perspectives. The current status of these universities was described in 6 levels of professors' scientific and technical mastery, content appropriateness, teaching methods, along with the assessment of students' academic achievement, resources, and facilities and equipment. The results showed that professors' scientific and technical mastery was higher than the average. More precisely, the course content was average, and teaching methods were higher than average. Similarly, students' academic achievement was average while resources, facilities, and equipment (physical space) were higher than the average in terms of quality (11). In addition, in their study on the quality of services provided by higher education institutions in Portugal, Alves and Vieira concluded that the management and organization of the groups, students, teaching-learning process, applied training courses, teaching and research facilities, and graduates were all in a relatively favorable status and faculty members and graduates were evaluated at a favorable level in the universities of this country (12).

Accordingly, considering that higher education should play a significant role in the field of competition (13) and the major problem of today's universities is the lack of environmental appropriateness (14), it is needed to efficiently identify the essential features of these universities in order to respond to environmental conditions. Further, after adapting universities to these features, deficiencies have to be identified so that higher education can be beneficial. Thus, the present study aimed to examine the alignment of the strategic plans of the medical science universities of Tehran with the features of the third millennium universities.

### Materials and Methods

This study was conducted to assess the compliance of 5 top 5 medical science universities of Tehran (i.e., Tehran University of Medical Sciences, Iran University of Medical Sciences, Shahid Beheshti University of Medical Sciences, Artesh University of Medical Sciences, and Baqiyatallah

University of Medical Sciences) with the characteristics of the third millennium universities from the perspective of their faculty members in 2017.

The sample size was obtained (1150 subjects) by using the Morgan table and random cluster sampling method. Accordingly, some faculty members from each faculty of the universities were randomly selected and included in the study. To determine the sample size, a great deal of attention was paid to the ratio of the sample size in the medical science universities of Tehran province.

The present survey was an applied one in terms of objectives and descriptive-comparative research in terms of the data collection method. To collect the required data, a researcher-made questionnaire was used based on the features of higher education institutions in the third millennium. The questionnaire consisted of 23 items divided into 3 parts including demographic information, university mission assessment, and headquarter-related questions. The response of the samples was in a 2-point Likert-type scale encompassing 1 = totally disagree and 2 = totally agree. Thus, a specific questionnaire was prepared and developed for this purpose and its validity was obtained through the experts' opinions. In addition, the reliability of the questionnaire was determined through Cronbach's alpha of 0.88 on a number of samples. In this phase, the content validity ratio and content validity index were used as well.

The statistical analysis of the research was done on both descriptive and inferential levels. At the descriptive statistics level, frequency, percentage, mean, and standard deviation were used in the table format. At the inferential statistics level, the multivariate analysis of variance (MANOVA) and Friedman tests were used at the significance level of 0.05. Data analysis and statistical tests were performed using SPSS software.

### Results

The findings represented that the variables of this study had a normal distribution (Table 1).

In this study, 1150 subjects were surveyed, of whom 60.2% were males. This ratio was consistent with the total number of the faculty members of the reviewed universities. Further, the majority of faculty members had Ph.D. and postdoctoral degrees (80.1%), 6.7% of them were general practitioners, and finally, 12.3% had master degrees. The findings (Figure 1) showed that the highest mean score of the population's attitude was related to the university vision (mean = 3.44).

As shown in Figure 2, the highest mean score (the components of university headquarters) of the attitude was related to environmental indicators (3.53) whereas the lowest mean score was found in administrative and financial indicators (3.4).

Based on the data in Table 2, there was a significant difference between the attitudes of faculty members ( $P < 0.01$ ).

Table 1. Normality Test of Variables

Variables	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	P value	Statistic	df	P value
Missions domain	0.07	1150	0.001	0.97	1150	0.001
Headquarters domain	0.09	1150	0.001	0.96	1150	0.001

**Discussion**

Despite the fact that medical science universities, as open social systems, should adjust their actions in line with environmental changes in order to be productive and provide environmental requirements (15), the results showed that their mission, existential reason, ruling values, and way of accountability almost (mean = 36.3) reflected new strategic paths in line with the third millennium universities. Today, the higher education system of Iran has found that there is no time for trial and error, and thus it is needed to consistently get align with international standards and changes (16). The results

of a study conducted by Goncharuk perceived that like the new-generation universities, the missions of higher education institutions in Ukraine, to some extent, were to adjust all their actions and increase the motivation of their clientele (17), which corroborates with the findings of the present study.

