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Identifying the Dimensions and Elements of Comprehensive Quality Management at Islamic Azad University: A Qualitative Study

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Purpose: comprehensive quality management is the art of managing the entire complex for accomplishing the best outcome. Thus, the present research was done to identify the dimensions and elements of comprehensive quality management at Islamic Azad University.

Methodology: The present research was an applied research of qualitative type. The research population consisted of experts in comprehensive quality management and evaluation at Tehran City; according to the principle of theoretical saturation, the sample size was estimated 12 individuals, chosen through snowball and purposive sampling methods. The research instrument was a semi-in-depth interview whose validity was confirmed through triangulation method, and its reliability, via interrater consistency coefficient, was estimated above 0.71. The data were analyzed through coding method in MAXQDA-2018 Software.

Findings: The coding results suggested that comprehensive quality management at Islamic Azad University had three dimensions of internal, external, and academic quality development along with service assessment. The internal dimension included elements of leadership, curricula planning, the staff competence level, competent faculty members, assessment quality, quality of the physical atmosphere, educational equity, information technology quality, feedback on performance, the students' competence level as well as the curriculum. The external dimension included cultural, social, economic, geographical — environmental elements. Finally, the dimension of academic quality and service assessment included elements of commercialization, skills, economic development, responsivity, value creation, as well as development of academic quality and service assessment.

Conclusion: considering the dimensions and elements identified for comprehensive quality management at Islamic Azad University, the ground could be provided for accomplishing comprehensive quality management as well as achieving useful and excellent outcomes.

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1. Introduction

The current era is a period of rapid and unpredictable developments, and the current status of management in today's societies reflect the unbalance between the growing complexity of organizations and their ability in predicting and tackling these transformations and complexities (Erdil & Erblulk, 2019). Today, for accomplishing the organizational goals and achieving sustainable development, any organization should employ a complex model involving a combination of comprehensive quality management and leadership management principles. This is because today's organizations, for their survival in the current competitive world, should implement comprehensive quality management effectively along with other novel methods of management (Wu & Liu, 2021). Thus, the challenge resulting from global competitions has led to increased pressure on organizations including universities for improving skills, competences, as well as quality of products and services. Therefore, for their growth, survival, and development, organizations should inevitably enhance the added value of their organizational activities, where one of the most important solutions in this regard is implementing comprehensive quality management. Since it seems that quality management with constant organizational transformation would ensure stability and dynamicity of organizations against rapid changes in social, economic, and technological structures, and since the quality of products and services in any country is formed based on the attitudes, actions, and decisions made by managers, teachers, economists, engineers, as well as other educated groups of the society, thus the quality of education and comprehensive quality management can be considered a key factor in the latent competition among countries (Ekrami, Yari & Rajabzadeh, 2012).

Quality is a multidimensional concept, in whose definition one can state that this construct refers to a set of features including impeccability, having a suitable composition, desired stability, customer satisfaction, elimination of errors, avoiding losses, suitable serviceability, accessibility, credibility, sense of responsibility, etc. (Khurniawan, Sailah, Muljono, Indriyanto & Maarif, 2021). Comprehensive quality management means undertaking teamwork with a customer-oriented, strategic, and disciplined approach for constant performance improvement. For the continuous amelioration of productivity quality, the competences as well as talents of the management along with the personnel are harnessed (Othman, Mohd Ghani & Choon, 2020). Comprehensive quality management is a managerial philosophy, which through introducing specific instruments, criteria, and processes, establishes a systemic view in organizations. Also, through improving the organization performance, it seeks to produce high-quality and low-cost products and services for enhancing customer satisfaction (Bolatan, Gozlu, Alpkan & Zaim, 2016). The theoretical framework of comprehensive quality management, as a novel managerial paradigm, was established in the early 1900s, and based on the systems theory, a novel perspective has been established towards human factor, constant quality improvement, and eventually customer orientation (Ozberk, Sharma & Dagli, 2019). This construct is a constant attempt for continuous improvement of processes, outputs, and all organizational activities for a greater emphasis and focus on educational activities and programs regarding the constantly changing environmental conditions (Sahoo & Yadav, 2018). Comprehensive quality management involves several activities including management leadership, quality effectiveness, education, staff relations, quality of information and reporting, supplier quality management, product service design, process management, strategic planning, customer orientation, information technology, and customer management (Gumus, 2020).

