



A Phenomenological Exploration of Mission Differentiation in Iran's Medical Sciences Universities

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Abstract

Introduction: Universities play a significant and determining role in many aspects of the contemporary world and must move closer to their proper position by assigning missions correctly. This study was conducted to present examples of mission differentiation in medical universities.

Methods: This descriptive phenomenology study was conducted with 10 experts with experience in academic differentiation. Participants in this study were selected through purposive sampling. Data were collected via semi-structured interviews (30 to 70 minutes). The Colaizzi method was used for data analysis. Methods for determining the accuracy and validity of the findings included consideration of credibility, confirmability, and transferability.

Findings: The differentiation of the mission of universities of medical sciences was obtained in 5 dimensions including academic education, service provision, research, knowledge management, and social service.

Conclusion: Operationalizing differentiation in the academic functional domain of universities of medical sciences is important because it improves quality across all areas of higher education and, consequently, enhances the ranking of Iranian universities in international rankings. There is no general or magical formula for building a world-class university. National contexts and institutional models differ significantly. Therefore, each country must select a strategy from various paths based on its strengths and resources.

Keywords: Mission differentiation, Descriptive phenomenology, Community outreach, Service Provision

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Introduction

In the higher education system, the term differentiation refers to a process in which distinct structures or functions are defined for the higher education institutions within that system (1). The differentiation process uses appropriate strategies to create differences between universities based on their objectives. Differentiation is essential and adds logic to the diversity of institutions within a higher education system. The important point is that creating a differentiation map is not easy. However, this can be achieved through the development of a typology of institutions and their precise, objective placement into appropriate categories (2). Higher education systems are changing due to financial pressures, rising social demands, and a growing number of students. Although teaching and research are still considered the core functions of

universities (3), universities must also, according to the expectations societies have, pay attention to the roles they have played in societal development (4). In most higher education systems worldwide, higher education institutions have become sufficiently diverse, ranging from large research universities and professional applied science universities to smaller specialized institutions that award degrees. There is a wide range of institutions, but there is no distinct, clear system with specific missions and objectives, which is essential for appropriate, relevant quality assurance mechanisms.

There is an urgent need to plan the structure of higher education systems to serve an increasingly diverse clientele who need the skills for a knowledge-based economy and opportunities for social mobility (2). Mission differentiation has also been a key issue internationally,



with its primary focus on the diversity of institutions with different missions within the higher education system (5). Sabeer (2019) notes that universities select missions that are acceptable to external stakeholders and consistent with the values of internal members (6). Evidence shows that excellence initiatives in Germany, France, Japan, and China have created greater differentiation within national systems by separating a new sector of world-class universities from other national and regional research universities (7-10). Furthermore, in Asia, countries such as Saudi Arabia, Singapore, and South Korea have implemented evaluation and planning to differentiate their higher education systems (11-13).

In Iran, the Ministry of Health and Welfare was established in 1941 and became responsible for health and treatment affairs. In 1985, with the approval of the Islamic Consultative Assembly, the Ministry of Health and Welfare and the medical school faculties of the Ministry of Science merged, and the Ministry of Health, Treatment, and Medical Education was founded. With the commencement of activities by universities of medical sciences, roles and expectations, including conducting appropriate education and research within the service delivery system (the actual workplace of graduates) and at all levels of service delivery, including primary, secondary, and tertiary levels (instead of solely hospital-based education), were determined (14-17). Reviews show that the quantitative growth in the number of enrolled students in Iran has been upward since the 1990s (18). On the other hand, many structural changes have occurred in the country's university system; indeed, quantitative and qualitative growth has occurred across various types of higher education institutions. Considering their quantitative growth and diversity of activities, one of the most principal expected missions of Iran's higher education, due to its unique advantages and opportunities, is to propose a novel idea for overcoming the current global epistemological crisis and presenting a new model for comprehensive and sustainable development and educating cultured individuals to fulfill such a role (19).

