


## The Role of Leadership in Academic Culture in Diverse Scientific Communities: A Systematic Literature Review

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Abstract	Article Info
<p><i>This systematic review explores effective leadership mechanisms for managing cultural diversity in universities, aiming to identify key practices that foster a positive and inclusive academic environment. A systematic review methodology was used to search electronic databases and Google Scholar, resulting in the inclusion of 22 studies published between 1979 and 2020. A meta-synthesis revealed a comprehensive framework with four dimensions and 32 mechanisms: 1. Pre-organizational: Focuses on the leader's background influencing their approach to diversity. 2. Operational: Explores leadership practices and strategies for managing cultural diversity. 3. Output: Examines the tangible outcomes of effective leadership in creating a positive cultural environment. 4. Feedback: Emphasizes the importance of feedback mechanisms for refining leadership practices.</i></p> <p><i>This review contributes to existing research by proposing a holistic framework for effective leadership in culturally diverse universities, encompassing all stages of leadership effectiveness.</i></p>	<p><b>Article History:</b> <b>Received:</b> September 23, 2024 <b>Accepted:</b> May 5, 2025</p> <p><b>Keywords:</b> Leadership, Leadership Mechanisms, Organizational Culture, Academic Culture, Higher Education.</p>

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### **Introduction**

Social culture plays a crucial role in shaping the behaviors, values, and beliefs of societies. This cultural backdrop directly influences organizational culture, causing organizations—particularly in the business sector—to operate in alignment with the needs and expectations of society. For instance, in collectivist cultures, organizations place greater emphasis on teamwork and social harmony, while individualistic cultures focus more on individual achievements and competition (Ayega, 2018). Consequently, organizations can act as agents of cultural change, promoting initiatives such as innovation and social responsibility, which in turn can alter societal attitudes over time.

Universities serve as a prominent example of organizations that respond to these social influences. As complex social entities with their own distinct cultures, universities must navigate changing environmental conditions while striving to maintain academic freedom and organizational autonomy (Sporn, 1996). The societal culture in which a university is embedded plays a vital role in shaping its institutional environment and governance practices (Daniel et al., 2011). While universities work to adapt to global influences, they also need to address issues of cultural diversity, inclusion, and equity

within their educational and managerial frameworks (Dimmock & Walker, 2000).

In this context, academic culture becomes a critical factor influencing scientific development within society. It is recognized that there is a significant relationship between the characteristics of academic culture and the rate of academic growth and scientific production (Fazeli, 2008). In the 21st century, environmental and global changes pose new challenges for the culture of higher education. Universities need to reconstruct their desired academic culture to effectively respond to these challenges and cope with the phenomenon of environmental change (Safaei Fakhri & Behrangi, 2009). These challenges are not limited to organizational structures but can also manifest within various academic subgroups or processes. For example, in human resource management, universities must achieve coordination and integration of their organizational units to gain a competitive advantage akin to that of multinational organizations (Dowling et al., 2013). International interactions have confronted the human resource management of universities with cultural diversity, for instance with respect to the differences in the international employees' views on monochronic (working in a linear fashion, focusing on one task at a time such as completing a project before starting a new one) or polychronic (juggling multiple tasks at once and valuing relationships over strict schedules, like attending to several conversations or projects simultaneously) schedules on work and leisure, the desire for direct or indirect communication, the desire for individualism or collectivism, and performance evaluation based on each culture (Ramanan, 2015).

A deep understanding of academic culture can enhance the quality of education and services for students and society, promote global educational and research activities, and provide high-standard

academic services (Azis & Abduh, 2019). Also, studies indicate that there is a significant and positive relationship between different types of academic culture and reducing students' alienation (Beyrami et al., 2014), reducing job burnout, increasing employees' job satisfaction (Zamini et al., 2010), and increasing the university's soft power (Yongyou, 2014). Conversely, weaknesses in academic culture can negatively affect university performance, diminish credibility, and reduce scientific dynamism (Yamani Dozi Sorkhabi, 2003). Thus, recognizing the interplay between organizational and academic cultures—and their mutual influences—can pave the way for development and advancement in the realm of higher education and science.

Forming a favorable academic culture needs organizational leaders to identify that culture is a complex subject, and at the same time have the motivation and skills to change cultural processes, determine ineffective values and assumptions, and then introduce and implement new concepts, values and assumptions (Bystydzienski et al., 2016). A rich body of research showed a positive and considerable effect of leadership style on the culture of the organization/school/university (Iqbal, 2004; Hosseini Sarkhosh, 2010; Karaminia et al., 2010; Ali Panah et al., 2014; Ali et al., 2015; Purwana, 2015; Karadag et al., 2020; Özgenel & Ankaralioglu, 2020).

Such a relationship between culture and leadership has long been regarded by scholars in the way proposed by Schein (1985, p. 25) recognizing the unique talent of leaders in managing culture and their ability to work with it. Leaders play a key and influential role in the development of academic culture (Baker, 1992, p.10). Studies have often stressed the role of leadership as a fundamental factor in shaping the culture of the organization (Metwally, et al., 2019). But to play such

a role better, understanding the culture and how to popularize it is a vital skill for those attempting to achieve strategic results in managing their organization (Belias & Koustelios, 2014). This skill, what is referred to in this study as "mechanisms," is also critical to advance the purposes of academic culture in universities. These mechanisms and how they are formed by leaders have been less examined in the literature (Huang, et al., 2005). Therefore, little is known about how school leaders can shape the school culture (Haiyan et al., 2017) or academic culture (Marzooghi et al., 2019).

Given the significance of this issue, this research explored leadership mechanisms in forming academic culture. To do this, we recognized that academic culture is often referred to as "organizational culture" in the literature, and we need to explore how leadership influences this dynamic in different organizations. After extracting the suggested leadership mechanisms, they can be applied based on the needs and conditions of each university. Thus, the objective of this research is to get a clear sight of the research into leadership mechanisms to shape culture for application in higher education. Therefore, the question that this research seeks to answer is: "through which mechanisms can academic leadership shape academic culture?"

The results of this literature research can open the way for researchers to develop existing knowledge in the field of academic culture. In addition, the findings can be used as a framework for the action of leaders at the university level to create or replace an academic culture based on desired values in universities.

## Literature review

### Academic culture in Higher Education

Academic culture is a combination of the initial definitions of “culture” and “organizational culture.” In these definitions, “culture” is described as constant and fundamental social meanings that shape beliefs and behaviors over time (Deal & Peterson, 1999, p. 7). On the other hand, “organizational culture” encompasses beliefs, values, assumptions, and performances that create a unique social and psychological environment within an organization (Viinikainen et al., 2019). If such constant and fundamental meanings and assumptions realize their way into academic interactions and associations, and academics, administrators, and students share them and will consider them as the basis for action and require certain standards of behavior, “academic culture” will be formed (Nayak & Venkatraman, 2010; Shen & Tian, 2012; Yongyou, 2014). To put it more simply, academic culture refers to the common beliefs, attitudes, values, meanings, assumptions, experiences, symbols, norms, and behaviors among university members, whether they are studying or working (Brick, 2020).

The primary elements within academic culture are beliefs and values. Beliefs play a crucial role in shaping how individuals perceive and interact with the world (Deal & Peterson, 1999, p. 26). They become the foundation of knowledge over time. Values, on the other hand, serve as standards of goodness, quality, or excellence. They influence behavior and decision-making (Ott, 1989). Within Parson’s “cultural system” framework, the expression of both values and beliefs occurs through a complex interplay between these elements. Values, broad ideals and goals that guide behavior, find expression through their articulation and embodiment within the cultural system. They influence the formation of norms, providing the underlying rationale

for rules and expected conduct. Also, beliefs, representing specific understandings and assumptions about the world, are closely intertwined with values but often remain implicit. They influence how individuals interpret cultural norms and symbols, shaping their actions and decisions within the broader cultural context. The interplay between values and beliefs occurs in various ways: (1) Symbolically: Cultural meanings are conveyed through rituals, art, music, and language, reinforcing shared ideals; (2) Institutionally: Social structures, laws, and organizations reflect and uphold cultural values and norms; (3) Individually: Personal choices, behaviors, and interpretations of cultural symbols demonstrate internalized values and beliefs. Understanding this dynamic interplay provides valuable insights into cultural functioning and change (Parsons, 1937, pp. 70-75, pp. 441-443; Parsons, 1951, pp. 59-65; Parsons, 1966, pp. 50-55).

