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Identification and Ranking of Factors to Improve the Quality of Education in Applied Science Higher Education Institutions

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Abstract

INTRODUCTION: Nowadays, quality as the heart of education has become the concern of education policymakers around the world. The present study was conducted with the aim of identifying and classifying factors for improving the quality of education in applied science higher education institutions in Tehran.

METHODS: This qualitative research was conducted by using qualitative content analysis. The statistical population includes articles, documents, and all the key informants of applied science higher education institutions in Tehran city. A total of 21 key informants were selected and studied using the purposive and snowball sampling method and maximum diversity technique. Data were collected by semi-structured interview, observation, review of documents and scientific texts and analyzed using MAXQDA-2022 and weighting of factors, criteria, and indicators with the Shannon entropy method and prioritization with RANK function in Excel. The validity of data was calculated by triangulation (examiner, methods and data) and reliability between two coders (0.72)

FINDINGS: The results demonstrated that the quality of education includes 33 factors.

CONCLUSION: Applied science higher education institutions are required to identify and improve the quality factors of education based on ethical, professional, competitive requirements, responsibility and accountability to the needs of students, parents and employers and attracting financial resources.

Keywords: Quality of education; Education quality factors; Applied science higher education institutions; Ranking of factors quality of education

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Introduction

Nowadays, the developments of the information age, the emergence of a knowledge-based society, and the popularization of higher education due to its customer-oriented nature along with internationalization, have raised the sensitivity of the stakeholders at the global level towards the acceptance of the quality of higher education in a dynamic environment to such an extent that this issue of quality It has turned higher education into one of the main concepts and focus of policy of institutions and governments in the field of higher education (1). Quality in higher education is considered one of the most important and vital elements that indirectly have a tremendous impact on the country's destiny. According to many experts, higher education has entered a new era where competition and quality are its main characteristics. One of the challenges facing universities of the new millennium is the concept of quality and the expectations that the beneficiary groups have of higher education to guarantee this concept (2).

In the last few decades, higher education has grown quantitatively; but along with the quantitative increase, its quality has not improved

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as it should. So that the society is faced with a phenomenon called unemployment of higher education graduates, and on the other hand, the needs of various industrial, agricultural, production and service sectors for skilled manpower have not been addressed. One of the reasons for this problem can be considered the mismatch of students' knowledge and skills with the needs of the customers of the educational system. To reduce this gap, it is necessary for universities to emphasize quality and improve it continuously. The output of the universities is specialists who are considered to be the builders of the society who, in addition to meeting their own needs, should benefit other people and the society. Therefore, in order to train such specialists, it is necessary to provide them with the best educational systems (3). On the other hand, due to the increasing demand for higher education around the world, concern about the quality of education in higher education institutions has increased. (4).

Also, the development, diversification and privatization of higher education systems in the world brings issues and concerns regarding the quality of higher education (5).The results of the studies indicate that the universities of Iran are not at a desirable and acceptable level in terms of educational quality, because the low educational quality leads to a shortage of specialized and skilled manpower, which will face problems as a result of the goals of the country's economic and social development programs (6). Therefore, today quality is at the top of most things and it can be said that quality improvement is one of the most important tasks that every applied higher education institution faces (7). However, having a high-quality education system allows universities to train students who are responsive to changes and have the ability to provide services according to the needs of customers (8). Thus, continuous improvement of quality in higher education institutions and universities is one of the necessities of sustainability and improving competitiveness (9). The concept of quality in education has also created a significant concern for universities worldwide (10), because it is difficult to define the quality in education (11&12). This difficulty is due to the existence of multiple stakeholders such as managers, students, parents, government, regulatory organizations and the social sector (13).

The Standards and guidelines for quality assurance in the European Higher Education Area (ESG) emphasize on the quality assurance of higher education institutions based on the following four principles:

1. Higher education institutions have the main responsibility of providing quality and ensuring it.
2. Quality assurance responds to the diversity of higher education systems, institutions, programs and students.
3. Quality assurance supports the development of quality culture.
4. Quality assurance considers the needs and expectations of students, other stakeholders and society (14).

According to the above contents, this research seeks to answer these questions:

1) What are the quality factors of applied science higher education institutions?

2) What is the importance, priority and weight of the quality factors of applied science higher education institutions?

