Designing an Organizational Culture Model Based on Lean Leadership (Case Study: Islamic Azad University)

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Abstract

Organizational culture primarily reflects the leaders of an organization. Leaders influence culture through their strategies, practices, values, and leadership styles. Lean leadership in higher education, which contributes to reducing costs and waste while improving quality and effectiveness in universities, has gained significant attention. This study aimed to design an organizational culture model based on lean leadership at the Islamic Azad University. Data were collected through semi-structured interviews with faculty members and department managers of the Islamic Azad University in Tehran. By analyzing the interview content and extracting codes, dimensions, and components of the organizational culture model based on lean leadership were identified and developed. The triple coding process—open, axial, and selective—was conducted using MAXQDA software (version 2020). The findings revealed that 96 concepts were labeled during the open coding process. These initial concepts were reviewed, analyzed, and categorized to identify the components. As a result, 19 components were extracted during the axial coding stage from the initial 96 open codes. Finally, nine main dimensions were identified during the selective coding stage. The classification of results focused on designing a model consisting of nine dimensions: customer focus, continuous improvement, employee participation, academic stakeholders, aligning lean thinking with higher education, inclusive and supportive lean university structures, strategic university planning based on lean principles, a systemic approach to university administration, and long-term managerial thinking.

Keywords: *Organizational Culture, Lean Leadership, University Culture, Qualitative Approach.*

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1. Introduction

Organizational culture is described as the fundamental assumptions, shared values, and beliefs that guide how members of an organization interact with each other and approach their work. The operational culture of an organization can be evaluated and measured, providing valuable insights into primary behavioral styles that enable organizational transformation initiatives [1-3]. Since organizational culture is significantly shaped by leadership and its processes, improving organizational culture can also be influenced by leadership [4]. Leadership is the most critical component of organizational management. In today's business environment, the status of leadership within an organization has a direct and unique relationship with its success, differentiating it significantly from competitors [2, 5]. The unique role of leadership in organizational effectiveness lies in addressing changes due to fundamental differences in organizational leadership styles, making it more impactful in the current business context than ever before. In the past, organizational leadership could operate with minimal acumen and ability by relying on certain organizational advantages [6, 7]. However, in today's fast-paced business environment, decision-making speed and risk-taking have necessitated that organizations make correct decisions promptly, even without complete information. This is only achievable through lean leaders who possess maximum intuition. This highlights the importance of lean leadership in shaping an organization's culture [8].

Womack and Jones (1997) used the term "lean thinking" to indicate the widespread application of this concept in business. Lean thinking provides a method to determine value in an organization and arrange value-creating activities in the most efficient way possible, implementing them with maximum impact when needed. This thinking is termed "lean" because it enables actions to be performed with fewer resources (e.g., less labor, equipment, time, and space) while aligning them more closely with consumer needs. Findings indicate that managers must go beyond mere management techniques to successfully implement lean management, which is achieved through applying soft measures and fostering the appropriate lean organizational culture characteristics [9, 10]. According to Dombrowski and Mielke (2014), neglecting lean philosophy and ignoring people and their issues are primary reasons for repeated failures stemming from weak leadership. Awais (2017)

identified four stages of lean leadership development: (1) commitment to self-development, (2) development of others, (3) daily support for Kaizen, and (4) creating a vision and aligning goals. Lean leadership requires lean thinking, which involves a cyclical process of time and quality improvement achieved by eliminating waste [11]. According to Bobbio et al. (2016), lean leadership ensures sustainability by coaching individuals and defining values, visions, and goals. Lean leadership, as a facilitator within organizations, supports training at both organizational and individual levels [12].