The ultimate goal of comprehensive quality management is involving all agents with diverse activities as well as organizational goals and missions, and through offering various mechanisms, it would provide suitable instruments for effective utilization of experiences, talents, intellectual power, and physical resources. Indeed, it automatically helps the organization to maximize the available power and latent competences of agents for organizational excellence and acquiring the satisfaction of beneficiaries in a desired way (Tahira, Slaeem, & Haider, 2020). This construct is a managerial tool, which with a focus on effectiveness and efficiency, causes enhanced organization responsivity to customers and stakeholders as well as improving organizational performance. Thus, comprehensive quality management as a managerial

philosophy, provide suitable instruments and methods for integrating various organizational sectors and their processes, and can coordinate all sectors, levels, and individuals in the organization for the principal goal of the organization (Panuwatwanich & Nguyen, 2017). Comprehensive quality management is the art of managing the entire complex for achieving the best outcomes; this construct is a smart, slow, and constant measure with a synergistic link in fulfilling the organizational goals. Ultimately, it culminates in customer satisfaction, increased efficiency, and enhanced competitive power in the market. In addition, comprehensive quality management is an organized structure emphasizing constant improvement of internal activities of an organization (Nasim, Sikander & Tian, 2020). Comprehensive quality management utilizes authoritarian and well-trained staff in an organization composed of several systems so that at any stage of operation it could add to the value of the products or services, and eventually achieves superior quality products or services that would enhance the customer satisfaction (Permana, Purba & Desy, 2021). Although relatively extensive research has been performed about comprehensive quality management, sparse studies have explored dimensions and elements, and no research in this regard at Islamic Azad University was found. Next, the results of the most important research about comprehensive quality management model have been reported. Gholizadeh & Sarbandi (2020) conducted a research on the effect of applying comprehensive quality management on the satisfaction and loyalty of customers. They concluded that comprehensive quality management directly affected customer satisfaction, customer loyalty, and quality of services. In addition, comprehensive quality management with a mediating role of the quality of services indirectly and significantly affect the customer satisfaction and loyalty. Almansouri & Yahaya (2020) researched structural equation modeling of comprehensive quality management and concluded that the factors of focus on customer, strategic planning, organizational culture, constant progress, and contribution of supplier had effective roles in comprehensive quality management. Fili, Pouya, Kazemi & Fakoor Saqieh (2019) studied the key factors of success for comprehensive quality management, and noted the commitment of the senior management and leadership, human resources management, training and learning, constant improvement, focus on customer, strategic quality planning, information and measurement, culture and communications, process management, supplier management, and benchmarking as the key factors. Del Bahari & Abdi (2018) researched prioritization of the effective factors on implementing comprehensive quality management. They concluded that the influential factors included staff-associated factors, assessment and feedback-associated factors, organization-related factors, and factors linked to systems and techniques. With regards to the staff-associated factors, factors of education, contribution of staff and teamwork; regarding the factors related to assessment and feedback, factors of communications, reward and performance assessment; concerning the organization-related factors, the factors of the senior management commitment, strategic planning, management and leadership, perspective, institutional constraints; and the regarding the factors related to systems and techniques, the factors of constant improvement and focus on customer had a higher priority. Sadeghi Moghadam & Momeni (2017) conducted a research on the factors affecting soft comprehensive quality management, which included commitment of staff, common vision, focus on customer, use of teams, and staff training. Other results of this research showed that managerial and support processes significantly and positively affected the soft comprehensive quality management with the factors of development and management of business features, management of financial and physical capitals; development and management of human resources plus operational processes along with the factors of developing vision and strategy; development and management of products and services together with offering diverse services and customer service management. Moghimi, Khatibi & Abdolshal (2016) introduced the executive obstacles of comprehensive quality management systems as staff and cultural characteristics, infrastructural characteristics, managers' characteristics, competitiveness features, and organizational features. Srima, Wannapiroon & Nilsook (2015) researched comprehensive quality management at schools. They identified four key influential factors affecting it including information system development model principle, development of information system based on the system development lifecycle, reporting information based on comprehensive quality