Methods

In this qualitative research, qualitative content analysis strategy was used to analyze the collected data. The statistical society included articles, documents (higher-level documents), and all key informants (principals, assistants, teachers, department managers, managers of education and research, managers of cultural affairs, and educational experts) of applied science higher educational institutions in Tehran. A total of 21 key informants were selected using the purposive and snowball sampling method and maximum diversity technique. Data were collected through semi-structured in-depth interviews, observation, review of scientific documents and texts and integrated with higher-level documents (3 documents) and literature review (60 articles) in order to enrich the data. Next, the data were analyzed by Strauss and Corbin's three-step coding method with Maxqda2022 software, the factors were weighted with Shannon's entropy method and finally prioritized with the RANK function in Excel according to Dr. Adel Azar article titled “Development of Shannon's entropy method for data processing in content analysis” (15). The results of calculating Cohen's Kappa coefficient (Brennan and Prediger, 1981) are shown in Tables (1 & 2).

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Table 1. Information of two independent coders

Row	Title of the interview	Number of codes of the first coder	Number of codes of the second encoder	Total number of codes	Number of agreements	Number of disagreements
1	The sixth interview	93	83	176	128	48

Table 2. Calculation of inter-coder reliability (Cohen's kappa agreement coefficient)

		Coder 1			
		1	0		
Coder 2	1	a = 128	b = 29	157	P (chance) = Pc =Number of codes/ (Number of codes + 1) 2 = 0.01
	0	c = 19	0	19	
		147	29	176	Kappa = (Po - Pc) / (1 - Pc) = 0.72

Table3. Enrichment of factors from combining the results of interviews with literature review

Combined data	Extracted factors	Number of factors
Literature review	Board of trustees, institutional council, higher documents, institutional philosophy and mission, institutional goals, institutional management and leadership, industry and university relations, internationalization, managers of educational departments, institutional structure, monitoring and evaluation affairs, education infrastructures, admitted students, students, faculty of the institute, applied science training courses, curriculum management, educational services, teacher affairs, virtual education, cultural and student affairs, research and technology affairs, learning resources, administrative affairs, finance and support, public relations, management human resources, in-service training of employees, intelligentization of the institution, teaching and learning process, graduate, institution budget, sustainable income, applied science centers.	33
Interviews and higher-level documents	Philosophy, mission and core values of the institution, higher-level documents, governance, leadership and management, human resource management, planning and evaluation, learning infrastructure and resources, curriculum management, teaching and learning system, education management, student affairs, educational services, student, student admission system, faculty, teachers, quality management, research system, graduates, employer, internationalization, interaction between university and industry.	21
Aggregation of common and different factors (interview and literature review)	Institutional management, human resource management, education infrastructure, teachers' affairs, educational services, cultural and student affairs, research and technology affairs, admissions, applied science centers, learning teaching process, learning resources, curriculum management, institutional structure, supervision and evaluation affairs, administrative affairs, finance and support, graduates, applied science training courses, higher-level documents, education management, goals of the institution, board of trustees, faculty of the institution, virtual education, council of the institution, sustainable income, students, managers of educational departments, philosophy, mission and core values, quality management, internationalization, employer, public relations, relationship between the institution and the industry, intelligentization.	34

Findings

First question: What are the quality factors of applied science higher education institutions? To answer this question, after combining the data obtained from literature review and interviews, the qualitative data analysis was done in three stages: open coding (description), central coding (classification) and selective (interpretation and narration). (Table3)

Second question: What are the importance, priority and weight of the factors of the quality of education in applied science higher education institutions? In order to answer this question, weighting was done by using Shannon entropy method and prioritization with the RANK function in Excel (Table 4).

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Table 4. Factors to improve the quality of education in applied science higher education institutions along with the importance factor (weight) and rank