Given the limited existing evidence regarding differentiation in Iran's higher education system and considering the importance of universities' roles in the economic development of societies, as intellectual centers of societies, as tools for gaining international identity, and as establishers of social justice; therefore, developing a differentiation model for universities of medical sciences, as the arm of Iran's higher education system, provides practical suggestions for the development of world-class universities. A qualitative phenomenological approach was therefore selected as the most appropriate method to deeply explore the lived experiences and perspectives of experts on this underexplored phenomenon. Providing a functional differentiation framework for Iran's higher education system seems necessary, as it will serve as a roadmap for this system to become a prominent higher education system globally. Therefore, in this study, we will elucidate examples of mission differentiation in

universities of medical sciences in Iran.

Methods

The present study is a descriptive phenomenology conducted using the Colaizzi method and based on the COREQ checklist. Extracting "lived experience" in a phenomenological study can be the most appropriate research method for explaining the shared experience of elucidating examples of mission differentiation in universities of medical sciences in Iran (20, 21). In this study, purposive sampling was used for data collection, and semi-structured in-depth interview approaches were used to obtain rich, complete, and valid data.

Participants were selected from individuals who entered the study as a rich source of information or key informants based on prior experience, including a research background, lectures in the field of differentiation. Participants were identified and recruited through their known publications and leadership roles in relevant academic and policy committees. Saturation was determined when two consecutive interviews yielded no new thematic insights relevant to the research question. In this study, in addition to being faculty members of universities under the Ministry of Health, they also had scientific activities in the fields of scientific authority and differentiation in the higher education system of medical sciences to obtain a more comprehensive yet specific perspective for differentiation in universities of medical sciences. Therefore, the study samples included individuals with the following characteristics: 1) Individuals who had at least conducted research and owned scientific publications including articles, research projects, and theses concerning differentiation or scientific authority; 2) Individuals who held valid conferences, symposiums, or scientific lectures on these topics; 3) Individuals with academic specialization in the field of differentiation, scientific authority, and related disciplines. In this study, sampling continued until data saturation was reached by conducting interviews with 10 participants in 2021 (22). For data collection, an interview guide developed by the research team based on the objectives was used. Each interview lasted between 30 and 70 minutes. At the beginning of the interview, a brief explanation about the research and its objectives was given. With the permission of the participants, the interviews were fully recorded and then transcribed verbatim. The data were analyzed by two researchers (S.Sh & Sh.Y).

Core questions guiding the interviews included, for example: 'From your experience, what are tangible examples that make one medical university different from another?' and 'How can a university strategically choose and excel in a specific mission? Since the research team was seeking the shared experience of participants in the phenomenon under study, only the verbal responses of participants were considered for analysis. To obtain more precise responses, probing questions such as "Please explain more" or "What exactly is meant here?" were used. For data analysis, in the first step, after each interview, the

audio files were transcribed using Microsoft Word 2019 as soon as possible.

In the second step, after determining the meaning unit, a more abstract and general concept was selected as a code, and Microsoft Excel 2019 was used to better manage this section. In the third step, after coding the entire dataset, the stability of the coding was repeatedly checked. Considering the importance of the topic, the validity of the coding of the interview texts was contemplated and reviewed several times, and the accuracy of the coding of the entire text was also evaluated by the research team according to the study's objectives.

In the fourth step, organizing and grouping the codes led to the formation of categories and, ultimately, conceptual patterns. The fifth step involved comparing the concepts obtained from the initial coding, identifying their similarities and differences. This stage included clarifying and making the identified categories or themes understandable.

In the final stage (step six), the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist, a 32-item checklist comprising three sections (the first part related to the research team and containing eight questions, the second part related to study design containing fifteen questions, and the third part related to analysis and study reporting containing nine questions) was used to confirm the study stages and reporting (23). The discussion of the validity of the findings (validity and reliability) was covered by employing the strategies of Lincoln and Guba (1986). For this purpose, based on this method, four criteria—member checking, transferability, dependability, and confirmability—were considered for evaluation and were observed throughout the study (24). Therefore, the researcher, considering these criteria, used various methods such as allocating sufficient time for data collection, seeking supplementary opinions from two colleagues familiar with phenomenological research, searching for negative and contradictory cases with alternative explanations, and also using a team approach, to strive for greater validity of the findings (25).

