Original Article

# Requirements, Criteria, Challenges, and Solutions for the Internationalization of Medical Education in Iran: A Qualitative Study

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#### Abstract

**Background:** Despite some obstacles, internationalization of medical education can promote the educational, research and clinical level of universities.

**Objectives:** The purpose of this study was to explore the opportunities, challenges, and solutions of the internationalization of higher medical education in Iran.

Methods: The present qualitative study was conducted with Brown and Clark's thematic content analysis approach. Purposeful sampling was performed using the snowball strategy, and the data were collected using semi-structured interviews. The statistical population included Iranian students and professors residing in universities abroad, experts and key officials working in the Deputy of International Relations in Iran's Ministry of Health and Medical Education, the Vice-Chancellors of the International Relation Units of the country's universities of medical sciences, and foreign students studying in Iran's universities of medical sciences. The data were gathered by conducting 17 interviews with eligible individuals following the principle of data saturation. Finally, the data were subjected to thematic analysis by MAXQDA-10 software.

Results: The data extracted from the interviews were categorized into 268 codes, 29 subcategories, and six categories. The themes identified were "specifications of an international higher education center", "advantages of internationalization", and "necessary items and requirements" in the field of requirements and criteria, "weaknesses and challenges of internationalization" in the field of challenges, "operational solutions for addressing challenges" and "successful domestic and foreign experiences of the internationalization of higher medical education centers " in the field of solutions. The subthemes of "weaknesses and challenges at the level of the university" and "hardware specifications" attained the highest frequency among open codes.

Conclusion: A need to be responsive to many present and future needs of our country necessities that the higher medical education system moves in parallel with the globalization process and multicultural societies. In this regard, officials should pay attention to the requirements, criteria, challenges, and solutions of the internationalization of higher medical education in Iran based on the evidence disclosed in this study.

Keywords: Internationalization; Medical Education; Challenges; Requirements; Criteria; Iran

# **Background**

Universities' fundamental functions are among the most important factors shaping the future world (1), and

the need to adjust these functions is becoming more evident every day in response to cultural exchanges and globalization (2, 3). The internationalization of

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universities is considered a way to establish intercultural and global relationships in the higher education system (2) and a planned response to the globalization process (4). There are a number of strategies for societies and institutions to move toward internationalization, originating from the demands arising from efforts for globalization (4, 5). This phenomenon also consists of consensus-based cooperation between universities in the fields of education, research, and service provision (6), which changes the world of higher education (7). Two indispensable parts of internationalization are international students and cooperation (8).

It is expected that universities across the world will host about 8 million international students by 2025 (9). Higher education institutions in many regions of the world give priority to internationalization, and countries pursue different goals for attracting international students in the future (10-13). This event requires establishing effective communication between higher education systems as a necessary revolution (14, 15). Across the world, the international affairs of educational systems are expanding in the context of becoming global citizens and being obliged to develop and empower these citizens (16). Since science recognizes no boundaries, universities should inevitably be considered international institutions (17).

Among the benefits of internationalization for universities are the promotion of national identity, improvement of the quality of education through reforms (18), scientific development, facing countless economic opportunities, and transformation into a financial source (2, 19). From a cultural point of view, the most important function of the internationalization of higher education includes the expansion and spread of national values and cultural principles at the international level (2, 20).

In most European countries, the internationalization of higher education is one of the goals of standardization and is seen as a process that offers universities an economic opportunity by attracting investment. Strategies such as dynamic international students and promoting the qualifications of personnel have helped this process for years; however, even big plans such as Erasmus are sometimes unwelcomed by some states or professors (21-23). Creating appropriate curricula and futurism are among the challenges of the internationalization of universities in many Asian countries (22), which can be obviated by quality promotion and the regionalization and unifying of internationalization policies (23). For example, China has already started harmonizing its national policies

regarding the internationalization of higher education (24). An important challenge faced by many countries in this regard includes close-minded brains and the departure of elites (25). Anyway, many countries, including African and Latin American countries, have embarked on this journey and are trying to solve obstacles and enforce their strengths in this field (26, 27).