It cannot be ignored that the value system of individuals is obtained from the *meanings* and *assumptions* of the mind and also their special academic *experiences* that have been achieved through various means such as teaching, learning, research, interaction, and relationships with students, professors, and personnel in the university environment (Olutokunbo et al., 2013). Ultimately, the subjects that have previously been identified as beliefs, values, meanings, assumptions, and experiences as elements of academic culture have demonstrated themselves in other elements of academic culture, such as *symbols* that are possible to be applied as common semantic contracts (Edgar & Sedgwick, 2008), pleasant or unpleasant *attitudes* and also the *norms* established in the form of orders, prohibitions, preferences, and permissions (Niazi et al., 2016). So, the entirety of culture is not only dependent on its elements but also how they interact and form a cohesive unit (Hammal & Vadi, 2006, p. 89).

The formation of academic culture within a university is influenced not only by cultural elements and their interactions but also by each individual member. Each university member brings diverse cultural elements (such as beliefs, values, and attitudes) that are either strengthened or forgotten during their time at the institution (Shen & Tian, 2012). Additionally, academic members form various groups based on their cultural preferences, and these groups constantly interact. As an educational unit, a university serves as a foundation for multiple relationships, including internal connections among managers, personnel, and students, as well as external relationships with graduates, future students, parents, and employers. Faculty members play a crucial role in shaping cultural dynamics beyond teaching scientific concepts. Their viewpoints, attitudes, evaluations, and actions significantly impact students' culture. Research demonstrates that professors' beliefs and behaviors significantly shape students' experiences and perceptions in academic settings, with cultural factors influencing faculty perspectives that in turn affect student motivation, sense of belonging, and academic interest (Lacosse et al., 2021; Muenks et al., 2021; Zhang & He, 2024), highlighting the critical need for faculty training in cultural diversity and inclusive practices (Chamberlain, 2005). Meanwhile, students adhere to specific values and norms, which they propagate as a social group. Effective team leaders or managers can leverage this cultural diversity to achieve productivity by ensuring a positive aspect of this rich academic culture (Deep et al., 2017).

Identifying more specifically the elements and actors of academic culture, each with their own unique features, enables us to understand the complexity of the concept of culture. Furthermore, the world being “a global village”, no university is assigned to a specific nationality in

today's society. The impact of internationalization on academic culture is multifaceted. This shift has led to a focus on quantitative indicators such as international student recruitment and outbound student mobility to demonstrate an institution's 'international' status (Robson et al., 2017). It has created new challenges for faculty members, including the need to adapt teaching methods for diverse student populations and engage in international research collaborations (Bedenlier & Zawacki-Richter, 2015). Moving forward, institutions may need to create clearer frameworks that encompass factors such as language and learning skills, educational systems, and faculty development to improve learning sustainability among international students and foster a truly internationalized academic culture (Yassin et al., 2020). Indeed, universities have been gathered together to form an academic society, with a variety of nationalities, cultures, languages, races, genders etc. Combining this cultural diversity of the academic communities (Baker, 1992, p.10) with the individual features of each academic actor, and with different elements of culture that are different and specific in each individual society and university, creates a highly diverse and multicultural scientific community, and also adds to the complexity of the concept of academic culture.

Accordingly, insight into these complex and diverse relationships (that basically refer to cultural elements of diversity) is required to study the culture of the university. Cultural diversity yields two basic issues for the university leader. Firstly, the leader, as a person who is directly related to the elements of culture in the university, must have a proper understanding of what and how each element is. Secondly, it should be known that culture cannot be formed by itself or by a specific person or group. So, the interaction of all members and subcultures is

necessary to understand and internalize cultural commonalities. Achieving both of these issues requires the effective involvement of academic leaders.

### **Leadership in Higher Education**

Up until the 1990s, most universities operated in a relatively stable environment where faculty members made decisions primarily focused on research and teaching rather than strong management skills. This collegial approach reflected Mintzberg's (1979, 1983) perspective of universities as stable institutions with minimal coordination between departments, concentrating on academic pursuits.

However, the landscape underwent significant transformation due to rapid globalization and technological advancements, ultimately giving rise to a new "knowledge economy" (Gregory, 1996). As a result, universities faced increasing pressure to adapt and produce graduates equipped to compete in this evolving reality. Governments also required universities to contribute to the development of "human capital" (Gregory, 1996). In other words, governments, viewing universities as key engines of economic growth, increasingly emphasized their role in developing a skilled workforce. This perspective framed students as investments in "human capital," leading to greater scrutiny of curriculum relevance and graduate employability. Consequently, universities had to adapt their educational approaches to meet the demands of the job market. These external pressures revealed the shortcomings of the traditional academic model. According to Davies et al. (2001), conventional academic governance struggled to keep up with the shifting demands of this new environment.

This transformation led to the emergence of university leadership as a response to the complexities of modern education. Effective leaders were needed to balance the age-old academic freedoms with the necessity of responding to external demands, such as securing funding in a competitive landscape. Kuiper (2005) identified two critical cultural aspects within universities: the academic culture, which focuses on research and teaching, and the managerial culture, which emphasizes efficiency and operations. Leaders now found themselves navigating both cultures.

Management is about creating frameworks for efficient operations, while leadership is about inspiring action and achieving shared goals in teaching and learning (Parrish, 2011). Thus, university leaders must act as stewards of academic freedom while also championing the overall success of their institutions.

Leadership in this context is multifaceted. Ramsden (1998) describes it as the daily practice of supporting, motivating, and guiding colleagues (cited in Parrish, 2011). Middlehurst (1993) adds that effective leadership involves taking responsibility, setting direction, and influencing outcomes. Toker (2022) provides a broader view, detailing various leadership roles within universities that encompass teaching, research, strategic vision, collaboration, and promoting fairness and recognition.

### **Academic leader for academic culture**

Universities are vibrant hubs of intellectual exchange, where students from diverse backgrounds come together to learn and grow. This rich tapestry thrives not just on the inclusion of different cultures, but on a deeper commitment to cultural integrity. This means fostering a space where individual identities are celebrated alongside a shared sense of

purpose and community (Vasquez & Nguyen, 2023). Martin (2012) offers a helpful framework for understanding the delicate dance between unity and diversity within universities. The first perspective, integration, envisions a university as a chorus singing in perfect harmony. This idealized image, however, overlooks the unique rhythms and voices that different cultures bring to the table. A more realistic approach lies in differentiation, acknowledging the existence of diverse subcultures within the university. These subcultures may coexist peacefully, or they may experience friction due to underlying power dynamics. Recognizing these dynamics allows for more nuanced leadership strategies. Finally, the concept of fragmentation suggests a university where everyone plays their own unique note, creating a beautiful but complex soundscape. This perspective highlights the vast array of perspectives that enrich university life, but also underscores the need for bridges and common ground (Mumby, 1994).

Universities that prioritize cultural integrity experience considerable advantages. Research by Vasquez and Nguyen (2023) and Perez and Gonzales (2019) clearly indicates that students from diverse backgrounds excel in environments that not only provide inclusive programming but also demonstrate sensitivity to cultural differences and foster a strong sense of belonging. Additionally, these supportive environments contribute significantly to greater academic readiness (Kolluri & Tierney, 2019) and, as a result, ultimately lead to higher academic success (Perez & Gonzales, 2019; Vasquez & Nguyen, 2023). This connection highlights the importance of cultural integrity in enhancing overall educational outcomes for all students.