In this research, all information, including participants' names, interview audio files, and transcripts, remained confidential. Instead of mentioning personal details, numbers were used for participants. According to the informed consent form, participants had the right to withdraw from the research at any stage, and no reason was required for their withdrawal.

Reflexivity

To ensure the phenomenological validity of this study, the researchers rigorously applied the principles of bracketing (Epoche) and reflexivity. Before data collection, the team explicitly documented and set aside their pre-existing assumptions about university mission differentiation through a structured bracketing exercise. Throughout the research process, reflexivity was maintained via reflective journals, critical team discussions, and consultation with peers outside the immediate field. These practices served

to mitigate researcher bias and ensure that the emergent five-dimensional framework was fundamentally grounded in the participants' lived experiences. The final member-checking process further validated that the interpretations remained faithful to the essence of the phenomenon as described by the experts, thereby strengthening the trustworthiness and philosophical rigor of the findings.

Results

The study population included 10 individuals selected from Shahid Beheshti, Kerman, and Tehran Universities of Medical Sciences, as well as managers from the Ministry of Health. Their average age was 54.2 years, and they held the academic ranks of professor and associate professor (Table 1). Following data analysis, 358 initial codes, 22 sub-themes, and 5 main themes were identified (Tables 2 and 3). The findings of this research reveal common concepts in the examples and priorities of differentiation within Iran's higher education system for medical sciences, which can be considered distinct missions expected of Universities of Medical Sciences. In essence, the areas of education, research orientation, knowledge management, and social service provision—alongside their current services—directly influence universities' distinct capacities and potentials.

The Mission of Universities in Academic Education

In the contemporary era, the educational mission is the primary responsibility of a university. The goal is to effectively educate individuals to function efficiently in an increasingly technological world. Indeed, education has held a central role from the beginning. However, this function has become more complex and diverse. Universities of Medical Sciences can emphasize this as a differentiating dimension and strengthen their related components. In this regard, Participant No. 1 stated: "If we want a university to have an advantage in education, special attention must be paid to mentorship. We must

Table 1. Demographic and Professional Characteristics of Study Participants (N = 10)

Study Title	Academic Rank	Organization/University	Gender
	Professor	Ministry of Health, Treatment and Medical Education	Male
	Professor	Kerman University of Medical Sciences	Male
	Associate Professor	Kerman University of Medical Sciences	Male
	Associate Professor	Shahid Beheshti University of Medical Sciences	Female
	Professor	Ministry of Health, Treatment and Medical Education	Male
	Associate Professor	Ministry of Health, Treatment and Medical Education	Female
	Professor	Shahid Beheshti University of Medical Sciences	Male
	Associate Professor	Shahid Beheshti University of Medical Sciences	Male
	Professor	Ministry of Health, Treatment and Medical Education	Female
	Associate Professor	Ministry of Health	Male

Table 2. Analysis of Part of One of the Codes Related to the Study, Along with Categories and Subcategories

Meaning Unit	Summarised Meaning Unit	Preliminary Code	Group of Codes	Subcategory	Main Category
-We have many faculty members who participate in jihadi camps and social activities. For example, Dr. ... with his team goes to an underprivileged area several times a year and performs jihadi and God-pleasing works	Participation of faculty members in social activities continuously and collaboratively.	Social Activities	Social activities that are current in a higher education institution and bring the necessary fame to the institution in this regard.	Effective Social Activities of Higher Education Institutions	Effective Role in Social Activities
-In differentiating higher education institutions, we must allocate a place for ethics. We must definitely find a way for it. Perhaps we can say that the faculty members of this institution are not on internal or external blacklists. For example, in publishing their articles, they have not conducted unethical work.	Importance given to the professional ethics aspects of members of a higher education institution at national and international levels.	Ethics	Values and ethical principles are a prominent feature of a higher education institution and it should be reputable in this regard.	Institutionalization of Professional Ethics Topics in Higher Education Institutions	Fame of Higher Education Institutions in Professional Ethics