Factors to improve the quality of education	f *Frequency*	Nij *Normalization*	Ej *Loads of information*	Wj *Coefficient of importance*	RANK
Management and leadership of the institution	323	0.122	0.058	0.080	1
Human resources management	228	0.086	0.047	0.066	2
Education infrastructure	212	0.080	0.045	0.063	3
Teachers' affairs	198	0.075	0.044	0.061	4
educational services	139	0.052	0.035	0.048	5
Cultural and student affairs	133	0.050	0.034	0.047	6
Research and technology affairs	109	0.041	0.029	0.041	7
Accepted	103	0.039	0.028	0.040	8
Applied science centers	94	0.035	0.027	0.037	9
Teaching learning process	89	0.034	0.026	0.036	10
Learning resources	87	0.033	0.025	0.035	11
Curriculum management	85	0.032	0.025	0.035	12
Structure of the institution	78	0.029	0.023	0.033	13
Monitoring and evaluation affairs	73	0.027	0.022	0.031	14
Administrative, financial and support affairs	73	0.027	0.022	0.031	15
Graduates	60	0.023	0.019	0.027	16
Applied science training courses	60	0.023	0.019	0.027	17
Higher-level documents	57	0.021	0.019	0.026	18
Education management	46	0.017	0.016	0.022	19
Objectives of the institution	44	0.017	0.015	0.021	20
Board of Trustees	42	0.016	0.015	0.021	21
Faculty of the institution	41	0.015	0.014	0.020	22
Virtual training	40	0.015	0.014	0.020	23
Institute Council	35	0.013	0.013	0.018	24
Stable income	35	0.013	0.013	0.018	25
Student	35	0.013	0.013	0.018	26
Managers of educational departments	33	0.012	0.012	0.017	27
Philosophy, mission and core values	30	0.011	0.011	0.016	28
Quality management	24	0.009	0.010	0.013	29
Internationalization	14	0.005	0.006	0.009	30
Employer	12	0.005	0.005	0.008	31
Public relations	11	0.004	0.005	0.007	32
The relationship between the institution & the industry	10	0.004	0.005	0.007	33
Education Intelligence	3	0.002	0.002	0.001	34
Total	2656	1	0.717	1	

According to the results obtained from Shannon's entropy method, among the effective factors on the educational quality of applied science higher education institutions, the institution's management and leadership factor is the highest priority with the coefficient of importance (0.080) and information load (0.058). Therefore, it can be concluded that the factor of "institution management and leadership" is an important factor that has more weight in the educational quality of applied science higher education institutions. As a result, institutions should pay more attention to this factor. The second priority is related to human resources management factor with importance coefficient (0.066) and information load (0.047). The third priority is given to the factor of education infrastructure with the importance coefficient (0.063) and information load (0.045). Also, the lowest priority of the factors is related to the intelligence factor with the importance factor (0.002) and information load (0.002).

Discussion and Conclusion

In this section, based on the findings of the research, the factors of improving the quality of applied science higher education institutions were explained and the relationship of these findings with the results of other researches was discussed.

Management and leadership of the institution: Success in the dynamic, complex and changing environments of higher education institutions requires competent leaders to advance the institution's mission and goals (16). Leaders must take actions to turn values into action, visions into reality, obstacles into innovations, and risks into successes. The results of this research are consistent with the results of Lagrosen, 2017; Taheryar, 2017; Islam, Ali & Islam, 2017; Yusoff et al, 2018; TRSP, 2018; AlTobi & Duqe, 2018; Tertiary Education

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Services Office, 2018; Mohammadi et al., 2017; 2018; Ramezani et al, 2018; Imanian et al., 2018. (56, 57, 59, 60, 61, 62, 68, 67, 72, 73)

***Human resources management*:** The effective use of human resources, so as to lead to the growth and development of core capabilities, is one of the most important goals of applied science higher education institutions and a factor of gaining a competitive advantage. The results of this research is consistent with the results of Gambhir et al, 2016; Islam, Ali & Islam, 2017; Nguyen, 2017; Taheryar, 2017; Tertiary Education Services Office, 2018; TRSP, 2018. (52, 57, 58, 59, 68, 72)

***Education infrastructure*:** Today, access to the most advanced information and educational facilities should be one of the most important goals of higher education institutions. So that with the help of these facilities, the sense of competition for learning can be aroused in the students. The conducted studies show that the types of educational equipment and facilities are different in terms of attractiveness, variety, preference and interest of students and the effect on learning and each of these facilities has a special effect on students' learning (17). This finding is consistent with the results of McCowan, 2017; Islam Ali & Islam, 2017; Nguyen & Hien Ta, 2017; Mohammadi et al., 2017; Ramezani et al, 2018, and Sadriya, 2018. (12, 50, 58, 59, 62& 73)

Lecturers' affairs: One of the most important elements of the higher education system and universities are the lecturers who play a decisive role in achieving the goals and objectives of higher education in terms of quantity and quality (18). Also, the improvement of the knowledge and competence of skilled human resources is conditional on the improvement of the knowledge and competence of the lecturers of applied science higher education institutions. Therefore, achieving the goals of the country's vocational higher education system is not possible without paying attention to teachers who have the ability, competence and professional qualifications (19). The result of this research is consistent with the result of Nguyen & HienTa, 2017. (58)