Furthermore, celebrating differences, rather than striving for homogenization, fuels innovation, critical thinking, and a vibrant

exchange of ideas (Moffitt & Barton, 2020). However, achieving cultural integrity is an ongoing challenge. Universities must avoid falling into the trap of fragmentation, where a lack of shared values leads to disconnection and conflict (Martin, 2012). Studies that support this viewpoint stress several dynamics that demonstrate how a novel strategy might develop within integration and differentiation (Moore, 2021; Muhr et al., 2022). According to this perspective, organizational culture is never totally stable or flexible, but is instead recreated via disputes among its members' subcultural viewpoints from the inside. Therefore, by interventions such as nuancing cultural stereotypes and strengthening hybrid positions, experts and researchers can jointly examine the dynamics of culture to find alternatives to stereotypes that are frequently defined by multiple subcultures as barriers to organizational integration (Muhr et al., 2022).

Here, effective leadership plays a crucial role. Leaders can bridge divides by fostering open communication and collaborative learning initiatives (Moffitt & Barton, 2020). Additionally, leadership styles (like transformational leaders) beyond traditional models significantly impact university culture. They can foresee the future and develop an ideal image of the organization by setting up future goals. Leaders set goals, creating a shared vision that unites faculty, staff, and students (Zulfaqar et al., 2021). Achieving this vision requires teamwork and collaboration, fostering a sense of community (Siswanto et al., 2023). With this definition, it seems that unless the members of the university cooperate in the form of a working team, the university goals will not be achieved. Also, the formation of cooperative teams is contingent upon a shared objective among members that goes beyond individual goals. This shared goal should unite members in valuing and interacting with each other, while still respecting differences in beliefs,

ideas, perspectives, and identities (Astin & Astin, 2000). Therefore, it can be said that a common goal will also strengthen some common cultural concepts. Such common concepts of culture in the university can be considered as a system of common cognitions, knowledges and beliefs (Abidin, 2014).

However, cultural integrity goes beyond simply following rules. It requires continuous reflection and a commitment to ethical practices. Transparency, fairness, and open communication create an environment where diverse perspectives can flourish (Solomon et al., 2021). This fosters a sense of shared values and goals across the university (Cooper, 2015). Effective leadership is crucial for achieving this cultural harmony. Studies consistently show a strong link between leadership style and positive university culture (Iqbal, 2004; Hosseini Sarkhosh, 2010; Karaminia et al., 2010; Tsai, 2011; Ali Panah et al., 2014; Birhanu, 2021; Jose & Seema, 2021). Leaders play a vital role in shaping a culture that prioritizes collaboration, critical thinking, and ethical conduct.

While it is important to prioritize leadership style and the establishment of a dominant academic culture in alignment with university goals, the leader's operational mechanisms play a crucial role in translating their unique concepts into action. This is particularly challenging in an educational institution like a university, which is characterized by diverse and complex elements, components, and audiences (Chen, 2017).

Considering this issue, the goal of this study is identifying leadership mechanisms to shape academic culture. This is a question that has received less attention in research related to the relationship between leadership and culture. A comprehensive understanding of these mechanisms will equip academic leaders with the necessary insights

to cultivate environments that not only encourage innovation and collaboration among faculty and students but also enhance overall institutional effectiveness. Furthermore, such environments are essential for driving societal impact, as they foster the development of critical thinking, creativity, and civic engagement among students, ultimately contributing to the betterment of society as a whole. By shedding light on how leadership practices can actively shape academic culture, this research encourages a more strategic approach to leadership in higher education, highlighting the importance of intentional cultural development in achieving positive educational outcomes.

## Methodology

### Selecting review papers

Considering the research issue, our questioning approach is a kind of "What" and consequently, the research question is: "*What* are the leadership mechanisms to shape the academic culture?"

To identify relevant studies on leadership mechanisms for cultural development in universities, we conducted a systematic search in October 2023 across eight electronic databases such as Google scholar- Scopus- ScienceDirect- Springer- Pro-Quest and Iran's scientific database, databases of Jihad University Scientific Information Center and Comprehensive Humanities Portal. Our initial search strategy utilized a broad range of keywords to capture diverse perspectives on leadership and culture formation:

- *Leadership and Culture Formation*: "Designing culture & Leadership", "Shaping culture & Leadership", "Developing culture & Leadership", "Cultural formation & Leadership",

"Creating culture & Leadership", "Building culture & Leadership", "Leadership mechanisms", "Cultural leadership",

- *Leadership in Educational Settings*: "Leadership & Academic culture"
- *Focus on Universities*: "University", "Higher education"

The selection criteria for this meta-synthesis prioritized qualitative studies that explored leadership mechanisms in shaping organizational culture. Due to the limited number of studies specifically focusing on universities or higher education institutions, the search was broadened to include other relevant contexts such as schools, organizations, and companies. Eligible study types encompassed a range of scholarly outputs, including journal articles, books, dissertations, and reports.

Based on these keywords, we refined our search string using Boolean operators (AND, OR, NOT) to ensure comprehensive yet focused retrieval: (Shape\* OR Develop\* OR Form\* OR Create\*) AND ("organizational culture" OR "academic culture") AND (Leader\* NOT "Cultural Leadership") AND (University OR "Higher education") AND (Mechanism\* OR process OR States\*). The Preferred Reporting Items for Systematic Re-views and Meta-Analyses (PRISMA) group, which mainly consists of a four-phase flow diagram, was used. The flow diagram describes the identification, screening, eligibility and inclusion criteria of the reports that fall under the scope of a review (Figure 1).

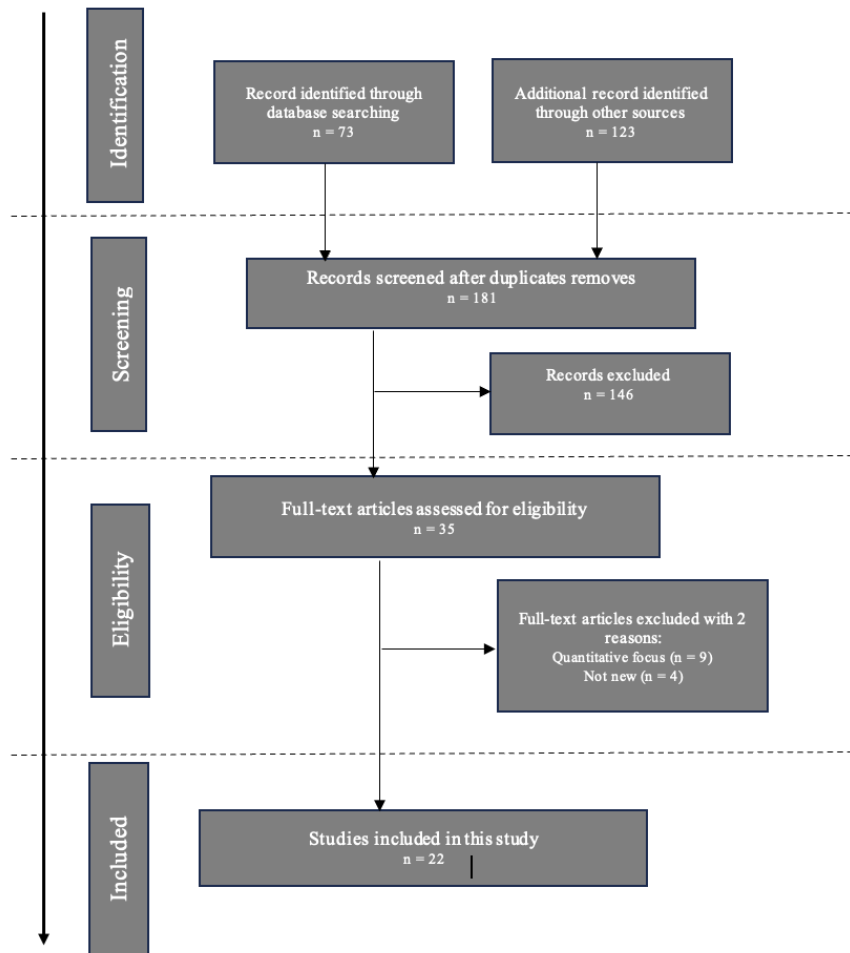


Figure 1. PRISMA flow diagram

About 73 results from keywords search, and 123 results (among about 2,180 Google Scholar results) with search string technique were identified. The first relevant research in this topic was found in 1982 and the most recent one in 2020<sup>1</sup> (see Table 1).