management information system for the school in practice, and assessment of the information system using black box technique. Hadavi, Farahani & Seifi (2015) dealt with developing a structural model for comprehensive quality management. They concluded that eight elements affecting it included senior management support, communication with customers, communication with suppliers, human resources management, staff behavioral factors, design processes, production processes, and quality assurance. Rezaei, Mojarradi, Gholifar & Safa (2014) researched the elements of implementing comprehensive quality management system at universities. They mentioned managerial, structural- communication, constant improvement and professional development, customer orientation, as well as collaborative- teamwork elements. Asif, Awan Khalid Khan & Ahmad (2011) presented a model on comprehensive quality management in higher education. They noted the effective and crucial factors for its success as leadership, vision, measurement and analysis, process assessment and control, design of plans, allocation of resources, and focus on beneficiaries.

Considering the importance of the issue and the progressive tendency of different institutes including universities in different countries of the world to implementing comprehensive quality management system, execution of this managerial approach at universities inside Iran generally and at Islamic Azad University in particular has not been addressed specifically. Indeed, this implementation has always been faced by various obstacles and issues, such that the comprehensive quality management has not succeeded in proper implementation. This in turn has resulted in decline of quality of universities in different dimensions. Since for implementing comprehensive quality management, there is no single or ready version through which one can practice this management in all organizations, any organization should try to implement comprehensive quality management based on the present conditions, as well as their special experiences and learning capacity. Thus, as the first step for resolving this challenge and initiating establishment of comprehensive quality management at universities, research should be conducted about precise understanding of the current conditions as well as identifying the elements and components of comprehensive quality management implementation. Another notable point is that students for universities are tantamount to the principal, immediate clients and customers of services, and enjoy greater interaction with the educational system. Therefore, the university should set understanding and fulfilling the students' expectations as a high priority so that comprehensive quality management could be achieved, whereby both students and university can accomplish their goals. Since comprehensive quality management enjoys a high status in educational systems for their excellence, and no cohesive research was found in this regard, accordingly the present study was done to identify the dimensions and elements of comprehensive quality management at Islamic Azad University.

2. Methodology

The present research was an applied study of qualitative type. The research population consisted of experts of comprehensive quality management and assessment in Tehran city; according to the theoretical saturation principle, the sample size was estimated 12, who were chosen through snowball and purposive sampling methods. According to the theoretical saturation principle, sampling continued until the research reached saturation whereby the new subjects could not add any point or finding to the research findings. For selecting the subjects, first the researcher chose a number of experts whom they knew (purposive sampling method). Then, they were asked to introduce other experts to researchers (snowball sampling method). In this way, all subjects of the present research after examining the inclusion criteria were chosen as the subject. These criteria included willingness to participate in the research, having at least 10 years of working background and authoring a book, paper, thesis, or research proposal about comprehensive quality management, a history of education or lecturing related to the subject, and a history of executive management at university.

Regarding the procedure of the research, first papers, theses, and books related to comprehensive quality management to which the researchers had access were investigated. Then, based on them, they designed

some questions to interview the experts specialized in comprehensive quality management and assessment. Thereafter, the subjects were selected to be interviewed; these selected subjects or indeed the selected experts were asked to introduce other experts to the researcher. All of them, in case of fulfilling the inclusion criteria, were chosen as the subject and underwent interview. This process continued until the research reached saturation. For the subjects, before conducting interview, the significance and necessity of the research were explained, whereby the researcher was committed to observing all ethical principles including confidentiality, anonymity of personal information, voluntary nature of participation in the research, acquiring permission for recording interviews, etc. The interviews were done individually at a specific time and place already set by the interviewees, and all interviews were recorded.

In the present research, in addition to the demographic information form capturing gender, age, and level of education, for data collection a semi-in-depth interview was used which had five main questions, which can be observed in Table 1.

Table 1. Questions of the interview

No.	Questions
1	What is your definition of comprehensive quality assessment at universities?
2	In what manner, attention to comprehensive quality assessment is important at universities to achieve this aim?
3	What dimensions, elements, and indices should be considered in comprehensive quality assessment of universities? Why?
4	What are the obstacles contributing to reduced comprehensive quality management at universities?
5	What are the factors that would improve comprehensive quality management at universities?