Educational services: Among the educational services of higher education institutions, applied to the society, is the education and training of skilled human resources. Educational services as the most important mission of universities is a symbol of quality management. The result of this research overlaps with the results of Ramezani et al, 2018. (62)

Research and technology affairs: Today, information plays a key role in the development and progress of societies, and in the current conditions, the acquisition of new knowledge and its management has provided the possibility of development and progress for most societies, therefore, life in the current world requires education and upbringing based on knowledge, research and innovation. The result of this research is consistent with the results of Nguyena & Hien Ta, 2017; Yusoff et al, 2018; Ramezani et al, 2018. (58, 60&62)

Accepted: The expansion of applied scientific higher education centers is essential due to increase of candidates for higher education. Limiting the admission capacity of universities, unemployment of graduates, and brain drain raises the necessity of choosing the most qualified people among the applicants to enter higher education institutions. Everyone expects to attract the most talented and capable candidates to university centers with a completely appropriate process so that the lofty goals of higher education can be easily achieved (20). The results of this research are consistent with the results of Mojtabazadeh, 2014 in this field. (48)

Applied science centers: Higher education centers and institutions under the supervision of the University of Applied Science & Technology are the executive pillar of applied science education and formed with the aim of improving knowledge and creating skills appropriate to the field of professional activity of people. In addition to teaching theoretical courses, they also provide practical training so that students can apply their skills in the field of industry and labor market after passing all course units (21).

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Teaching and learning process: It is a process that flows between the teacher and the learners in order to increase knowledge and skills. The quality of this process is the ideal state of education in which the phenomenon of learning occurs in students. Three main elements that must be studied for a complete review of the teaching and learning process in any educational system including type of education, the level of learning, and evaluation quality (22). The results of this research are consistent with the results Nguyen & HienTa, 2017; McCowan, 2017; Yusoff et al, 2018; Ulker & Bakioglu, 2018; Sadriya, 2018. (4, 12, 50, 58, 60)

Learning resources: The importance of educational materials or educational resources is in these cases: improving the knowledge, abilities and skills of students; monitoring their understanding of information; and helping their overall growth and development. Teaching and learning requires the selection of appropriate educational resources to motivate students and explain course contents. These resources include a variety of printed materials, audio-visual media, and other materials for individual or group training. The preparation of teaching and learning activities requires the selection of appropriate educational materials to motivate students and to explain the course content. These resources include all kinds of printed materials, audio-visual media, and other materials for individual or group training (23). The results of this research overlap with the results of Morze et al, 2016; Namoun & Benoida, 2019. (49&79)

Curriculum management: It is a collaborative, comprehensive, systemic and systematic curriculum management system to achieve curriculum goals (24). It manages all educational activities related to the curriculum. Its focus is on improving the effectiveness of education and it is specifically qualified to meet the needs of the industry (25). This finding is based on the results of researches as McCowan, 2017; Islam, Ali & Islam, 2017; Nguyena & Hien Ta, 2017; Quality Assessment Center, University of Tehran, 2019 and Sadriya, 2018. (12, 50, 58, 59& 81)

Organizational structure of the institution: This structure is the way by which the activities of the institution are divided, organized and coordinated and specifies how tasks are to be assigned; who should report to whom; what are the formal coordination mechanisms; and what are the organizational interaction patterns that must be followed. It also determines official relationships and indicates the levels that exist in the administrative hierarchy, while also specifying the control area of managers (26). The results of this research are consistent with the results of Basar et al, 2016 and McCowan, 2017. (12&76)

Monitoring and evaluation affairs: Evaluation, as one of the quality management functions, plays a significant role in knowing the current situation and making decisions in order to plan and improve the quality of university activities. Higher education institutions are evaluated so that they can be managed better, achieve their goals, fulfill their missions and answer the question of how to have the best quality in higher education (27). The results of this research is consistent with the results of CIHE, 2016; Morze et al, 2016; Gambhir et al, 2016 and Rahmanpour et al, 2016. (49, 52&78)