Emiliani and Emiliani (2013) used the metaphor of music to describe implementing lean concepts in an organization, emphasizing that the quality of a musical concert depends on various factors. Through this metaphor, they demonstrated that lean is not merely about applying a set of tools; it is about harmonizing and precisely integrating melodies (continuous improvement) and harmonies (respect for individuals) while working with tools and processes (musicians, their instruments, musical notes, etc.) [13]. This metaphor aligns with studies showing that many business leaders fail to understand the interdependence of tools and processes with organizational culture [14]. Leaders adopt tools assuming they are sufficient to achieve a lean organization. The missing link lies in understanding the role of leadership in cultural transformation and the impact of culture on organizational performance. Organizational culture reflects the systems and structures through which individuals derive meaning from their work and organizational life [5, 15-19].

Culture is often defined as "the way we do things here" and broadly understood as "the shared and learned world of experiences, meanings, values, and understandings that inform individuals and are symbolically expressed, reproduced, and communicated." In lean philosophy, culture is reflected through two core values that should permeate organizational work: (1) respect for individuals and organizational members and (2) continuous improvement. "Respect for individuals" signifies the belief that employees are an organization's greatest asset. Through its employees, a company can foster a culture of continuous improvement. The second value, systematic continuous improvement, is embedded within the fabric and functioning of lean processes [20]. The goal of continuous improvement is to support organizational learning by identifying root causes of

problems to prevent recurrence. Emiliani (2011) stated that to achieve "true lean," leaders must develop systems and practices that reinforce both respect for individuals and continuous improvement. A common approach to continuous improvement is performance measurement systems [21]. According to Elg et al. (2012), performance measurement systems effectively quantify organizational efficiency and effectiveness; however, they often overlook the cultural and human dimensions. Currently, statistical metrics focusing on outcomes and economic indicators dominate the determinants of change and success [22]. By emphasizing outcomes (external customer needs), such measures tend to disregard the relationship between workplace culture and quality (internal customer needs). Many organizations fall into the trap of relying on performance metrics to demonstrate success, neglecting the importance of cultivating a culture that supports lean initiatives [15, 23].

A broad range of studies in existing literature has examined the application of lean concepts across various sectors, including industry, services, and the public sector. However, fewer studies have addressed lean applications in higher education and academia. Thus, further research is needed to adapt lean theory to the context of academic education [8, 24]. This study aims to present an organizational culture model based on lean leadership in the Islamic Azad University of Tehran.

2. Methodology

This study is applied in terms of its objective and qualitative in terms of data collection method. The study population includes managers of Islamic Azad University who meet the following criteria: (1) currently active in their roles and (2) with a minimum of 5 years of managerial experience in any unit of Islamic Azad University. It also includes academic experts with the following criteria: (1) academic expertise in the field of higher education and organizational culture, and (2) membership in the faculty of Islamic Azad University. Participants were purposefully selected until theoretical saturation was achieved. Theoretical saturation was reached after the tenth interview, where no new statements or concepts emerged. However, to ensure complete theoretical saturation, interviews were continued up to the twelfth participant.

In this study, data were collected and analyzed using semi-structured interviews with an inductive approach and employing Strauss and Corbin's (1997) method of open, axial, and selective coding. Data analysis was conducted using MAXQDA software (version 2020). During open coding, concepts, properties, dimensions, and events were identified through comparative analyses. Axial coding, a necessary step to examine the relationships between concepts and categories developed in the previous step (open coding), helped identify subcategories. Finally, selective coding refined the categories from the previous step, identifying and classifying the main categories.

To assess the validity of the data collection tool, member checking was employed. Some experts were asked to provide feedback on the clarity, content, and comprehensiveness of the interview protocol questions. After receiving their suggestions and comments, the final research model was validated.

The reliability of the data collection tool was assessed using the inter-coder agreement method. Three selected interviews were recoded by a research colleague, and the intra-topic agreement percentage was calculated as the reliability index.