strive for successful and internationally renowned graduates to emerge from the university, which would differentiate it in that aspect.” Participant No. 7 noted: “It seems that perhaps the consistent use of a specific teaching method at a university over the years could create a suitable advantage for Universities of Medical Sciences.”

The Mission of Universities in Research

Research is another primary duty of universities; it is a core value for top universities worldwide, and the institutional credibility of faculty members is primarily determined by research productivity. Research is defined in various ways across disciplines, including the medical sciences, and can take diverse forms. It enables greater university faculty presence in the community, the conduction of applied research, and the enhancement of the quality of the service delivery system. Participant No. 2 remarked: “Research and research activities in today’s world could be the most important distinguishing point for Universities of Medical Sciences. Major world universities are often renowned for their research activities, where research takes precedence. In Iranian Universities of Medical Sciences as well, research should be a priority for differentiation among universities that possess suitable potential for conducting important research projects.” Participant No. 8 added: “It is not an exaggeration to say that the most important differentiating dimension for a university is research, though not just any research, but effective research.”

The Mission of Universities in Knowledge Management

The role of universities in knowledge management is introduced, on the one hand, as a source for knowledge storage in the new era. In today’s competitive environment, the need for organizations, including

health organizations, for knowledge assets has intensified significantly. The non-replicable, scarce, valuable, and irreplaceable nature of these knowledge assets, alongside the emergence of concepts such as knowledge management, intellectual capital, and intangible assets, indicates the increasing importance of knowledge resources in organizations. Participant No. 1 commented: “If a university has appropriate processes for creating, developing, and disseminating existing knowledge within the university, it can certainly be one of the university’s important advantages.”

The Mission of Universities in community outreach

A university is a social institution that can foster growth, become social capital, prepare students for the realities of the outside world, and provide access to knowledge. Opportunities for social service can be a valuable tool for influencing early exposure in student education. In some cases, medical sciences education institutions partner with local community organizations or larger institutions involved in community development. Participants in this study also highlighted the importance of this topic in the University of Medical Sciences’ community service provision. Participant No. 6 stated: “The extent to which faculty members of a university participate in social activities according to community needs can be a distinguishing aspect for a university. For example, how much faculty members, residents, and other students voluntarily engage with social and therapeutic issues of the community can determine the advantage of that university’s service.” Participant No. 3 noted: “Consistent participation in various medical outreach camps can be a prominent activity in Universities of Medical Sciences; this very factor will bring fame to that university.”

Table 3. Examples of Mission Differentiation in Universities of Medical Sciences in Iran