It is necessary for Iran's higher education system to move toward internationalization, and reasons for this notion include the necessity of knowing other nations and cultures, identifying and addressing the needs of the global community, and becoming the top scientific power in the region in line with the objectives of the country's 20-year vision document (16). In this regard and in pursuit of the benefits of internationalization, Iran, and particularly the Ministry of Health and Medical Education, has set a clear path for the country's medical universities by offering medical education transformation and innovation plans in the form of transformation packages in the fourth step of the health system transformation plan. In line with this policy and considering the lack of adequate studies on the structure of medical sciences universities, this study aimed to assess the requirements, criteria, challenges, and solutions of the internationalization of Iran's higher medical education system.

# **Objectives**

The purpose of this study was to explore the opportunities, challenges, and solutions of the internationalization of higher medical education in Iran.

# **Methods**

Since Iran has focused on admitting the maximum number of foreign students in its universities, and the fact that no qualitative study has yet been conducted to thoroughly explore the requirements, criteria, challenges, and solutions of the internationalization of higher medical education in Iran, we decided to conduct this study with a qualitative approach. The present qualitative study was conducted on 17 people, recruited by purposeful sampling and the snowball strategy, using thematic content analysis method (28, 29). Data collection was performed using semi-structured interviews.

Participants in this study were recruited using purposeful sampling and the snowball strategy. For this purpose, initially, a list containing the names of people involved in the internationalization of Iran's medical sciences universities and those having rich information on this topic (for example, because of studying or teaching in universities abroad) was prepared. Then according to eligibility criteria (being informed of the process of the internationalization of universities, being studying or teaching at universities abroad, managers and officials in charge of the internationalization of the higher medical education system, or foreign students studying in Iran's medical sciences universities), people were chosen as participants in the study. In order to ensure to include of all possibly eligible people, participants during interviews were requested to introduce experts in the field who possibly could fulfill inclusion criteria.

After selecting the research participants and contacting them via a phone call or e-mail, the interview guide was sent to them via e-mail. After making the necessary arrangements, the interview's time and place were determined considering the preferences of the interviewees, and informed consent was obtained from them. During the interview, the participants were fully explaining the objectives and protocols of the study, and their consent was obtained regarding the voice recording of the interview. Data collection was conducted using semi-structured interviews.

Considering the main questions of the research, the interview was started with open-ended questions such as: "In your opinion, what are the characteristics of a higher medical education center?", "Could you please note the criteria and requirements of the internationalization of higher medical education?" or "Would you please state the challenges, weaknesses, solutions, and strengths of the internationalization of

higher medical education in Iran?". The subsequent probing questions were then asked to enrich the data. The validity and reliability of the interview questions were assessed by the criteria proposed by Lincoln and Guba (30). The texts of the interviews were transcribed precisely and verbatim after the end of each interview. The interviews were conducted considering the principle of data saturation, meaning that data collection through interviews continued until reaching the understanding that the interviews provided no new information.

In this study, 17 people fulfilled our inclusion criteria, whose gender distribution and educational characteristics at the time of the interviews have been provided. Overall, 88.23% of the interviewees were males with doctorate degrees working in a university. The duration of the interviews varied between 40 and 80 minutes. Interviews with people outside Iran were conducted virtually and with people inside Iran either in-person or virtually. The instructions and duration of the interview were initially informed to the participants at the beginning of the session so that they could manage the time dedicated to responding to the questions. Considering that the study was conducted during the Covid-19 pandemic, only four (23.52%) of the participants preferred in-person interviews, seven (41.17%) of them were interviewed by phone, and six (35.29%) individuals were interviewed via virtual communication applications (Skype and WhatsApp) (Table 1).

**Table 1.** The Characteristics of the Interviewees Participating in this Research

Variable	Domains	Number
Executive position	Deputy Minister of Education of the Ministry of Health, Treatment, and Medical Education	1
	The director of the international affairs of the university or faculty	5
	Foreign students studying in Iran's universities	2
	Employees at research centers affiliated with medical universities	4
	Employees at educational departments affiliated with medical universities	5
	(professors and staff)	
Educational level	Foreign student	11.77%
	Holding a doctorate or Ph.D. degree	88.23%
Gender	Female	11.77%
	Male	88.23%
Interview method (%) and duration	In-person (373 minutes)	23.52%
	Telephone (434 minutes)	41.17%
	Virtual communication applications (160 minutes)	35.29%