**Table 1.**

*Number and type of studies resulting from keyword search*

	Keyword	Number of studies in terms of the type			
		Book	Thesis	Article	Other
1	Creating culture & Leadership	1	6	8	5
2	Shaping culture & Leadership	7	6	14	2
3	Building culture & Leadership	1	-	-	4
4	Developing culture & Leadership	-	-	1	1
5	Cultural formation & Leadership	-	2	3	-
6	Designing culture & Leadership	1	-	-	-
7	Leadership mechanisms	-	1	7	-
8	Cultural leadership	-	-	2	1
9	leadership & Academic culture	-	-	-	-

Following the initial search, we implemented a two-step screening process to identify the most relevant studies for qualitative analysis:

1. Initial Screening (Title and Abstract):

Studies were excluded if:

<sup>1</sup> . No research on this topic (leadership mechanisms for culture) was found prior to 1982 and after 2020.

- They lacked a clear connection to the research topic (leadership mechanisms for cultural development). Actually, while these articles may have included relevant keywords in their titles, the actual content did not provide a thorough exploration of the specific mechanisms of leadership that directly influence any types of culture.
- They focused solely on quantitative analysis of the leader-culture relationship, not the mechanisms themselves.

## 2. Full-Text Review:

Following the initial screening, full-text articles were retrieved and assessed for inclusion based on the following criteria:

- **Qualitative Focus:** The study employed qualitative methods to explore and describe leadership mechanisms for cultural development.
- **Novelty:** The study introduced new insights or classifications of leadership mechanisms beyond simply replicating existing research. This contrasts with some studies that merely restated leadership mechanisms previously mentioned in earlier works. For example, the classification proposed by Schein (2004) was often referenced without a deeper examination of its application in contemporary contexts.

This two-step screening process ensured that the included studies provided rich qualitative data on leadership mechanisms for shaping culture. Finally, 22 studies were considered as the most relevant studies in the field of research according to the searched keywords or search strings and studying their text.

### Analyzing the selected studies by meta-synthesis method

Identifying and extracting 22 studies obtained enables us to refer these studies to the next stages of the meta-synthesis method to analyze the data and collect the mechanisms mentioned in them. This method allows researchers to pool and analyze findings from multiple qualitative studies, drawing collective meaning and generating more comprehensive understanding of complex phenomena (Bearman & Dawson, 2013; Edwards & Kaimal, 2016). The model of Sandelowski and Barroso's meta-synthesis (2007) has been applied in order to analyze the information in this stage, with the following steps: initial data extraction, the inclusion of data in meta-synthesis, and ultimately, data analysis. Also, the technique of classification of findings and the technique of quantitative meta-summary were used in order to analyze the qualitative findings (Sandelowski & Barroso, 2007) as follows:

#### *Extracting initial data and drawing a descriptive table of data*

Data were extracted from each study using a pre-defined and standardized form. This form ensured consistent and systematic collection of information across all included studies. Extracted data encompassed a range of elements, including source code, author(s), title, publication year, publication type, findings related to specific leadership mechanisms identified for culture shape. The form also included space for researcher notes and reflections. A descriptive table (see table 2) of basic information was prepared.

**Table 2.**

*Descriptive table of primary data extracted from research references*

1	<b>Title:</b> Corporate cultures: the rites and rituals of corporate life <b>Author/s:</b> Deal & Kennedy <b>Year:</b> 1982 <b>Type:</b> Book
	<ul style="list-style-type: none"> <li>• The basic organizational structure</li> <li>• The administrative and technical systems</li> <li>• The physical and appearance</li> <li>• Stories, myths and sagas</li> <li>• Formal statements and philosophies</li> <li>• Ceremonies, rituals and traditions</li> <li>• The anointing and celebrating heroes and heroines</li> </ul>
2	<b>Title:</b> The culture of schools (Chapter 1 in the book titled: Leadership: Examining the elusive) <b>Author/s:</b> Deal <b>Year:</b> 1987 <b>Type:</b> Book
	<ul style="list-style-type: none"> <li>• Recreate the history of a school</li> <li>• Articulate shared values</li> <li>• Anoint and celebrate heroes</li> <li>• Reinvigorate rituals and ceremonies</li> <li>• Tell good stories</li> <li>• Work with the informal network of cultural players</li> </ul>
3	<b>Title:</b> The Organizational Culture Perspective <b>Author/s:</b> Ott <b>Year:</b> 1989 <b>Type:</b> Book
	<ul style="list-style-type: none"> <li>• Staff selection</li> <li>• Socialization</li> <li>• Removal of deviating members</li> <li>• Communication mechanisms</li> </ul>
4	<b>Title:</b> The principal's role in teacher development <b>Author/s:</b> Leithwood & Jantzi <b>Year:</b> 1990 <b>Type:</b> Book
	<ol style="list-style-type: none"> <li>1. strengthening the schools culture             <ul style="list-style-type: none"> <li>○ emphasizing shared goals;</li> <li>○ collaborative decision-making</li> <li>○ reducing teacher isolation</li> </ul> </li> <li>2. bureaucratic mechanisms             <ul style="list-style-type: none"> <li>○ provision of money,</li> <li>○ planning and scheduling</li> </ul> </li> <li>3. staff development</li> <li>4. direct and frequent communication</li> <li>5. sharing of power and responsibilities</li> <li>6. use of symbols and ritual by celebrating</li> </ol>
	<b>Title:</b> Organizational culture and leadership

5	<b>Author/s:</b> Schein <b>Year:</b> 1992 <b>Type:</b> Book
	<ul style="list-style-type: none"> <li>• adapting to their environment</li> <li>• establishing and evolving workgroups</li> <li>• empowering sub-cultures that represent ideal norms</li> <li>• creating systems of task forces and committees to manage the culture</li> </ul>
6	<b>Title:</b> Leadership & School Culture <b>Author/s:</b> Bates <b>Year:</b> 1992 <b>Type:</b> Conference Papers
	<ul style="list-style-type: none"> <li>• Pedagogy</li> <li>• Curriculum</li> <li>• Assessment</li> <li>• Discipline</li> </ul>
7	<b>Title:</b> Organizational Culture in the Management of Mergers <b>Author/s:</b> Nahavandi & Malekzadeh <b>Year:</b> 1993 <b>Type:</b> Book
	<ul style="list-style-type: none"> <li>• As a role model</li> <li>• Use of the reward system</li> <li>• The selection and recruitment process</li> <li>• Structure and strategy</li> <li>• The physical setting</li> </ul>
8	<b>Title:</b> Shaping school culture <b>Author/s:</b> Deal & Peterson <b>Year:</b> 1999 <b>Type:</b> Book
	<i>Major symbolic roles of leaders:</i> <ul style="list-style-type: none"> <li>• Historian: seeks to understand the social and normative past of the school</li> <li>• Anthropological sleuth: analyzes and probes for the current set of norms, values and beliefs that define the current culture</li> <li>• Visionary: works with other leaders and the community to define a deeply value-focused picture of the future</li> <li>• Symbol: affirms values through dress, behavior, attention, routines</li> <li>• Potter: shapes and is shaped by the school's heroes, rituals, traditions, ceremonies, symbols</li> <li>• Poet: uses language to reinforce values and sustains the school's best image of itself</li> <li>• Actor: improvises in the school's inevitable dramas, comedies and tragedies</li> <li>• Healer: oversees transitions and change in the life of the school; heals the wounds of conflict and loss.</li> </ul>
9	<b>Title:</b> Leadership: Creating Culture Change <b>Author/s:</b> Huckshorn & LeBel <b>Year:</b> 2002 <b>Type:</b> Book
	<ul style="list-style-type: none"> <li>• Commitment</li> <li>• Mission &amp; vision</li> <li>• Clarifying organizational values</li> <li>• Empowering, supporting, and supervising staff</li> <li>• Using data to inform practice</li> <li>• develop a plan</li> </ul>