The selected experts responded to five questions of interview mentioned above, and their responses in addition to recording through note taking were also voiced recorded for re-examination and to prevent loss of data. After completion of the interviews, their psychometric indices were investigated; the validity of the interviews was confirmed through triangulation method, while its reliability was estimated above 0.71 through intercoder agreement coefficient. Ultimately, the data were analyzed through coding method in MAXQDA-2018 software.

3. Findings

The experts of this research were 12 individuals, whose demographic information in terms of frequency and frequency percentage, including gender, age, working experience, and education, is presented in Table 2.

Table 2. The frequency and frequency percentage of the participants' demographic information including gender, age, working background, and education

Variables and levels		Frequency	Frequency percentage
Gender	Male	6	50
	Female	6	50
Age	31-40 years	2	67/16
	41-50 years	7	33/58
	51-60 years	3	25
Working experience	11-15 years	2	67/16
	16-20 years	7	33/58
	21-25 years	3	25
Education	PhD	12	100

According to Table 2, the number of male and female participants was equal; their level of education was PhD (all participants), with the age and working background of most of them being 41-50 years and 16-20 years respectively. The dimensions and elements of comprehensive quality management at Islamic Azad University are provided in Table 3.

Table 3. The dimensions and elements of comprehensive quality management at Islamic Azad University

Dimensions	Elements	Indices
Internal	Leadership	Leadership and management, university leadership, entrepreneurial leadership, and managerial factors
	Curriculum planning	Curricula planning, educational processes and curricula, quality of references and content of courses, match between references plus content of courses with comprehensive quality, and nonuse of rigid or inflexible education
	Staff competence level	Human resources, individual factors and university staff
	Competent faculty members	Human resources, individual factors, faculty members, professors, competent faculty members and lecturers, professor being creative and entrepreneur, personality traits of professors as well as quality of professors
	Assessment quality	Strategy, management structure, quality of higher education system, quality assessment at university, quality of assessment and assessment as feedback
	Physical environment quality	The necessary resources and equipment, environmental development, quality of physical environment, quality of educational environment as well as quality of the environment plus the educational requirements
	Educational equity	Educational equity, establishing balance in different aspects of the university and lack of discrimination
	Quality of information technology	Quality of information technology, knowing up-to-date technologies, as well as knowing and employing novel technologies
	Feedback on performance	Input assessment, process evaluation, output assessment, evaluating the extent of accomplishment of goals and strategies, feedback on performance and education output, along with examining the status of graduates after their graduation
	Students' competence level	Human resources, individual factors, students and graduates, student quality, training positive spirit to students and enhancing risk-taking attitude in them, as well as the competence level of students
	Educational content	Attention to the content of academic research, educational content, educational quality, training quality, curricular content and references, as well as quality of these references
External	Cultural	Promoting culture of quality, culture of society, and cultural environment
	Social	Academic infrastructures, social context, academic environment and society

	Economic	Economic context, income generation for university via research, changing economic indicators from mass consumption to mass knowledge and allocating suitable budget
	Geographical environmental	- The university's popularity against industry, commerce and government, shortening the distance between university and industry, communication with top universities for academic exchanges, as well as establishing communication with top universities for use of experiences
Academic quality development and quality assessment	Commercialization	Commercialization of knowledge and ideas, conversion of knowledge and information to product and services, establishing legal policies for industry and university relations, modifying official and legislating institutions, developing businesses arising from scientific research and activities, establishing suitable grounds for industry and university interaction, academic entrepreneurship, entrepreneurial attitude, model development based on superior models and job creation
	Skills	Skill-oriented plans and strategies, skill development, skill-based educational planning and conducting applied research
	Economic development	Establishing the grounds for industry and university interactions, economic strategic development, industry and university interaction, increasing income and financial independence, as well as needs assessment in the society
	Responsivity	Liability and responsibility, responsivity to the industry, responsivity to the society, responsivity to the university and government, and university as an accountable institution
	Value creation	Culture development, quality culture, internalizing culture, existence of caring, motivated, and competent individuals, having positive attitude and value creation
	Academic quality development	Knowledge of high-quality behavior by the academic members, increase in the number of students, university participation in economic development, match between educational content and industrial needs, serious support by the government, developing suitable structures, supporting top ideas, modifying official and legislating institutions, efficient official institutions such as ministry of sciences, competent managers, operational planning, strategic development, ranking of universities, suitable targeting at university, lack of grade orientation, lack of degree orientation, and educating professors
	Service assessment	Assessment of academic services, effect of external environment on university services, as well as assessing the educational content of university