The reliability of the data was ensured according to the four criteria proposed by Lincoln and Guba, including validity, transferability, reliability, and verifiability. For validity and verifiability, experts in the internationalization, medical education, and qualitative study methodology fields were invited to participate in the research as a strategy to achieve triangulation and, more deeply, divulge the topic. In addition, for the triangulation of data resources, the interviewees were selected purposefully from diverse groups, such as foreign students studying in Iran, Iranian students studying abroad, as well as professors, researchers, and

activists engaged with management and policymaking in the internationalization of higher medical education. In addition, data coding was conducted by two members of the research team, and when there were disagreements and ambiguities in the codes extracted, group discussions with the participation of other team members were held to resolve the issue. Using the continuous comparative analytic strategy and repeatedly surfing through code extraction steps, the accuracy, consistency, meaningfulness, and analyzability of the model and research findings were employed to ensure the validity of the data (31).

Moreover, the details of the research protocol, including the composition of the interviewees and data collection and analysis methods, were clearly described. When reporting the findings, relevant and suitable quotes from the interviewees were provided to explain field experiences and compare them with other studies if necessary. For reliability, after reaching data saturation (i.e., the emergence of no further information with regard to the main question), two additional interviews were conducted to ensure data sufficiency. After data transcription on paper

by typing, the data were entered into MAXQDA software (version 10) for analysis. After reading the data several times to acquire a good grasp of the interviews' concepts, primary codes were identified, and this process was repeated until recognizing the main theme and subthemes. For each interview, data analysis was started by repeatedly reading the data to achieve data immersion and a feeling of sinking into a whole (as reading a novel). Then the interview texts were read verbatim, and the primary codes were extracted by highlighting unique words that could possibly harbor key ideas or concepts. Note-taking from the primary perceptions was used to close the primary impressions and thoughts to the text. This process continued until the extraction of the primary codes from the text, which were then categorized into sub-themes based on their links and connections. These newly merged categories were utilized to organize and classify the codes into meaningful themes. Subsequently, the researcher specified a unique and comprehensive title based on the shared meanings existing between the codes of a given category. Finally, the themes, sub-themes, and codes identified in the study were described (Table 2).

Table 2. The Main Themes and Subthemes and Respective Number of Open Codes

Main themes	Subthemes	Number of codes
Specifications of an international higher	Hardware features	17
education center	Intellectual features	11
	Software features	10
Necessary criteria and requirements	Political criteria and requirements	10
for the internationalization of medical	Legal criteria and requirements	5
universities	Economic criteria and requirements	4
	Cultural criteria and requirements	9
	Academic criteria and requirements	13
	Communication criteria and requirements	11
	Managerial criteria and requirements	9
Weaknesses and challenges of	Political weakness and challenges	12
internationalization	Socio-cultural weakness and challenges	9
	Environmental and physical weaknesses and challenges	7
	Academic weaknesses and challenges	20
	Structural and administrative weaknesses and challenges	14
	Economic weakness and challenges	3
	Technological weaknesses and challenges	4
Operational solutions to resolve	Political, cultural, and social suggestions and solutions	14
available challenges	Technological and communication suggestions and solutions	14
	Economic suggestions and solutions	3
	Educational and research suggestions and solutions	10
	Structural and administrative suggestions and solutions	10
Advantages of internationalization of	Political strengths	5
Iran's higher education system	Socio-cultural strengths	6
	Scientific strengths	11
	Geographical strengths	4
	Structural and administrative strengths	7
Successful domestic and foreign	Successful experiences inside the country	12
experiences of internationalization of higher medical education centers	Successful experiences abroad	4

#### **Results**

The analysis of 17 interviews conducted with the participants revealed 268 codes, 29 sub-themes, and six themes (Table 1). Based on thematic content analysis and the main themes identified in this research, the interviewees denoted factors that can be very helpful for the internationalization of higher medical education. The themes emerged were as follows: "specifications of an international higher education center", "advantages of internationalization", and "necessary items and requirements" in the field of requirements and criteria, "weaknesses and challenges of internationalization" in the field of challenges, "operational solutions for addressing challenges" and "successful domestic and foreign experiences of the internationalization of higher medical education centers" in the field of solutions.