10	<b>Title:</b> Organizational culture and leadership <b>Author/s:</b> Schein <b>Year:</b> 2004 <b>Type:</b> Book
	<i>Primary embedding mechanisms:</i> <ul style="list-style-type: none"> <li>• What leaders pay attention to, measure and control on a regular basis</li> <li>• How leaders react to critical incidents and organizational crises</li> <li>• Observed criteria by which leaders allocate scarce resources</li> <li>• Deliberate role modelling, teaching and coaching</li> <li>• Observed criteria by which leaders allocate rewards and status</li> <li>• Observed criteria by which leaders recruit, select, promote, retire and excommunicate organizational members</li> </ul> <i>Secondary reinforcement mechanisms:</i> <ul style="list-style-type: none"> <li>• Organizational design and structure</li> <li>• Organizational systems and procedures</li> <li>• Organizational rites and rituals</li> <li>• Design of physical space, facades and buildings</li> <li>• Stories, legends and myths about people and events</li> <li>• Formal statements of organizational philosophy, values and creed</li> </ul>
11	<b>Title:</b> Leaders, Values, and Organizational Climate: Examining Leadership Strategies for Establishing an Organizational Climate Regarding Ethics <b>Author/s:</b> Grojean, Resick, Dickson, Smith <b>Year:</b> 2004 <b>Type:</b> Article
	<ul style="list-style-type: none"> <li>• Use values-based leadership</li> <li>• Set the example</li> <li>• Establish clear expectations of ethical conduct</li> <li>• Recognize and reward behaviors that support organizational values</li> <li>• Provide feedback, coaching, and support regarding ethical behavior</li> <li>• Be aware of individual differences among subordinates</li> <li>• Establish leader training and mentoring</li> </ul>
12	<b>Title:</b> Organizational culture and leadership (3 <sup>th</sup> edition) <b>Author/s:</b> Schein <b>Year:</b> 2006 <b>Type:</b> Book
	<ul style="list-style-type: none"> <li>• Conversations</li> <li>• Resource allocation</li> <li>• Apportionment of power</li> <li>• Instatement of organizational structures and processes</li> </ul>

13	<b>Title:</b> Management's Role in Shaping Organizational Culture <b>Author/s:</b> Kane- Urrabazo <b>Year:</b> 2006 <b>Type:</b> Article
	<ul style="list-style-type: none"> <li>• trust and trustworthiness</li> <li>• Empowerment</li> <li>• Consistency</li> <li>• mentorship</li> </ul>
14	<b>Title:</b> <i>The Ownership Quotient: Putting the Service Profit Chain to Work for Unbeatable Competitive Advantage</i> <b>Author/s:</b> Heskett, Sasser & Wheeler <b>Year:</b> 2008 <b>Type:</b> Book
	<ul style="list-style-type: none"> <li>• Establish clear organizational mission and vision and values and set the example by themselves</li> <li>• Reinforcement and investment in culture on a continuous basis</li> <li>• Fairness of leadership</li> <li>• Organizations with clearly codified cultures enjoy labor cost advantages.</li> <li>• Employees and customers loyalty</li> <li>• selective of prospective customers</li> <li>• the best serving the best</li> <li>• foster effective succession in the leadership ranks</li> <li>• Periodic revision of the company's core values and search for best practices both inside and outside the organization</li> </ul>
15	<b>Title:</b> Understanding and Managing Organizational Culture <b>Author/s:</b> O'Donnell & Boyle <b>Year:</b> 2008 <b>Type:</b> Book
	<ul style="list-style-type: none"> <li>• Creating a climate for change</li> <li>• Leaders as champions</li> <li>• Employee engagement and empowerment</li> <li>• Team orientation</li> <li>• Tracking cultural change</li> <li>• Training, rewards and recognition</li> </ul>
16	<b>Title:</b> Cultural Leadership: Formation of an Ethical Organizational Culture <b>Author/s:</b> Armenakis, Brown & Mehta <b>Year:</b> 2010 <b>Type:</b> Report
	<ul style="list-style-type: none"> <li>• Authentic ethical leader</li> <li>• Agents of Cultural Diffusion</li> <li>• Establishing the Organizational Culture</li> <li>• Important Formal and Informal Practices (selection &amp; requirement, socialization, decision making, organizational learning);</li> <li>• Cultural Internalization</li> </ul>

17	<b>Title:</b> Leadership: Theory, Application & Skill Development <b>Author/s:</b> Lussier & Achua <b>Year:</b> 2015 <b>Type:</b> Book
	<i>Symbolic Actions:</i> <ul style="list-style-type: none"> <li>• Leaders serving as role models</li> <li>• Celebrating achievements</li> <li>• Interacting face-to-face with rank-and-file</li> <li>• Matching organizational structure to culture</li> </ul> <i>Substantive Actions:</i> <ul style="list-style-type: none"> <li>• Matching HR practices to culture</li> <li>• Matching operating policies and practices to culture</li> <li>• Creating a strategy–culture fit</li> <li>• Aligning reward/incentive system with culture</li> <li>• Matching work environment design to culture</li> <li>• Developing a written values statement</li> </ul>
18	<b>Title:</b> School culture and leadership of professional learning communities <b>Author/s:</b> Carpenter <b>Year:</b> 2015 <b>Type:</b> Article
	<ul style="list-style-type: none"> <li>• Considering effective collaborative system</li> <li>• Empowering</li> <li>• Continuous improvement cycle</li> <li>• Shared leadership structure</li> </ul>
19	<b>Title:</b> Principal Leadership and Its Link to the Development of a School's Teacher Culture and Teaching Effectiveness: A Case Study of an Award-Winning Teaching Team at an Elementary School <b>Author/s:</b> Lee & Li <b>Year:</b> 2015 <b>Type:</b> Article
	<ul style="list-style-type: none"> <li>• Collaborative teaching teams should be developed to release teachers from their self-isolation</li> <li>• To have an effective teaching team, major leaders should be carefully chosen</li> <li>• Principals and administrative staff must set a good model and replace formal leadership with care and service.</li> <li>• Be courteous to quality senior teachers to uphold campus ethics.</li> </ul>
20	<b>Title:</b> Leadership in the Formation and Change of School Culture (Chapter 8 in the book titled: Chaos, Complexity and Leadership) <b>Author/s:</b> Şişman <b>Year:</b> 2015 <b>Type:</b> Book
	<ul style="list-style-type: none"> <li>• Role Modeling and Leadership</li> <li>• Information and Communication Process</li> <li>• Changes in Institutional Structure</li> <li>• Management and Use of Symbols</li> <li>• Use of Stories and Legends</li> <li>• Ceremonies and Meetings</li> <li>• Regulation of the Physical Environment</li> <li>• Education and Socialization Programs</li> </ul>

	<ul style="list-style-type: none"> <li>• Personnel Selection Process</li> <li>• Decision Making Process and Criteria</li> <li>• Administrative Practices</li> <li>• Create a Learning School</li> </ul>
21	<b>Title:</b> Framework for transforming departmental culture to support educational innovation <b>Author/s:</b> Corbo, Reinholz, Dancy & et.al. <b>Year:</b> 2016 <b>Type:</b> Article
	<ul style="list-style-type: none"> <li>• Change in the values, beliefs, myths and rituals of the organization</li> <li>• Understand the values that underlie an organization</li> <li>• Align their messages about change with existing or aspirational values.</li> <li>• Try to shift values by altering mission statements or using existing symbols or rituals in new ways.</li> </ul>
22	<b>Title:</b> The role of system leadership: creating and maintaining an effective school culture and climate <b>Author/s:</b> Guy <b>Year:</b> 2020 <b>Type:</b> Thesis
	<ul style="list-style-type: none"> <li>• frequent check-ins,</li> <li>• checklists</li> <li>• regular meetings,</li> <li>• mentoring</li> <li>• collaboration</li> </ul>

### *Classifying and summarizing data*

After identifying and extracting the initial data, Classifications have been obtained using the classification technique. The explanations and tables that have been presented in the following parts are in response to the most central question of the study, specifically, what are the leadership mechanisms to shape academic culture? At this stage, mechanisms extracted from the text of the studies were separated in different classes according to the similarities and differences in content and function.