Category	Class	Subclasses
Academic Education	Providing Outstanding Education	Successful mentorship at the international level. Providing specific teaching methods at the university level. Scientific talent of faculty members. Promotion of graduate studies. Convergence of education and research. Research-based education. Transformation of the existing educational system. Training committed and specialized human resources. Expansion of educational programs. Educational guidance. Demand-driven education.
	Research Orientation	Demand-driven research. Research collaboration. Research productivity. Scientific authority. Development of scientific hubs. Qualitative enhancement of sciences. Collaborative knowledge production. International cooperation. Cross-sectoral cooperation. Scope of international activities. Global collaborations.
Research	International Research Interactions Gaining International Research Credibility	
Service Provision	Providing Specialized Medical Services Development of Science and Technology in Service Provision	Providing service to community members. Development of medical tourism. Support for knowledge-based companies in service provision. Promotion of creativity and innovation. Transforming ideas into products. Development of indigenous technologies. Support for entrepreneurial activities in service provision. Utilizing environmental capacities in service provision. Prominent environmental feature in university research.
	Development of Entrepreneurship in Service Provision Attention to Environmental Capacities in Service Provision	
Knowledge Management	Management of Knowledge-Based Activities	Cooperation agreements on specialized topics. Excellence in managing knowledge assets. Management of prominent and credible documents. Systematic problem-solving processes. System for recording and utilizing experiences. Outstanding system for knowledge transfer and dissemination. Production and provision of distinct specialized services. Creation and dissemination of specialized knowledge. Frequent use of data mining in various activities. Joint publications with the industry sector. Investment for knowledge creation. Scientific fame of faculty members. Existence of research centers with high-quality publications. Inventions and innovations in specific fields generating dedicated income for the institution.
community outreach	Effective Role in Social Activities Fame of Higher Education Institutions in Professional Ethics	Social responsiveness. Special focus on community-oriented professional development programs. Ethics-centricity in service provision. Providing educational programs at the community level. Providing services to vulnerable and at-risk populations.
	Prominent Social Activities	Fame for developing community-based curriculum programs. Conducting research based on community health problems.

The Mission of Service Provision in Universities

In Iran, the University of Medical Sciences functions as the executive arm for providing health services, and health service delivery is the most fundamental function of any country's health system. All these services are made possible through the training of specialized personnel by higher education institutions. However, examples of differentiated missions in Universities of Medical Sciences include the provision of specialized services to attract medical tourism at the national, regional, and international levels. Educational-medical centers operating under the Universities of Medical Sciences can play an effective role in this regard, as participants in this study also highlighted its importance. Participant

No. 10 said: "One area in which Universities of Medical Sciences can differentiate themselves is by providing medical services to attract medical tourism. In fact, some universities are pioneers in this field, and with more planning, they can also gain international fame. Of course, special attention should be paid to the potential of clinical departments and university facilities in this regard." Participant No. 8 added: "Clinical faculty members who are highly renowned worldwide in their specialty should be utilized as a differentiating potential."

Discussion

The findings of this study revealed that mission differentiation in Iranian Universities of Medical

Sciences can be conceptualized using a five-dimensional framework encompassing Education, Research, Service Provision, Knowledge Management, and community outreach. This finding aligns with the global literature on higher education differentiation, which emphasizes diverse missions, while also highlighting specific dimensions such as community outreach and Knowledge Management, considering the integrated context and social accountability of Iranian medical universities. Among the strengths of this study are the rich, reliable data collected from specialists' experiences, which provide substantial information on the mission differentiation of universities of medical sciences.

Education, as the primary duty of universities, is one of the fundamental pillars in the development and progress of societies, and its main objective is to provide suitable opportunities for acquiring knowledge, skills, and training specialized human resources with the necessary abilities to perform related duties in society (26). In various countries, higher education institutions have been differentiated along dimensions such as research, education, credibility, and the university's position in valid rankings, findings consistent with this study. According to Chankseliani et al. (2020), universities can conduct basic and applied research to improve understanding and develop applications of scientific knowledge (27). In the field of education, there is also a wide range of innovative practices and specialized programs at universities worldwide. For example, the University of Waterloo is one of the world leaders in cooperative education, which combines academic studies with on-the-job training. Ryerson University specializes in professional applied programs and has a graduate school for continuing education. McMaster has been a leader in problem-based learning in medical programs (28).

Our dimension of community outreach confirms and contextualizes the idea of the "third mission" of universities, as proposed by researchers such as Gaisch (2019). Activities such as participation in voluntary medical camps, identified in our data, represent a unique form of social responsibility in the Iranian context. Considering the importance of universities of medical sciences' social service provision to the community, their current structures have failed to scientifically and professionally address the community's issues and needs. In fact, the immersion of the academic community in a set of theoretical, non-applied training programs has weakened the community's trust in universities. Therefore, with the emergence of such problems, attention to the connection and interaction between the university and the community seems necessary (29). Zaibet et al. (2019) propose a model to strengthen the bond among university, industry, and community, with technical, political, and social dimensions (30). Also, Gaisch (2019), in her study, points to formulating a third mission for higher education institutions, referring to universities that, in addition to education and research, tend toward collaboration with communities for meaningful social

transformation (31).