The subthemes of "weaknesses and challenges at the level of the university" and "hardware specifications" attained the highest frequency among open codes.

# Specifications of an International Higher Medical Education Center

Regarding the features of a higher medical education center, three items, including hardware, software, and intellectual features, were prominent. So, it can be noted that being equipped with suitable tools, having adequate physical spaces, the existence of active and enthusiastic human resources, seeing internationalization as a necessary requirement, and taking into consideration an internationalization continuum when making decisions are among the main characteristics of an international higher education center.

Participant No. 5 stated: "...managers' believing in internationalization and their trying to be present in this field, as well as considering an internationalization continuum before making any decision, are among the main specifications of an international educational center".

# **Necessary Items and Requirements for the Internationalization of Medical Sciences Universities**

In response to the question of what are the necessary criteria and requirements for the internationalization of higher medical education, the interviewees raised a number of issues, which were classified into several categories, including political, legal, economic, cultural, university-related, communication, and managerial. Examples of these items included having political and diplomatic relations with numerous countries, political support from high-ranked policymakers, coordination of internationalization policies with the country's political visions, legal facilitating the issuance of visas for

foreign students and professors, valuing the rules and regulations governing international communications, paying attention to internationalization when hiring professors and establishing necessary standards, engaging universities' boards of directors and trustees, discarding complicated rules and regulations, increasing the internationalization budget of universities, nurturing a multicultural environment and flexibility in facing other cultures in universities, paving the ground international research opportunities, active participation in international relations, exchanging information about internationalization requirements with other domestic and foreign universities, changing the attitude and understanding of managers towards internationalization, changing the organizational structure of medical universities in favor of internationalization, etc. These were among the subthemes noted in this research as the necessary criteria and requirements of internationalization.

One of the interviewees (No. 7) stated: "... beyond all, an organization's authorities should truly believe in internationalization because not only there is a need to create structural changes, but also visions, strategies, and attitudes ... so, the selection of people should be tailored accordingly".

# Discussion

Universities can solve social problems substantially help the community achieve scientific advancements only when they deliver high-quality performance in terms of education and research (32). One of the strategies that developing countries can employ to improve the quality of research and education in their universities is to establish international communication (33). This agrees with the results of the present study, as the participants reiterated the importance of establishing international communication at all levels and policy areas.

The criteria and requirements of internationalization in the field of medical education encompass multiple areas and three generations of international universities, and each of these generations has its own challenges and advantages (34). In terms of political requirements, the most important items include establishing political and diplomatic relations with other countries, the need for high-rank policymaking and political support internationalization of universities, the coordination of higher education internationalization policies with national political values, facilitating the rules of issuing

visas for foreign students and professors, valuing the rules and regulations related to international communication, attention to paying internationalization when hiring professors, and creating necessary standards (35). The most important role the government regarding internationalization of higher education is to support strategic thinking in this area. In fact, state policies have a decisive role in countries where universities are affiliated with the government. Overall, 41% of international students around the world are studying in countries that have a national strategic plan for the internationalization of higher education and have chosen English as their second language (36).

The solutions raised in this study have also been emphasized in other articles (37). Likewise, the weaknesses and challenges of internationalization mentioned are in line with similar studies (38). Political and security issues and realities, especially the fear of terrorism, education costs, and the process of obtaining visas, have always been among the parameters with negative impacts on the internationalization of universities (39). The poor spirit for researching, poor English language skills, and poor literature search skills among students and professors were among the most important challenges of higher education (40). Therefore, educational institutions should consider revising their traditional teaching methods and employing new alternative techniques if they want to sustain in the present and future (1), a notion mentioned by most of our participants in this study. The specific and operational suggestions and solutions raised by the interviewees to overcome the existing challenges were confirmed by similar studies (41, 42). The strengths of the internationalization of the higher education system in Iran have also been reiterated in similar studies (43).

The benefits of internationalization for medical universities encompass political, cultural, social, and economic venues. Studies have noted the positive outcomes of the internationalization of education, such as the expansion of intercultural communication skills (44), technology transfer, strengthening of political relations (45), attracting foreign elites, increasing international cooperation, increasing scientific research and products, economic productivity, and financial venues (42), supporting the results of the present study.