This classification is designed by looking again at educational institutions such as schools and universities as an open social system, what Hoy and Miskel (2008) point out. In open systems organizations take inputs from the environment, transform them and produce outputs. In this model, the system's capacity for feedback facilities the

repetitive and cyclic pattern of “input-process-output”. Feedback is information about the system that enables it to correct itself (Hoy & Miskel, 2008, pp. 18-21). The open social-system models also have both internal and external feedback mechanisms as their key elements (Hoy & Miskel, 2008, p. 31). By breaking down university systems into these four components, we gain a clearer understanding of how they function. This helps us identify key drivers of success, potential bottlenecks, and areas for improvement. Also, when faced with a problem or opportunity, considering inputs, processes, and potential outputs along with feedback allows for more thoughtful decision-making (Stermann, 2000). Simple frameworks provide a shared language for discussing and understanding complex systems. These frameworks offer a flexible structure that can accommodate changes while maintaining a cohesive understanding of the underlying dynamics.

## **Results**

At this stage, the leadership mechanisms extracted were explained in four main dimensions: pre-organization, operational, output and feedback. Actually, the pre-organization dimension is somehow equivalent to input, with the difference that pre-organizers can refer to the sorting, classification or further preparation of these inputs in addition to the necessary materials and information (Scarf, 1963). The operational dimension deals with the processes and operations carried out for the realization and efficiency of pre-organizers. After that, the operations performed on the inputs will lead to the creation of outputs. Finally, the feedback dimension determines the necessary corrective actions. This four-dimensional framework was developed to address the stages of culture-shaping, ensuring that leadership practices are assessed comprehensively and systematically. In academic leadership

contexts, this framework is particularly relevant as it emphasizes the importance of cultivating a culture that supports learning, collaboration, and innovation.

The pre-organization phase is critical for academic leaders as it involves creating a shared vision and aligning resources effectively. By thoughtfully sorting and classifying inputs, university leaders can better prepare their institutions to meet the diverse needs of students, faculty, and the broader community. This preparatory work lays the groundwork for a positive organizational culture that values inclusivity and academic excellence.

In the operational dimension, academic leaders must implement processes that facilitate teaching, research, and community engagement. This involves establishing clear policies, promoting interdisciplinary collaboration, and ensuring that faculty and staff have the necessary tools and support. Effective operations in universities lead to an enriched academic environment where innovation can thrive, ultimately enhancing the institution's reputation and effectiveness.

The output dimension reflects the success of academic programs, research initiatives, and student outcomes. By focusing on measurable results, leaders in higher education can identify strengths and areas for improvement, fostering a culture of accountability that encourages both faculty and students to aim high. Celebrating achievements and learning from challenges are vital for maintaining momentum and motivation within the academic community.

Lastly, the feedback dimension allows academic leaders to engage in reflection and continuous development. By soliciting input from faculty, staff, and students, university leaders can identify what

strategies work and which do not, making necessary adjustments that align with the institution's mission and values. This ongoing discourse enhances a culture of openness and shared governance, empowering the academic community to contribute to its growth and adaptability.

In summary, the four-dimensional framework serves as a vital tool for academic leaders striving to shape a culture that prioritizes collaboration, innovation, and continuous improvement. By integrating these four dimensions into their leadership practices, university leaders can create an environment that not only meets the current challenges but also anticipates future needs, ultimately leading to the sustained success of the institution.

- 1) Pre-organization: In the first category, due to the importance and repetition of basic concepts such as program development, documents, and values, which are known as inputs, before the start of the culture development process, some mechanisms were placed in the theme titled "Pre-organization". In other words, this category encompasses mechanisms that are essential for the university's relevance and sustainability. Without these mechanisms, the continuation of work processes lacks philosophical and logical justification.
- 2) Operational: In the second category, the content of many mechanisms showed the functional and process aspect of the area of culture shaping. In other words, after preparing the vision and the program, it is time to implement the organizational arrangements and mechanisms developed to advance and realize the shaping of culture and this content was classified as "operational" mechanisms.
- 3) Output: The third category focuses on leadership mechanisms that aim to foster and promote the university's culture within both internal and external public spheres. These mechanisms serve as channels to

communicate the university's vision for cultural development, reaching audiences both within the university community and in the broader community beyond.

4) Feedback: In the fourth category, some leadership mechanisms are primarily applied after the operational stage to address shortcomings and implement necessary reforms to achieve goals. These mechanisms, which include feedback obtained from both internal (intra-organizational) and external (extra-organizational) mechanisms, can be classified as "feedback."

*Combining findings.* At this stage, all the subjects that were classified were revised several times according to the suggested categories. Accordingly, the results of reviewing the texts and sources showed that a total of 136 mechanisms have been mentioned by different researchers for a long time, and many of them share the same content in terms of title or content (see table 3).

**Table 3.**

*Combining similar expressions*

Similar groups	Final Mechanism
<ul style="list-style-type: none"> <li>✓ Understand the social and normative past; (8)</li> <li>✓ Analyzes and probes for the current set of norms, values and beliefs that define the current culture; (8)</li> <li>✓ Understand the values that underlie an organization (21)</li> <li>✓ Align their messages about change with existing or aspirational values. (21)</li> <li>✓ Try to shift values by altering mission statements or using existing symbols or rituals in new ways (21)</li> </ul>	<p><b>Understand the social and normative past &amp; analyzes and probes for the current set of norms, values and beliefs that define the current culture;</b></p>
<ul style="list-style-type: none"> <li>✓ Formal statements of organizational philosophy (10)</li> <li>✓ What leaders pay attention to, measure and control on a regular basis (10)</li> <li>✓ Formal statements and philosophies (1)</li> <li>✓ emphasizing shared goals; (4)</li> </ul>	<p><b>Formal statements of organizational philosophy, mission and vision;</b></p>

<ul style="list-style-type: none"> <li>✓ Mission &amp; vision (9)</li> <li>✓ Establish clear organizational mission and vision (14)</li> </ul>	
<ul style="list-style-type: none"> <li>✓ Formal statements of organizational values and creed (10)</li> <li>✓ Developing a written values statement (17)</li> <li>✓ Clarifying organizational values (9)</li> <li>✓ works with other leaders and the community to define a deeply value-focused picture of the future (8)</li> <li>✓ Articulate shared values (2)</li> <li>✓ Establish clear organizational values (14)</li> </ul>	<b>Developing a written values statement &amp; alternating revision</b>
<ul style="list-style-type: none"> <li>✓ Use values-based leadership (11)</li> <li>✓ Authentic ethical leader (16)</li> <li>✓ Shared leadership structure (18)</li> </ul>	<b>Determine leadership style</b>
<ul style="list-style-type: none"> <li>✓ Establish clear expectations of ethical conduct (11)</li> </ul>	<b>Clear expectations</b>
<ul style="list-style-type: none"> <li>✓ Develop a plan (9)</li> <li>✓ Planning and scheduling (4)</li> </ul>	<b>Develop a plan</b>
<ul style="list-style-type: none"> <li>✓ Staff selection; (3)</li> <li>✓ The selection and recruitment process (7)</li> <li>✓ Personnel Selection Process (20)</li> </ul>	<b>The selection and recruitment process</b>
<ul style="list-style-type: none"> <li>✓ Structure and strategy (7)</li> <li>✓ Organizational design and structure (10)</li> <li>✓ Instatement of organizational structures (12)</li> <li>✓ Matching organizational structure to culture (17)</li> <li>✓ Creating a strategy–culture fit</li> <li>✓ Changes in Institutional Structure (20)</li> <li>✓ The basic organizational structure (1)</li> </ul>	<b>Matching structure &amp; strategy</b>
<ul style="list-style-type: none"> <li>✓ Organizational systems and procedures (10)</li> <li>✓ Instatement of organizational processes</li> <li>✓ Matching HR practices to culture (17)</li> <li>✓ Matching operating policies and practices to culture</li> <li>✓ The administrative and technical systems (1)</li> <li>✓ Bureaucratic mechanisms</li> <li>✓ Decision Making Process and Criteria (20)</li> <li>✓ Administrative Practices (20)</li> <li>✓ Decision making (16)</li> </ul>	<b>Adapting organizational systems and procedures</b>
<ul style="list-style-type: none"> <li>✓ Important Informal Practices</li> <li>✓ Work with the informal network of cultural players (2)</li> </ul>	<b>Create and reinforcement of informal process</b>
<ul style="list-style-type: none"> <li>✓ Observed criteria by which leaders allocate scarce resources (10)</li> <li>✓ Resource allocation (12)</li> <li>✓ Provision of money (4)</li> </ul>	<b>Provision &amp; allocation of resource</b>