Administrative, financial and support affairs: These affairs are related to planning, directing, coordinating and controlling administrative and financial activities and supporting the educational activities of applied science higher education institutions within the framework of regulations, laws, bylaws and approved instructions and creating coordination to perform assigned tasks. The results of this research overlap with the researches of Gambhir et al, 2016; Taheryar, 2017; TRSP, 2018; Tertiary Education Services Office, 2018; Nguyen, 2017; IAS, 2017; Matos, Riley & Akera, 2017; ABHE, 2017 and Namoun & Benoida, 2019. (52, 57, 58, 66, 68&79)

Graduate: One of the important goals and tasks of applied science higher education institutions is to cultivate specialized and efficient human resources needed by the society. Nowadays, universities should train graduates with skills that can play a role professionally in the era of learning (28). There are no doubt that

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today's students, future employees and employers will be profitable businesses around the world. In the evaluation of the students, the goal is to judge the knowledge, attitude and skills of the students at the end of the course (29). The results of this research are consistent with the research of Nassereddine, 2018; and Lopez et al, 2016. (65& 70)

Applied science training courses: These training courses are done with the purpose of: promoting and transferring working knowledge, creating skills, improving the information and experiences of employees, increasing productivity, flourishing outstanding talents and actualizing latent talents to take up various jobs and professions. In this way, the ability of people to do the work assigned to them will reach the desired level (30). The results of this research overlap with the results of Quality Assessment Center, University of Tehran, 2019 and Imanian et al., 2018. (56&81)

Higher-level documents: These documents in every country determine the path and direction of movement of that country. In our country, there are many higher-level documents in various fields that draw a favorable perspective (31). These documents also emphasize applied science and skill training. The results of this research are consistent with the research of Baniasadi and et al, 2016. (64)

Education management: Today, the importance and role of education management in the development and progress of societies and organizations is not hidden from anyone. Compared with other fields of management, educational management is particularly important in terms of the impact of educational activities on the quality of graduates who enter management training courses (32). The results of this research are consistent with the results of ABHE, 2017. (66)

Objectives of the institute: The goals and mission of these institutions include: training the committed, expert and skilled human resources needed by the country; improving the level of knowledge and culture of society; creating job skills in order to increase labor productivity; improving the knowledge and skills of people working in different professions and jobs; and fostering self-confidence so that according to the needs of the society, through little support, students can enter the world of work. In order to achieve this goal, the quality of education should be raised and students should have hope for the future. Finally, their mission is to develop and coordinate educational centers with the needs of society (33). The results of this research overlaps the research of Lopez et al, 2016; ABHE, 2017; Lagrosen, 2017; Tertiary Education Services Office, 2018; Namoun & Benoida, 2019; Ramezani et al, 2018. (62, 65, 66, 67, 68&79)

Board of Trustees: They are used as the best pillar and reference for decision-making and guidance in macro-educational issues in higher education institutions. The results of this research overlap with the research results of Lewis, 2016 and Merabishvili et al, 2017. (14&82)

Faculty of the Institute: Since a long time, universities have played a central role in training specialized human resources and sensible citizens, and to fulfill this important role, they need knowledgeable educational leaders, qualified lecturers, a strong curriculum, and a coherent structure (34). What can help improve the atmosphere of university teaching today is focusing on improving the qualifications of university lecturers and preparing the conditions for their movement to acquire teaching skills. This important matter has requirements such as the entry of persons with basic qualifications and the training of qualified faculty members (35). Applied scientific higher education institutions employ qualified full-time faculty members to support their mission and goals. The results of this research are based on the research results of Nguyen & HienTa, 2017; and Tehran University Quality Assessment Center, 2019. (58& 81)

Virtual education: Due to the benefits of virtual education at the level of higher education, the demand for holding virtual education courses at the university level is increasing. In virtual education, it is possible to achieve maximum efficiency in learning by combining different

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learning methods such as text, audio, video, etc. The appropriate approach to virtual education should have the characteristics of two-way interaction between the professor and students and the formation of educational work groups, the use of appropriate educational technologies such as the use of the web and information technology in the educational environment (36). This finding is consistent with the research results of Mohammadi et al, 2017. (73)

Institutional Council: Institutional Council is the second policy-making body after the Board of Trustees, which regulates the current policies and programs of the institution based on the macro-policies approved by the Board of Trustees or other competent authorities. (37) In the literature review of this research, no results were found that were consistent with this factor.