Consistent with similar studies, a number of disadvantages were noted for the internationalization of higher education, such as the departure of elites, conflicts between the roles of the university as a political

or national organization (39), reduced diversity of curricula, excessive use of English as the second language, and the commercialization of education (42). It is worth mentioning that the issue of the departure of elites was noted only by one of our participants.

Evaluating the internationalization of the higher education system in the United States, Canada, and Australia showed that the most important strategy employed by these countries was the internationalization of the curriculum via learning and integrating international content into the existing curricula. However, translocating professors and students in the context of exchange programs is less popular, while priority is given to local and national curricula in each country (46).

*Limitations*: This study coincided with the Covid-19 pandemic, which limited our capability to conduct faceto-face interviewees with some of the participants, somehow interfering with data collection. This is the first qualitative study deeply exploring the viewpoints of professors, and managers internationalization in the context of medical education to disclose the requirements, criteria, and challenges of the internationalization of higher medical education in Iran. However, considering the cross-sectional nature of the study, we cannot rule out changes in the opinions of the participants due to alterations in the respective criteria and challenges of internationalization over time due to social, political, economic, and cultural transitions.

# Conclusion

The findings of the study indicate that responding to the numerous needs of the country requires that higher medical education moves towards globalization and multicultural societies. Regarding creating specification of internationalization, it is required not only to benefit from appropriate equipment, physical spaces, and active and enthusiastic human resources but also to see internationalization as a necessity for the university. There is a need to prepare and adhere to an internationalization continuum before making any decision in the university. The Ministry of Health and medical universities in Iran, as the representative of the government in the field of medical education, should pay attention to the following:

-Creating a suitable structure for the university tailored to the culture of the indigenous people living around the university

- -Developing an internationalization continuum at the national and provincial levels and adhering to it before making any decision related to the field of medical sciences
- -Creation of local standards comparable to international norms
- -Reorganizing and developing infrastructure compatible with international standards
- -Reviewing the organizational structure of medical universities to comply with internationalization
  - -Creating an international language in universities
- -Establishing scientific and research communication with reputable universities around the world
- -Establishing diplomatic relations with countries hosting reputable universities (macro policymaking)
- -Supporting students and professors participating in international activities
- -Efforts to remove internal and external sanctions (macro and social policymaking)

Considering the high potential of Iran's medical universities for internationalization in the field of medical education, it is advisable to prioritize removing barriers and fulfilling requirements in this area to promote the internationalization of these universities.

**Supplementary material(s):** is available here [To read supplementary materials, please refer to the journal website and open PDF/HTML].

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# References

1. Hejrati MS. A brief look at the country's higher education system and some of its challenges. Proceedings of the National Higher

- Education Congress of Iran; 2016 Apr 14; Tehran, Iran. 2016. [In Persian]
- 2. Shamsi Gooshki E, Pourabbasi A, Akbari H, Rezaei N, Arab Kheradmand A, Kheiry Z, et al. Internationalization of medical education in Iran: A way towards implementation of the plans of development and innovation in medical education.
- J Adv Med Educ Prof. 2018 Jan; 6(1): 43-8. doi:10.30476/jamp.2018.43341. [PMCID: PMC5757156] [PMID: 29344529]
- 3. Sarkarani MR. Internationalization of Higher Education. Journal of Political and Economical Information. 2002;306:183-4.
- 4. Mosavi T, Nave Ebrahim A, Araste HR, Abdollahi B. Analysis of the inside and outside of universities outcomes of internationalization for the Iranian Selected State Universities. Journal of Innovation and Value Creation. 2020;17(9):85-104. [In Persian]
- 5. Wilkins S, Huisman J. International student destination choice: The influence of home campus experience on the decision to consider branch campuses. Journal of Marketing for Higher Education. 2011;21(1):61-83. doi: 10.1080/08841241.2011.573592.
- 6. Rezaei H, Yousefi AR, Larijani B, Dehnavieh R, Rezaei N, Adibi P. Internationalization or globalization of higher education. J Educ Health Promot. 2018 Jan 10;7:8. doi: 10.4103/jehp.jehp\_25\_17. [PMID: 29417068] [PMCID: PMC5791431]
- 7. Knight J. Crossborder education: An analytical framework for program and provider mobility. Higher education: Handbook of theory and research. Dordrecht, Netherlands: Springer; 2006: 345-95. doi:10.1007/1-4020-4512-3\_7.
- 8. Rezaei H, Yousefi A, Larijani B, Rezaei N, Adibi P. Road map of Iran's internationalization of medical sciences education: Experience of Isfahan University of Medical Sciences. Iran J Med Educ. 2017;17:125-33. [In Persian]
- Siegmund J, Rawdon B, Ren C. Top Markets Report Education: A Market Assessment Tool for US Exporters. [cited 2016 May 8].
   Available from:

 $https://legacy.trade.gov/topmarkets/pdf/Education\_Top\_Markets\_Report.pdf.$ 

10. Alfaro L, Ketels C. Microeconomics of competitiveness: Singapore's higher education aspiration. [cited 2016 May 06]. Available from:

https://www.isc.hbs.edu/Documents/resources/courses/moc-course-at-harvard/pdf/student-

projects/Singapore%20Higher%20Education%202016.pdf.

- 11. Hearps R, editor Global trends & disruptors in international student referrals. Melbourne: ANZA: 2016.
- 12. O'Connor A. A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes. Journal of Business Venturing. 2013;28(4):546-63. doi:10.1016/j.jbusvent.2012.07.003.
- 13. Blackwell B. Industrial strategy: Government and industry in partnership–Building Information Modelling. London: HM Government; 2012.
- 14. DeBoer GE. The globalization of science education. Journal of Research in Science Teaching. 2011;48(6):567-91. doi:10.1002/tea.20421.
- 15. Marashi S, Mehralizadeh Y, Toosi T. Globalization and its Effects on Curriculum Goals in Educational System of Iran. Journal of Educational Sciences. 2013;20(1):51-74. [In Persian]
- 16. Khoshnoodifar M, Fathi Vajargah K. Internationalization distance education curricula in Iran higher education. Technology of Education Journal. 2012;6(1):1-18. doi:20.1001.1.20080441.1390.6.1.1.9. [In Persian]

- 17. Bostrom CA. Diffusion of internationalization in Turkish higher education. Journal of Studies in International Education. 2010;14(2):143-60. doi:10.1177/1028315309332028.
- 18. De Vita G, Case P. Rethinking the internationalisation agenda in UK higher education. Journal of Further and Higher Education. 2003;27(4):383-98. doi:10.1080/0309877032000128082.
- 19. Fazeli N. Globalization and Higher Education: Global Trends in the Institution of Higher Education and The Status of Higher Education in Iran. Social Sciences. 2004;11(25):1-41. [In Persian]
- 20. De Wit H. Internationalization of higher education in the United States of America and Europe: A Historical, Comparative, and Conceptual Analysis. London: Greenwood Press; 2002.
- 21. Yılmaz G. Emulating Erasmus? Turkey's Mevlana exchange program in higher education. Asia Europe Journal. 2019;17(2):145-59. doi:10.1007/s10308-017-0497-y.
- 22. Ng SW. Rethinking the mission of internationalization of higher education in the Asia-Pacific region. Compare: A Journal of Comparative and International Education. 2012;42(3):439-59. doi:10.1080/03057925.2011.652815.
- 23. Tanhueco-Nepomuceno L. Internationalization among selected HEIs in the ASEAN region: Basis for a proposed framework for an internationalized campus. International Journal of Educational Development. 2019;65:152-71. doi: 10.1016/j.ijedudev.2018.07.003.
- 24. Pan SY. China's approach to the international market for higher education students: strategies and implications. Journal of Higher Education Policy and Management. 2013;35(3):249-63. doi:10.1080/1360080X.2013.786860.
- 25. Tight M. Internationalisation of higher education beyond the West: challenges and opportunities—the research evidence. Educational Research and Evaluation. 2022;27(3-4):239-59. doi:10.1080/13803611.2022.2041853.
- 26. Guilherme A, Morosini M, Kohls dos Santos P. The process of internationalisation of higher education in Brazil: the impact of colonisation on south-south relations. Globalisation, Societies and Education. 2018;16(4):409-21. doi: 10.1080/14767724.2018.1440351.
- 27. Thondhlana J, Abdulrahman H, Chiyevo Garwe E, McGrath S. Exploring the internationalization of Zimbabwe's higher education institutions through a decolonial lens: postcolonial continuities and disruptions. Journal of Studies in international Education. 2021;25(3):228-46. doi:10.1177/1028315320932319.
- 28. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today. 2004 Feb;24(2):105-12. doi: 10.1016/j.nedt.2003.10.001. [PMID: 14769454]
- 29. Hsieh HF, Shannon SE. Three Approaches to Qualitative Content Analysis. Qual Health Res. 2005 Nov;15(9):1277-88. doi: 10.1177/1049732305276687. [PMID: 16204405]
- 30.Lincoln YS, Guba EG. Naturalistic inquiry. California, US: Sage; 1985. doi:10.1016/0147-1767(85)90062-8.
- 31. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology. 2006;3(2):77-101. doi:10.1191/1478088706qp063oa.