✓ Reinforcement and investment in culture on a continuous basis (14)	
<ul style="list-style-type: none"> <li>✓ Apportionment of power (12)</li> <li>✓ collaborative decision-making (4)</li> <li>✓ Sharing of power and responsibilities (4)</li> </ul>	<b>Apportionment of power &amp; responsibilities</b>
<ul style="list-style-type: none"> <li>✓ Socialization (3, 16)</li> <li>✓ Education and Socialization Programs (20)</li> </ul>	<b>Socialization</b>
<ul style="list-style-type: none"> <li>✓ Communication mechanisms (3)</li> <li>✓ Conversations (12)</li> <li>✓ Interacting face-to-face with rank-and-file (17)</li> <li>✓ Direct and frequent communication (4)</li> <li>✓ Information and Communication Process (20)</li> <li>✓ Regular meetings (22)</li> <li>✓ Reducing teacher isolation (4)(19)</li> </ul>	<b>Information &amp; communication mechanisms</b>
<ul style="list-style-type: none"> <li>✓ Agents of Cultural Diffusion (16)</li> <li>✓ Empowering sub-cultures that represent ideal norms (5)</li> </ul>	<b>Create network of cultural players</b>
<ul style="list-style-type: none"> <li>✓ Empowerment (13)</li> <li>✓ Employee engagement and empowerment (15)</li> <li>✓ Training (15)</li> <li>✓ Empowering, supporting, and supervising staff (9)</li> <li>✓ Empowering (18)</li> <li>✓ Staff development (4)</li> </ul>	<b>Employee engagement and empowerment</b>
<ul style="list-style-type: none"> <li>✓ Team orientation (15)</li> <li>✓ Establishing and evolving workgroups (5)</li> <li>✓ Considering effective collaborative system (18)</li> <li>✓ Collaboration (22)</li> </ul>	<b>Team orientation</b>
✓ How leaders react to critical incidents and organizational crises (10)	<b>Crises management</b>
<ul style="list-style-type: none"> <li>✓ The physical setting (7)</li> <li>✓ Affirms values through dress, behavior, attention, routines (8)</li> <li>✓ Design of physical space, facades and buildings (10)</li> <li>✓ Matching work environment design to culture</li> <li>✓ Management and Use of Symbols (20)</li> <li>✓ Using existing symbols or rituals in new ways</li> <li>✓ The physical and appearance (1)</li> <li>✓ Regulation of the Physical Environment (20)</li> </ul>	<b>Matching work environment design &amp; physical setting to culture</b>
<ul style="list-style-type: none"> <li>✓ As a role model (7)</li> <li>✓ Deliberate role modelling, teaching and coaching (10)</li> <li>✓ Leaders as champions (15)</li> <li>✓ Leaders serving as role models (17)</li> </ul>	<b>Leader as a role model</b>

<ul style="list-style-type: none"> <li>✓ Principals and administrative staff must set a good model and replace formal leadership with care and service</li> <li>✓ Principals and administrative staff (19)</li> <li>✓ Role Modeling and Leadership (20)</li> </ul>	
<ul style="list-style-type: none"> <li>✓ Set the example (11)</li> <li>✓ Establish clear organizational values and set the example by themselves (14)</li> </ul>	<b>Set the examples</b>
<ul style="list-style-type: none"> <li>✓ Use of the reward system (7)</li> <li>✓ Observed criteria by which leaders allocate rewards and status (10)</li> <li>✓ Rewards and recognition (15)</li> <li>✓ Aligning reward/incentive system with culture</li> <li>✓ Recognize and reward behaviors that support organizational values (11)</li> </ul>	<b>Use of the reward system;</b>
<ul style="list-style-type: none"> <li>✓ Shapes and is shaped by the school's heroes, rituals, traditions, ceremonies, symbols (8)</li> <li>✓ Uses language to reinforce values and sustains the school's best image of itself (8)</li> <li>✓ Improvises in the school's inevitable dramas, comedies and tragedies (8)</li> <li>✓ Organizational rites and rituals (10)</li> <li>✓ Stories, legends and myths about people and events (10)</li> <li>✓ Celebrating achievements (17)</li> <li>✓ Ceremonies, rituals and traditions (1)</li> <li>✓ The anointing and celebrating heroes and heroines (1)</li> <li>✓ Recreate the history of a school (2)</li> <li>✓ Anoint and celebrate heroes (2)</li> <li>✓ Reinvigorate rituals and ceremonies (2)</li> <li>✓ Tell good stories (2)</li> <li>✓ Change in the values, beliefs, myths and rituals of the organization (21)</li> <li>✓ Stories, myths and sagas (1)</li> <li>✓ use of symbols and ritual by celebrating (4)</li> <li>✓ Use of Stories and Legends (20)</li> <li>✓ Ceremonies and Meetings (20)</li> </ul>	<b>Traditions &amp; ceremonies, Stories, legends and myths about people and events;</b>
<ul style="list-style-type: none"> <li>✓ Creating a climate for change (15)</li> </ul>	<b>Creating &amp; developing a climate for change</b>
<ul style="list-style-type: none"> <li>✓ Commitment (9)</li> </ul>	<b>Make a commitment</b>
<ul style="list-style-type: none"> <li>✓ Trust and trustworthiness (13)</li> </ul>	<b>Building trust</b>
<ul style="list-style-type: none"> <li>✓ Tracking cultural change (15)</li> </ul>	<b>Tracking cultural change</b>

✓ Cultural Internalization (16)	<b>Cultural Internalization</b>
✓ Create a Learning School (20)	<b>Organizational learning</b>
✓ Organizational learning (16)	
✓ Removal of deviating members (3) ✓ Observed criteria by which leaders recruit, select, promote, retire and excommunicate organizational members ✓ Continuous improvement cycle (18)	<b>Continuous improvement cycle</b>
✓ Provide feedback, coaching, and support regarding ethical behavior (11)	<b>Provide feedback, coaching &amp; support regarding valuable behavior</b>
✓ Mentorship (13) ✓ Establish leader training and mentoring (11) ✓ Mentoring (22)	<b>Establish leader training &amp; mentoring</b>

Finally, by combining similar expressions and eliminating duplicates, 33 mechanisms were identified and extracted for leaders in order to shape culture (see table 4).

**Table 4.**

*Re-framing leadership mechanisms for shaping organizational culture*

Dimensions	Sub-dimensions	Mechanisms
<b>Pre-Organization</b>		Understand the social and normative past & analyzes and probes for the current set of norms, values and beliefs that define the current culture;
		Formal statements of organizational philosophy, mission and vision
		Developing a written values statement & alternating revision
		Determine leadership style
		Clear expectations
<b>Operational</b>	<b>Adaptive</b>	Develop a plan
		The selection and recruitment process
		Matching structure & strategy
		Adapting organizational systems and procedures
		Create and reinforcement of informal process
		Provision & allocation of resource
		Apportionment of power & responsibilities
		Socialization

		Information & communication mechanisms
		Create informal network of cultural players
		Employee engagement and empowerment
		Establish leader training & mentoring
		Team orientation
		Crises management
	Motivational	Matching work environment design & physical setting to culture
		Leader as a role model
		Set the examples
		Use of the reward system
		Traditions & ceremonies
		Stories, legends and myths about people and events;
	Defense	Creating & developing a climate for change
		Make a commitment
		Building trust
Output		Organizational learning
		Cultural Internalization
Feedback	Tracking cultural change	
	Continuous improvement cycle	
	Provide feedback, coaching & support regarding valuable behavior	

*Validation of findings.* Having identified and categorized the mechanisms, the next step is to validate the results using a holistic approach that emphasizes the interconnectedness of these mechanisms". Based on this approach, continuous implementation, facilitated by specific mechanisms, serves as a key indicator of the research's validity, as it ensures proper organization and plan development (Cowan, 2002). This is done by early detection and diagnosis of research errors before mistakes can affect and tarnish the data and the results of the research. According to many qualitative researchers, if the researcher follows the principles of the research well, the results of the research will be correct (Nikneshan et al., 2010). Qualitative research naturally has a rotational situation and qualitative researchers, before seeking to draw conclusions, regularly review and revise the information obtained in the research process. This strategy helps the researcher to take corrective measures during the research

process. Confidence in the “sample sufficiency” can ensure the effectiveness and quality of qualitative research, so that it can ensure the access to optimal information and minimize waste (Morse, 1998).