The finding related to Service Provision, particularly medical tourism, suggests that Universities of Medical Sciences in Iran are viewed not only as domestic service providers but also as potential actors in the international health arena. This perspective requires coherent planning and investment in marketing and quality enhancement. Accordingly, given advantages such as a suitable geographical location, low service costs, appropriate equipment, and qualified doctors, it seeks to capitalize on opportunities in the international healthcare services market. In this regard, important factors such as formulated policies, coherent planning, and information dissemination regarding capabilities and capacities through appropriate informational channels will play an effective role in the development of medical tourism (32).

Furthermore, the emphasis on Knowledge Management aligns with McCowan's (2016) view of the university as an institution for storing, transferring, and creating knowledge, indicating that this role is perceived as a potential competitive advantage in Iranian medical universities. To differentiate in knowledge management, the expected roles and duties of higher education institutions, particularly universities of medical sciences, must be aligned with the growth and specialization of knowledge in today's world, thereby placing these institutions' missions on the right path (33).

In fact, evidence shows that universities that clearly identify their mission and objectives and explicitly and unambiguously specify the matters most relevant to them create more opportunities to claim a specific position in the labor market and to influence society (34). To move along the path of differentiated mission, universities need the necessary resources and optimal management and leadership, which are the primary needs (35-37). Moving along the path of differentiation in universities of medical sciences can initiate a move towards the scientific authority of universities of medical sciences (38, 39).

An important point that must be mentioned here is answering these questions: "If institutions in a higher education system are identified as differentiated and carry out their activities accordingly, how is the coordination of this differentiated higher education system determined?" or "Do higher education institutions function properly within a differentiated system, and are all moving in line with the system's main functions?" Answering these questions relates to the discussion of differentiation and articulation among institutions, which, alongside differentiation, has been considered by successful differentiated systems worldwide and incorporated into their national higher education policies (40). Articulation refers to mechanisms that facilitate student mobility within and between institutions that form the higher system. Differentiation and articulation are intended to maximize productivity, efficiency, and overall competitiveness (41).

Therefore, considering the expected missions from universities of medical sciences such as education, research, and service provision, which are inseparable

parts of these institutions, and logical expectations from them considering the increasing advances in science and technology and social responsiveness, we will achieve that, in addition to the aforementioned expected missions, special attention should be paid to other hidden aspects of their mission, which indicate the knowledge management and social service provision of these institutions, in such a way that universities can be expected, based on their existing abilities and capacities, to lead to a differentiated system in the higher education system of medical sciences in one of the mentioned domains. Our proposed five-dimensional framework not only aids individual universities but also raises important questions for system-level coordination (articulation). How can policymakers encourage universities to specialize in different dimensions while ensuring system-wide coherence and student mobility?

This study was conducted with a limited population of central experts. To enhance generalizability, future quantitative studies with a larger sample size from the Universities of Medical Sciences across the country are recommended. Additionally, a deeper exploration of the implementation barriers for each of the five dimensions could be the subject of future research.

Conclusion

This study, by presenting a five-dimensional framework, provides a deeper understanding of potential examples of mission differentiation in Iranian Universities of Medical Sciences. Operationalizing this framework can help policymakers and university administrators formulate distinct missions and specialized strategies tailored to their unique capacities and contexts, rather than striving for excellence across all areas. This can ultimately lead to enhanced quality, competitiveness, and specialized impact of these universities at national and international levels. Future research can focus on developing assessment tools based on these dimensions or conducting case studies on leading universities in each dimension.

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Authors' Contribution

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Competing Interests

The authors declare that there is no conflict of interest regarding the publication of this article.

Ethical Approval

This study was approved by the Ethics Committee of Shahid-

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