According to the results of Table 3, comprehensive quality management at Islamic Azad University had three dimensions including internal, external, development of academic quality and assessment. The internal dimension included elements of leadership, curriculum planning, staff competence level, competent faculty members, assessment quality, quality of the physical environment, educational equity, information technology quality, feedback on performance, competence level of students and educational

content. The external dimension included cultural, social, economic, as well as geographical-environmental elements. Finally, the dimension of development of academic quality and service assessment included commercialization, skills, economic development, responsivity, value creation, development of academic quality, and service assessment. Therefore, the model of dimensions and elements of comprehensive quality management at Islamic Azad University can be seen in Fig. 1.

Fig. 1. The model of dimensions and elements of comprehensive quality management at Islamic Azadi University
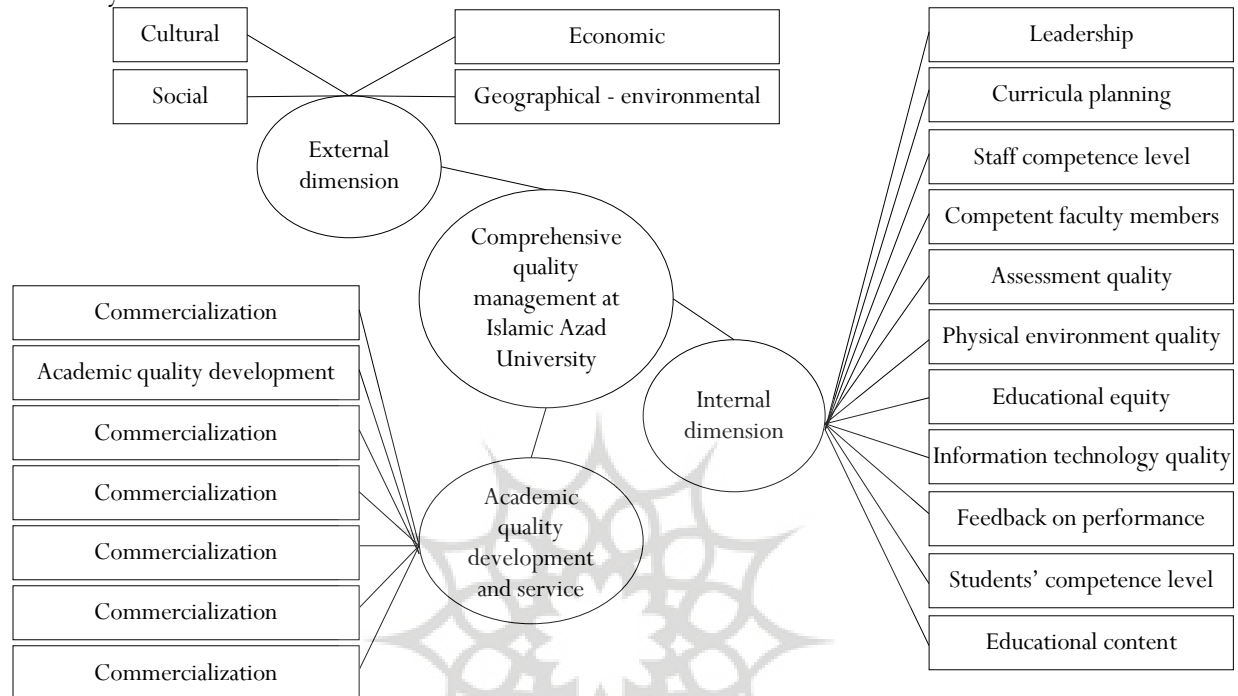
4. Discussion

Comprehensive quality management plays a key role in economic, social, and cultural development, and it can create a competitive advantage for any organization including educational organizations. Thus, the aim of this research was presenting a favorable model of comprehensive quality management at Islamic Azad University.