Table 1. Reliability Test Results

Interview	Number of Codes	Agreed Codes	Reliability
First Interview	13	6	0.92
Fourth Interview	15	6	0.80
Tenth Interview	9	4	0.88
Total	37	16	0.86

Based on this analysis, the reliability coefficient for the interview protocol in this study was calculated at 86%. This value is considered satisfactory by researchers, as the minimum acceptable reliability coefficient is reported to be 0.6 (60%).

3. Findings and Results

This section presents the main findings of the study. During the initial coding phase, interviews were analyzed, and 96 concepts were identified through the recognition of verbal statements. In the axial coding phase, the identified concepts were re-examined, and subcategories were recognized and grouped, resulting in 19 subcategories

extracted from the 96 open codes. During the third phase, selective coding, the subcategories identified in the axial coding phase were analyzed and categorized into 9 main categories. Table 2 presents the three stages of coding.

Table 2. Example of Open Coding

Concept	Example Verbal Statement
Eliminating Bureaucratic Processes	"This involves identifying and removing bottlenecks and waste in educational and administrative processes, such as simplifying registration processes, reducing response time to student inquiries, and improving library service quality."
Establishing Customer-Centric Teams	"Forming teams responsible for identifying customer needs, designing new services, and improving processes."
Addressing Student Complaints and Suggestions for Quality Improvement	"One of the most important aspects in university culture is recognizing student value. Students should have the ability to offer complaints and suggestions for quality improvement, and leadership should prioritize these."
Rejecting Redundant and Scientifically Ineffective Papers	"One of the key aspects of lean leadership is eliminating redundancies. Currently, many Islamic Azad University students face pressure due to the requirement of two accepted scientific-research articles for their defense, which often leads them to low-quality journals."
Utilizing Key Performance Indicators (KPIs)	"Using KPIs to measure university performance across various domains is one of the essential actions in lean management at Islamic Azad University."
Employee Participation in the University	"Employee participation is one of the pillars of successfully implementing an organizational culture based on lean leadership. When employees actively engage in continuous improvement processes, it not only generates innovative ideas but also increases their commitment to Islamic Azad University."

The results of the interview analysis and the categorized concepts obtained from open, axial, and selective coding are presented in Table 3.

Table 3. Categorization of Identified Dimensions

Selective Code	Axial Code	Open Code
Customer Focus	Identifying Needs and Expectations	1) Student as a customer, 2) Needs assessment, 3) Specialized educational and research services for students, 4) Addressing student complaints and suggestions for quality improvement, 5) Understanding the needs of students, faculty, and staff.
	Continuous Process Improvement	6) Eliminating bureaucratic processes, 7) High-quality library services, 8) Reducing student wait times, 9) Increasing student satisfaction, 10) Enhancing productivity, 11) Boosting competitiveness of the university, 12) Creating customer-focused teams, 13) Staff training, 14) Addressing poor allocation of faculty resources.
	High-Quality Educational and Research Services	15) Improving the quality of education and research, 16) Supporting research in English, 17) Rejecting redundant and non-scientific articles in university journals, 18) Removing the two scientific-article requirement for defense and focusing on quality criteria, 19) Equal educational opportunities, 20) Addressing insufficiencies, 21) Poor understanding of curricula.
Continuous Improvement	Learning and Innovation Culture	22) Promoting a learning culture, 23) Encouraging new ideas, 24) Organizational culture based on learning, innovation, and continuous improvement, 25) Using learning tools.
	Identifying and Eliminating Waste	26) Identifying non-value-adding activities, 27) Identifying bottlenecks, 28) Simplification and removal of complexities, 29) Improving administrative and educational processes.
	Using Quality Improvement Tools	30) Utilizing KPIs to measure and improve performance, 31) Addressing faculty and staff needs, 32) Continuous improvement methods, 33) Flexibility and quick responsiveness, 34) Measuring and analyzing performance, 35) Creating self-managed teams, 36) Encouraging university-wide participation.
Employee Participation	Empowering Employees	37) Providing necessary training, 38) Allocating required resources, 39) Training and empowering employees, 40) Multi-task training for staff, 41) Creating growth opportunities, 42) Problem identification by employees themselves, 43) Effective communication, 44) Using problem-solving tools, 45) Celebrating successes.
	Creating Collaboration and Trust	46) Transparent decision-making, 47) Active listening to feedback, 48) Respect for individuals, 49) Appreciation of contributions.
	Forming Self-Managed Teams	50) Delegating authority to teams, 51) Supporting teams, 52) Setting clear objectives.
	Developing Reward Systems	53) Non-material rewards, 54) Designing performance-based reward systems, 55) Material rewards.
	Encouraging Suggestions and Ideas	56) Prompt review of suggestions, 57) Implementing effective suggestions, 58) Creating effective communication channels.
Academic Stakeholders	Identifying and Creating Value	59) Defining stakeholders, 60) Using tools to understand stakeholder values, 61) Defining process value from stakeholder perspectives, 62) Conducting activities needed by stakeholders, 63) Eliminating non-value-adding activities, 64) Identifying process flows that add value from stakeholder perspectives.
	Stakeholder Engagement	65) Collaborating with external partners, 66) Effective communication with stakeholders, 67) Supplier participation, 68) Stakeholder involvement in defining values and improving processes.