Some issues make universities provide documents on their future status, including the emergence of modern thinking, knowledge-based management, pioneering activities, the development of competitive ambiance, rapid and easy access to educational materials without temporal and spatial constraints, changing information half life cycle, organizational learning and learning organization, and the like (18). The results of the present study demonstrated that medical science universities could describe (mean = 3.44) their future or long-term visions in written documents. Besides, the results of Mohammadi’s study revealed that the ambiguity in the written vision of some universities and the similarity between the vision and mission manifest were big mistakes that led to the confusion of staff in those universities (19). Describing the vision is the perspective of success in higher education institutions, through which their staff will know what they are expected to do. Furthermore, there will be the same motivation and synergy among the staff to achieve the goals of the organization and thus reducing the need for direct monitoring (20).

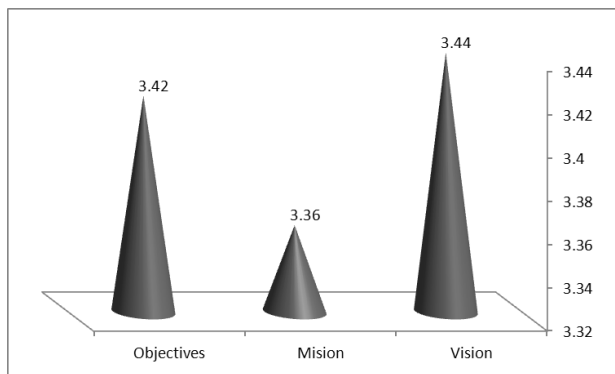


Figure 1. The Mean Scores of Faculty Members’ Attitudes Toward the Components of University Missions.



Figure 2. The Mean Scores of Faculty Members’ Attitudes Toward the Components of University Headquarters.

Universities are the origins and sources of development and changes in all countries, especially in developing countries. If the quality of universities is not favorable, the realization of the development plan of that country will be tough concerning the role of higher education (21). The results of the present study represented that medical education in the reviewed universities needed a change (mean = 3.52). This situation implies that medical education should not only be prepared to meet the needs of the community but also should be adapted to the changes in new technologies. However, other studies showed that the educational systems of universities in developed countries have maintained and enhanced their quality by an emphasis on technology, marketing conditions, political and economic conditions, and socio-cultural circumstances (22,23). The reasons for

Table 2. Inter-subject Effect Test of the Main Question

Dependent Variable	Type III Sums of Squares	df	Mean Square	F	P Value
Missions	349.18	5	349.18	11.47	0.001
Headquarters	335.42	5	335.42	11.35	0.001

the difference in the results of the studies are the lack of proper planning and the organization of the educational system, the inappropriate selection of objectives, executive mechanisms and educational processes, and the disproportion between the activities of the above-mentioned universities and the social and economic capacities of the community.

Third millennium universities, like any other social organization, have realized the need for a change in their internal and external functions in order to be adapted to the changes (24). The results of the present study displayed that the medical science universities of Iran, in accordance with the indicators of the third millennium universities, have been nearly able (mean = 3.49) to comply with formal mechanisms and interactive organizational patterns. Moreover, the top leaders of these universities (mean = 3.40) have been successful in designing appropriate patterns for the division and coordination of staff's duties and the relationships between them. However, Dyer and Dyer found that 21st century universities had an organizational structure for permanent interaction with the environment, which included systems by which all university units were integrated, and this ensured effective communication within the organization (25), which contradicts the findings of our study. Such difference is probably because the organizational structure is affected by the objectives, strategy, organization environment in addition to the technology and extent of the organization (26). Furthermore, the results of the present study showed that in line with the universities of developed countries, the medical science universities of Iran were somewhat successful (mean = 3.42) in determining the future objectives of the university. Although knowing the objectives of the university means properly understanding and identifying the mission and objectives of the university, the values and expectations of the community, as well as the resources and facilities of the university can affect the determination of the objectives.