- 32. Sotodeh Asl N, Ghorbani R, Rashidy-Pour A. Restrictive factors in medical research in the viewpoint of students of Medical Sciences University of Semnan. Koomesh. 2015; 17(1):267-76. [In Persian]
- 33. Arasteh HR. International Higher Education Contributions in Iran and How to Improve Them. Quarterly Journal of Research and Planning in Higher Education. 2006;12(1):99-115. [In Persian]
- 34. Knight J. International universities: Misunderstandings and emerging models? Journal of Studies in International Education. 2015;19(2):107-21. doi:10.1177/1028315315572899.
- 35. Valimoghaddam S, Kamali N, Mojtabazadeh M. Role of government in internationalization of higher education in Universities of Medical Sciences of the Country: A Qualitative Research. J Journal of Medical Education Development. 2019;12(33):43-55. doi:10.29252/edcj.12.33.66.
- 36. Curaj A, Deca L, Pricopie R. European higher education area: The impact of past and future policies. Cham, Switzerland: Springer Nature; 2018. [PMCid:PMC6045661]
- 37. Moosavi MM, Azizi M, Badizadeh A, Rezghi H. Identifying the Components of Internationalization of Higher Education (Case Study: Medical Services Education Industry). Journal of Healthcare Management. 2019;9(4):7-18.
- 38. Nikbin M, Zakersalehi G, Mahozi R. The Model of Internationalization of Higher Education from Cultural Policy Perspective. Journal of Science and Technology Policy. 2017;10(3):33-43. doi: 20.1001.1.20080840.1396.10.3.5.8. [In Persian]
- 39. Altbach PG, Teichler U. Internationalization and exchanges in a globalized university. Journal of Studies in international Education. 2001;5(1):5-25. doi:10.1177/102831530151002.
- 40. Rahmanpour M, Leyagatdar MJ, Afshar E. A comparative study of the development of information technology in higher education worldwide with an emphasis on Iranian higher education system. Educational Researches. 2009;5(18):1-39. [In Persian]
- 41. Ardakani FB, Yarmohammadian MH, Abari AAF, Fathi K. Internationalization of higher education systems. Procedia Soc Behav Sci. 2011;15:1690-5. doi:10.1016/j.sbspro.2011.03.353.
- 42. Knight J. 2005 IAU Global Survey Report: Internationalization of Higher Education: New Directions, New Challenges. Paris, France: International Association of Universities (IAU); 2006.
- 43. Galavandi H, Hasani M, Moradi Z. Analysis and evaluation of the country's universities status in the indicators of internationalization of higher education from the perspective of students. Public Organizations Management. 2018;6(3):157-73.
- 44. Grünzweig W, Rinehart N. Rockin'in Red Square: Critical approaches to international education in the age of cyberculture. New Brunswick, New Jersey: LIT Verlag Münster; 2002.
- 45. Tremblay K. Academic mobility and immigration. Journal of Studies in International Education. 2005;9(3):196-228. doi:10.1177/1028315305277618.
- 46. Behjati Ardakani F, Yarmohamadian MH. Comparative studying internationalizing high education in different countries of the world and presenting proper model in Iran. Journal of New Approach in Educational Administration. 2018;9(3):1-18. [In Persian]