Adapting Lean Thinking to Higher Education	Lean Thinking in Administrative Processes	69) Admissions, 70) Hiring, 71) Budgeting and cost reduction, 72) Facility procurement.
	Lean Thinking in Research and Education Activities	73) Course design and delivery, 74) Addressing academic assignments, 75) Student feedback, 76) Improving educational programs.
Inclusive and Supportive Lean University Structures	Supportive Leadership	77) Servant leadership aligned with organizational values, 78) Setting examples, 79) Creating a clear and motivational vision for the organization, 80) Senior management commitment, 81) Supporting teams and individuals to achieve goals.
	Integrated Information Systems	82) Data collection, 83) Data analysis, 84) Reporting.
University Strategic Planning Based on Lean Principles	Waste Reduction	85) Identifying common wastes in universities, 86) Identifying and eliminating waste.
	Agile Organizational Structures	87) Flexibility, 88) Responsiveness to changes, 89) Agile organizational structures, 90) Performance-based reward systems, 91) Effective communication, 92) Student participation.
Systemic Approach to University Management		93) Holistic understanding of the organization and its interconnected components, 94) Integrated rather than fragmented process improvements.
Long-Term Managerial Thinking		95) Avoiding reliance on short-term outcomes, 96) Patience and persistence.

Figure 1. The Final Model of The Study

4. Discussion and Conclusion

The lean concept is a set of principles and practices emphasizing continuous improvement and respect for employees as core elements of a strategic business philosophy aimed at enhancing product quality. These two leadership principles are consistently applied to eliminate waste and improve process flow (Balzer, 2020). Over the past decades, lean principles and practices have been integrated globally into public and private sector organizations. The adoption of lean leadership practices in universities and educational institutions has been driven by the need to meet the expectations of students and faculty, reduce costs in an era of financial constraints, address public demands for efficiency and effectiveness, and, most importantly, strategically utilize all available institutional resources to fulfill educational missions [2, 20, 25-30]. Accordingly, the present study examined organizational culture based on lean leadership at the Islamic Azad University in Tehran.

The dimensions and components of the proposed model were identified and extracted through semi-structured interviews. The first dimension of an organizational culture based on lean leadership was customer focus. In this study, customers included students, staff, and faculty members of the Islamic Azad University. Customer focus was categorized into three components: accurately identifying needs and expectations, continuous process improvement, and providing high-quality educational and research services. Regarding this dimension, researchers argued that lean culture in educational institutions could enhance administrative processes such as optimizing educational services and improving student admissions and educational programs [8, 31]. Emiliani (2011) suggested that Kaizen could be an effective method for improving courses and delivering business value to students [21]. Radnor et al. (2006) emphasized that the lean concept is gaining interest in the education sector as a useful organizational philosophy and administrative toolset [32]. Maguad (2007) recommended using lean techniques to eliminate waste in the education sector, reduce costs, increase revenues, and ultimately enhance educational activities and learning [33].