Given that the production, development, and spread of knowledge play the role of an engine for the comprehensive and sustainable development of a country, university as a knowledge-producing organization has the main responsibility for fulfilling and achieving these important goals (27). Contrarily, the findings of this study depicted that knowledge production in medical science universities in relation to the other realities of the society has not kept its vital process (mean = 3.46). However, another research reported that the development of developed countries has been as a result of investing in research, and a large number of scientific research in industrialized developed countries has suggested this fact as well (28). The reason for this difference is that developed countries are aware of the importance and status of science and technology and consider them as the axis of economic, social, political, and cultural development. Accordingly, they have done strategic planning and huge investments in order to

achieve scientific development and authority.

The universities and higher education institutions of the 21st century sketch their requirements in the form of new knowledge, culture, and ideas (29). The results of the present study demonstrated that in medical science universities, the supreme objectives of the university were not considered as common values, beliefs, and norms governing the university, and they were not taught as the true patterns to the new staff (mean = 3.49). Besides, the norms or behavioral patterns, which were ideal or verbal, were relatively (mean = 3.53) in accordance with the components of universities in developed countries. On the contrary, the findings of the study of Wolszczak-Derlacz showed that the supreme objectives of universities in developed countries were in the form of a pattern of fundamental assumptions that were learned and used by the staff in order to solve problems related to compliance with the external environment and internal development, and they acted so well that they were recognized valid. Then, these organizational beliefs were taught to new staff as the right way to understand and solve the problems of the university (30). The reason for this contradiction in the results is that the values of the university culture are usually reflections of the values of society and the environment in which the university is located and this happens because the cultural habits have social origins and the people living in societies make such habits.

Third millennium universities are welcomed to changes and convert ideas to actions quickly. These features in the third millennium universities not only become a set of values, guiding beliefs, understandings, and ways of thinking but also increase the influence of university leaders on the staff so that they voluntarily and eagerly do predetermined activities with certain objectives (13). However, the results of the present study showed that the efforts of university leaders to create motivation and effective communication with the staff in achieving academic goals were not very significant (mean = 3.49). Nevertheless, Kok and McDonald demonstrated that in developed universities, the leaders influence the staff to adapt the constructive beliefs of long-term and big decisions (strategic beliefs) of the university to the common beliefs of decision-makers (applied beliefs), thus they help to achieve the cultural objectives and success of the university (31). The reason for this difference reflects the organizational culture of universities in a way that some studies have claimed that there is a significant relationship between organizational culture and the leadership of the university (32,33).

The findings of this study pointed out that there was a significant difference between the components of the studied universities ( $P < 0.001$ ). The results further showed various capacities in terms of economic and social potency and the organizational culture of universities that affected the quality of these components of the higher education system.

The study had some limitations. This study was carried out on a few medical science universities and thus the results cannot be generalized to all medical universities. This study was not conducted on non-medical science universities, and therefore, the results cannot be generalized to all universities in Iran. This study only evaluated 2 fields of mission and headquarter activities. Therefore, it is necessary to do further study to examine the other indicators of higher education institutions more widely.

### Conclusions

In general, the studied medical science universities were almost different from the third millennium universities in the field of mission and headquarter activities. They need to have accountability to their quality of work and show their value and competency. Besides, they should attempt to improve by obtaining the necessary credentials and quality assurance. The results also showed that there was no time for trial and error and universities should consistently adjust themselves to global standards in line with current developments. It seems necessary for the continuous modification of the academic system in order to establish an efficient evaluation system, which would improve the quality of the educational system and the entire higher education system.

### Conflict of Interests

Authors have no conflict of interests.

### Ethical Issues

Ethics approval was obtained from the Ethics Committee of Iran University of Medical Sciences (IR.IUMS. REC.1395.95-03-133-29002).

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