The results suggested that for comprehensive quality management at Islamic Azad University, three dimensions including internal, external, as well as development of academic quality and quality assessment were identified. The internal dimension included elements of leadership, curriculum planning, the staff competence level, competent faculty members, assessment quality, quality of the physical environment, educational equity, information technology quality, feedback on performance, competence level of students and educational content. The external dimension included cultural, social, economic, as well as geographical- environmental elements. Finally, the dimension of development of academic quality and service assessment included commercialization, skills, economic development, responsivity, value creation, development of academic quality, and service assessment. These results concur with the findings of Gholizadeh & Sarbandi (2020), Almansouri & Yahaya (2020), Fili et al (2019), Del Bahari & Abdi (2018), Sadeghi Moghadam & Momeni (2017), Moghimi et al (2016), Srima et al (2015), Hadavi et al (2015), Rezaei et al (2014), and Asif et al (2011).

In interpreting the results of this research for comprehensive quality management at Islamic Azad University with three dimensions including internal (elements of leadership, curriculum planning, the staff competence level, competent faculty members, assessment quality, quality of the physical environment, educational equity, information technology quality, feedback on performance, competence level of students and

educational content), external (cultural, social, economic, as well as geographical- environmental elements), and development of academic quality and service assessment (commercialization, skills, economic development, responsivity, value creation, development of academic quality, and service assessment), it can be inferred that for implementing comprehensive quality management at Islamic Azad University, it should absorb and train human resources with a quality-oriented attitude. The today's needs of the society including job creation, making research practical, knowledge commercialization, increasing income, and financial independence of universities are among the necessities when paying attention to comprehensive quality management at Islamic Azad University. Along this path, there are some obstacles that complicate the attention to this issue. Accordingly, the society, government, and different institutions should take some measures for modifying and correcting these challenges including the structural and process problems of universities, incompetent managers, grade orientation, inefficient faculty members, degree orientation, the mismatch between educational content and the society needs, inefficient official institutions, lack of serious support, and the mismatch between education and the needs of the society as well as industry. In addition, there are some factors for improving them; the government, university, industry, and society by reinforcing these factors can provide a suitable ground for developing comprehensive quality management through modeling based on superior models, modifying the official and legislating institutions, operational planning, absorbing caring, motivated, and competent individuals, providing the suitable ground for university and industry interaction, developing and internalizing the proper culture, ranking of universities, educational needs assessment, training professors, and education-oriented planning. If the mentioned issues are accomplished properly, definitely favorable outcomes would be achieved for university, industry, and society. The examples include responsivity to the industry, society, and government, value creation, commercialization, developing entrepreneurial skills, as well as economic development.

Based on the results of this research, the following suggestions are proposed:

The dimensions and elements identified in this research and the desired model of comprehensive quality management at Islamic Azad University can be used for evaluating the development of comprehensive quality management. Each of the elements and indices associated with them can be considered an evaluation index for comprehensive quality management.

Evaluation, preservation, and constant improvement of quality, responsivity, and value creation for competitiveness in the today's competitive era are among the main goals of comprehensive quality management and assessment at universities. In this research, attention to internal and external factors has been found as the dimensions of quality management and evaluation at universities for comprehensive quality management development. Based on the identified elements for it, the universities in the country can try to evaluate and enhance the quality of university.

Another suggestion is to create a specialized unit for managing intellectual assets of university to reduce bureaucracy and establish flexibility in the procedures related to commercialization.

Also, organizing joint congresses and conferences with the industry to enhance communication and gain awareness of the needs and competences of the second party, as well as formation of societies, networks, and offices for establishing communication among researchers, owners of industries, and investment are suggested to improve comprehensive quality management.

The last suggestion is emphasis on comprehensive quality management development activities when redefining the mission of the university and evaluating the quality of university. This can be achieved based on the factors and elements identified for the desired model of comprehensive quality management.

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