Stable income: Today, higher education institutions are trying to maintain their survival by earning stable income. Undoubtedly, financial resources and the manner of their management can affect the success or failure of applied science higher education institutions. The duty of managers of institutions is to diversify the institution's financial resources by attracting public assistance and increasing specific incomes by providing educational services, research, cultural technology and other sources (38). The results of this research are consistent with the research results of Mussawy & Rossman, 2018. (69)

Student: One of the reasons for the existence of applied scientific higher education institutions is the presence of young people as customers requesting educational services (19). Applied scientific university and its subcategory, applied scientific education centers, is an important center for entrepreneurship of young people and students. (39). This finding is consistent with the researches of Chinta, Kebritchi & Ellias, 2016; Islam, Ali & Islam, 2017; Nguyen & HienTa, 2017; and Ramezani et al, 2018. (58, 59, 62& 83)

Managers of educational departments: These managers have a special position in the higher education system. Because as a member of the academic staff, they are skilled in the field of education and research, and as managers, they have the important task of guiding the members of the group and helping them in their scientific development, and as a result, the quality of the group is improved (3).

The philosophy and mission of the institution: It expresses the main intentions of the founders when forming the institution (40). One of the most basic missions of the University of Applied Scientific & Technology is the transfer and promotion of knowledge, work technology, and the creation of skills and abilities in people in order to take up jobs and meet the needs of the labor market (41).This finding is in line with the results of ABHE, 2017; Lagrosen, 2017 Tertiary Education Services Office, 2018; Namoun & Benoida, 2019; Ramezani et al, 2018. (62, 66, 67, 68&79)

Quality management: One of the important tasks of quality management is quality assurance (42). When the higher education system is equipped with a quality assurance mechanism, it can be sure of the following: university establishment licenses; the validity of the training; research and specialized services of universities; the quality of official encyclopedias granted by universities to graduates as well as public and government support for higher education institutions (43). This finding is consistent with the results of Islam, Ali & Islam, 2017; Lagrosen, 2017; TRSP, 2018; Tertiary Education Services Office, 2018; Nassereddine, 2018; Namoun & Benoida, 2019 and Al Ghawiel, 2020. (67, 68, 59, 70, 72&79)

Internationalization: Today, universities, as a manifestation of the progress and development of human capital, are affected by global events and conditions, and as institutions to eliminate the technological gap and strengthen scientific, educational and cultural exchanges between nations and cultures, they have a special place. The internationalization of the higher education system has many positive consequences, including development of intercultural communication skills; education for a global citizen; technology transfer; increasing study

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areas; strengthening diplomatic relations; an opportunity to attract foreign elites; increasing international cooperation; strengthening scientific research and production; and economic productivity and financial benefits (44). This finding is consistent with the research results of Lagrosen, 2017. (67)

Employer: Since the training offered to the students of higher education institutions is applied, skillful and practical, the graduates do not need a preparation course to enter the labor market. Therefore, they are mostly attracted by the employers of factories and production and industrial centers because their training is in accordance with the needs of employers and the labor market.

Public Relations: Public relations are nothing but an effort to protect and improve the reputation of higher education institutions. In today's competitive environment, where every organization tries hard to improve the public image of its brand, public relations have become a vital need (45). The results of this research are consistent with the research of Taheryar, 2017. (57)

The relationship between industry and university: In today's world, the connection between industry and university plays an effective role in the growth and development of countries and presence in international communities. Attracting capital is the most important advantage that universities get in interaction with industry, and this issue clearly affects the number and quality of university research (46). The effective factors in the relationship between industry and university are: human resource exchange between university and industry; joint research activities; setting up joint research laboratories; organizing industrial training courses for students; establishment of joint educational companies; holding practical scientific training courses for industry employees; the pattern of university professors and students visiting the industry and vice versa; and technology transfer (47). This finding overlaps with the research results of ALTobi & Duqe, 2015; Gambhir et al; 2016; TRSP, 2018; Namoun & Benoida, 2019; Musa, 2019; Ansari Samani & Nafar, 1400; Bahardoust, et al, 2022; Kiakojouri, 2021; Hosseinlou et al, 2022. (51, 55, 52, 54, 61, 72&79)

According to the mentioned contents, applied scientific higher education institutions must continuously improve the quality of their education in order to compete with other institutions to achieve the following: student recruitment; financing; attracting the attention of employers, students and their parents; internationalization; and increasing the level of public satisfaction with the quality of skill education.

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Conflict of Interests

The authors declare that there were no conflicts of interest in this study.

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