The second dimension of an organizational culture based on lean leadership was continuous improvement. In this study, continuous improvement encompassed three components: fostering a learning and innovation culture,

identifying and eliminating waste, and using quality improvement tools such as Six Sigma and 5S. Studies highlighted that the absence of continuous improvement projects is a major barrier to implementing lean practices in educational institutions [8, 11, 34-36].

The third dimension was employee participation. In this study, employee participation included five components: empowering employees to participate in decision-making and process improvement, creating a collaborative and trusting organizational environment, forming self-managed teams, developing reward and recognition systems, and encouraging suggestions and innovative ideas through suggestion systems. Employee performance in higher education, as core members of university organizations, depends on various factors, including leadership style and organizational culture [37]. Emiliani (2011) argued that one major consequence of anti-lean leadership behaviors is the "loss of employee commitment," inevitably leading to reduced engagement levels. According to him, employee participation is one of the pillars of implementing lean management in any culture [21].

The fourth dimension was academic stakeholders. This study identified two components: recognizing and creating value from stakeholders' perspectives and engaging with stakeholders. Universities worldwide face challenges such as changing stakeholder requirements (e.g., students, businesses, and governments) and issues related to their involvement in university affairs [38]. Narenji Sani et al. (2021) also emphasized the role of stakeholders in lean university culture in their study [39].

The fifth dimension was adapting lean thinking to higher education. This study identified two components: lean thinking in administrative processes and lean thinking in educational and research activities. The findings indicated that lean thinking should be applied across various administrative and support areas, including student admissions, hiring, budgeting and cost reduction, facility procurement, course design and delivery, academic assignments, student feedback, and educational program improvement.

Other dimensions of organizational culture based on lean leadership at the Islamic Azad University included inclusive and supportive lean university structures (with two components: supportive leadership and integrated information systems), university strategic planning based on lean principles (with two components: waste reduction and agile organizational structures), a systemic approach to university management, and long-term managerial thinking.

Regarding supportive leadership, In terms of waste reduction, the findings of Hines and Lethbridge (2008) demonstrated significant potential for improving value for customers and eliminating waste in universities [40]. Jahan and Daggett (2015), relying on students' perceptions of lean principles in universities, noted that waste elimination is central to implementing lean concepts in academia, with identified waste areas including poor resource allocation, unequal educational programs, and weak understanding of curricula [35].

Based on the literature and the findings of this study, one of the key concepts in an organizational culture based on lean leadership in universities is adapting lean thinking to higher education. However, a review of existing literature revealed limited studies on this topic. Therefore, it is recommended to explore the alignment of lean thinking with higher education in future research. Additionally, future studies should investigate the role of external variables beyond the university ecosystem on organizational culture based on lean leadership, such as government policies, national culture, global events (e.g., pandemics), and the role of information and communication technologies.

It is recommended that kindergarten managers utilize marketing and educational management specialists and consultants to design marketing strategies, addressing concerns about optimizing educational services through specialized approaches in marketing and business development.

Kindergarten managers should focus on designing physical environments based on global standards, considering elements like color psychology, children's emotions, aesthetics, and acoustics, rather than solely emphasizing the visual appeal of buildings and equipment.

Kindergarten managers should leverage online platforms and social media to raise awareness among parents and other stakeholders about the kindergarten brand and unique educational services, with the help of online marketing specialists.

Lastly, given the emphasis of most kindergartens on superficial features, managers are encouraged to focus on unique values such as social responsibility, providing valuable content for child development, and creating a constructive and calming educational environment to attract more customers.

Authors' Contributions

Authors equally contributed to this article.

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