The verification strategy in the present study is the “sample sufficiency”. According to this, the sample includes all the studies provided the best and most information about the subject of the research. In the present study several processes of combined validation optimization have been used. These processes include: consulting with the reference librarian about validity of reference sites and search processes (type of validation: descriptive), consulting with a specialist in meta-synthesis research about research methods and steps (validation type: theoretical), consulting with the custodians of academic culture about keywords and necessary references (type of validation: pragmatic), independent search of resources by at least two reviewers (type of validation: descriptive), independent evaluation of each report by at least two re-evaluators (validation type: descriptive-interpretive).

Finally, to understand leadership mechanisms for developing a culture in the university, in this research, a quad categorization was done in the form of pre-organization, operational, output and feedback aspects. This category can be narrated based on the management research literature. Based on this, cultivating a thriving university culture demands strategic planning and proactive leadership. This journey unfolds in four stages:

1. *Pre-organization*: Analyze current values, beliefs, and cultural highlights to understand your landscape (Schein, 1999). Formulate a clear vision for the desired future culture, translated into specific expectations and regularly updated (Kotter, 2012). Establish a leadership style aligned with this vision to guide the transformation.



2. *Operational*: Develop a structured operational plan and establish mechanisms for adaptation (Nadler & Tushman, 1989). Reform leadership selection, recruitment, and socialization processes to align with new cultural values (Schein, 1990). Design new organizational processes promoting transparency, information sharing, and collaboration (Ashkanasy & Wilderom, 2008). Implement strategies that support and reinforce the adopted values in practice (Cameron & Quinn, 2006). Success hinges on efficient resource allocation, power sharing, fostering informal networks, strengthening internal processes, and developing strong work teams (Katzenbach & Smith, 1999). Leaders serve as crucial role models, influencing cultural development (Yukl, 2013) through their actions and embodying the desired values; leverage successful cultural examples like utilizing storytelling, ceremonies, and traditions to motivate and orient members (Schein, 2010) and implement timely rewards to motivate and reinforce new values (Lawler & Mohrman, 2003); cultivate a positive climate for change through open communication, trust building, and commitment (Kotter & Cohen, 2007); develop crisis management strategies to mitigate potential resistance.

3. *Output*: In this stage, organizational learning has taken place among the members, and the culture has been internalized as a result of this process.

4. *Feedback*: Employ monitoring and improvement cycles provide feedback and track cultural changes (Cameron & Quinn, 2006).

By following this four-stage approach, universities can foster a thriving culture that promotes innovation, collaboration, and student success.

## Discussion and Conclusion

Regardless of the technique used, what is referred to as "academic culture" is always a cohesive network of all the components, elements, beliefs, symbols, assumptions, experiences, and even the presence of university staff and faculty who have played a significant role in its construction. In the end, the public perception of the university will emerge because of the meaningful interactions among these elements and their potential outcomes. This external image will develop over time and have an impact on the university's cultural standing in society. Therefore, universities need to actively regulate their academic culture since they are among the value-oriented institutions in society. In this approach, professional organizations should create meaningful and reciprocal control and coordination systems for meaning management (Dill, 2012).

Based on this, the present research was carried out to look at how leaders shape university culture. In order to achieve this, the ideal mechanisms that university leaders can employ to bring about a desirable culture were examined and extracted from related prior studies. The final mechanisms were then compiled in a four-dimensional framework consisting of pre-organizing, operation, output and feedback dimensions for use in the academic environment. However, it should be remembered that according to what is known as a general rule in decision-making, selecting the best way of action from several options, always necessitates careful consideration of the various dimensions and aspects of a way of action, cost-benefits analysis, passing through its negative points and continuing past its positive points (Jaeger et al. 2013). Therefore, it is important to consider the mechanisms from a practical standpoint in order to have a more complete understanding of them. This means one framework is not

always the best, each framework may be used in a different manner depending on what is most advantageous and compatible in each circumstance. One of the existing frameworks in the literature may adequately address the university's unique circumstances.

The key feature that sets the current study apart from other research in the area of leadership practice to shape culture can be summed up as follows: the research's final framework, is provided in "categories of dimensions and components". This categorization, which has shown the procedures before to, during, and after the leader's performance, offers the framework for making it easier to comprehend and identify the root of potential issues with culture-shaping. For instance, there have been instances in the university where the leader's performance in the "pre-organizer" dimension has been favorable, the vision and missions and the definition of the concepts of culture have been properly presented, the correct leadership style has been identified, and the expectations have been clearly defined, but the process of adaptation of structure and strategy or socialization, has not been implemented well. Using the thought-out framework in this situation, it is feasible to pinpoint the primary cause of the issue and find a solution without upsetting or changing other components or reworking them. Only the studies by Schein (2004) and Lussier and Achua (2015) show a "categorized" feature congruent with the current study.

The current study's utilization of a meta-synthesis method is another distinction from similar studies. From a theoretical perspective, the present study has gathered and compiled all of the materials that have been made public (so far) in the literature. This provides a good basis on which other scholars working in the area of leadership and culture might build a cultural action model for university leaders.

Additionally, the accumulation of these elements demonstrates that culture is formed by a variety of methods that go beyond one or two straightforward modifications and that each of these elements must exist for culture to exist. The 22 studies examined in this research, each the product of extensive efforts by researchers, have emphasized different aspects of the leadership mechanisms for shaping culture. Nevertheless, the combination of these mechanisms undoubtedly enhances the performance and experience of earlier researchers.

The comparison of the measured criteria, in the end, reveals the similarities and differences between the present study and studies of relevant research backgrounds. However, discussing theories, models, and frameworks is pointless until they are put into action in the actual world and their advantages and disadvantages are examined. The most comprehensive theories may not provide the greatest solution in a given circumstance, while the most basic and inconsequential subjects often work best in actual situations.

It is important to note some limitations that impacted this research: the lack of extensive engagement from qualitative researchers in this specific topic, particularly in academic and higher education environments, has led to a shortage of studies reviewed in this field. Additionally, the existence of varying definitions of the concept of leadership mechanisms across different studies inevitably forced researchers to exclude many identified studies. Furthermore, the absence of clearly defined criteria in qualitative research for retaining or discarding a research work from the research process has resulted in inconsistencies in research methodologies.

Therefore, it is recommended that future research, at the theoretical stage, actively engage academic leaders and experts by presenting the study's framework and final components for their evaluation of the

research's validity and viability. This collaboration will ensure a comprehensive understanding and practical relevance of the proposed framework. On the operational side, it is crucial to clearly outline implementation requirements, establish actionable steps, and conduct thorough condition analyses that consider input resources, potential barriers, risks, and opportunities for each mechanism. Furthermore, a wide array of studies should be pursued to uncover unseen influences on academic culture among university students. This includes evaluating the long-term effectiveness of higher education cultural programs in the context of ongoing societal changes and developing a cohesive framework for cultural strategy that aligns with each university's distinct cultural documentation. Emphasizing honesty, transparency, and effective communication throughout these processes will significantly enhance the quality and impact of the research initiatives.

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