Research Article

Developing a Winning Culture in Autonomous Indian Engineering Institutions

Thanikachalam Vedhathiri[1]

1. Former Professor and Head of the Center for International Affairs, National Institute of Technical Teachers Training and Research (NITTTR), Chennai, India

The twenty-first century offers excellent opportunities for engineering institutions to grow. These opportunities demand an appropriate culture to facilitate the institute faculty members and develop them to offer cutting-edge programs. Many institutes suffer from a want of an appropriate winning culture. The objectives of this research are to assess the harms created by toxic leaders in distorting the academic culture, to explore methods to eradicate toxic leaders' actions, to suggest needed winning cultures to facilitate institutional growth, and to identify strategies to institutionalize the winning culture. 1253 faculty members were purposely selected for this research. The twenty-first century offers more opportunities for engineering colleges to develop interdisciplinary programs, offer consultancy projects, undertake sponsored research projects, and provide excellent jobs for graduates. Methods to eradicate the actions and distorted cultures created by toxic leaders were explored. Based on the literature survey, existing cultural models of corporates were identified. Significant cultural models of world-class universities were identified. The harm created by toxic leaders was identified. Appropriate methods to eradicate the actions and distorted cultures created by toxic leaders were synthesized. A needed culture for creating and maintaining high-performance research teams was recommended. A model for a desired set of academic cultures was developed. The model was validated through three engineering institutions and found to be satisfactory. Shortcomings of this research have been identified. Suggestions for further research on engineering culture have been indicated.

Corresponding author: Thanikachalam Vedhathiri, vthani2025@gmail.com

1. Introduction

The twenty-first century offers more global challenges to all fast-developing countries to lead the human capital through their universities. They have to enhance the culture of the institutions so that their faculty can undertake cutting-edge research and development programs to meet the challenges of disruptive technologies. A large number of Indian engineering colleges struggle to achieve their planned goals, unable to offer consultancy services to various stakeholders, develop outstanding graduates, scaffold outstanding faculty teams, and improve their reputation even though they have excellent resources and funds. The chief executive officers, like principals, directors, and deans, focus their attention on their growth only. They fail to recruit diverse faculty members, delegate needed autonomy to plan cutting-edge programs, develop interdisciplinary research schemes, and fail to ensure equity. They usually never share more important communications from the Ministry of Education with the faculty members and never establish an in-house faculty development center for continuous learning and development. They have not supported a collaborative environment to bid for consultancy projects under various international development agencies (IDAs). Further, they fail to conduct academic audits on various programs and projects to assess the problems faced by the faculty members. A balanced engineering culture is important in creating product innovation, fostering the career development of faculty teams, serving various stakeholders like industries, government engineering departments, private industries, international development agencies (IDAs), micro, small, and medium enterprises (MSMEs), attracting outstanding faculty members, and offering development programs for diverse global faculty members under various international development agencies (IDAs). Hence, these institutes have not built a winning engineering culture that will assist product innovation, attract and retain outstanding faculty teams, and provide effective and efficient services to improve quality, energy efficiency, and the environment with long-lasting pollution-free products.

1.1. Growth of Toxic Leadership Impedes Winning Culture

Instead of focusing on innovations, racial discrimination grows in many autonomous higher education institutes due to the following reasons: selection of low-quality chief executive officers who convert the institutes into their limited liability companies (LLCs), focused only on their self-growth, never focused on the legitimate mission, created an informal organization to protect themselves, supported the unqualified coteries, obstructed the performance of outstanding faculty teams through

industry-relevant graduate and postgraduate programs, controlling all important communications from the Ministry of Education, minimizing the allocation of funds even though the Board approved them based on strategic planning submitted by the departments, never allowed the faculty to establish interdisciplinary research and development programs, ignored the needed growth of budding faculty members, stopped all bidding processes for projects under various International Development Agencies (IDAs), and handing over the letters of invitations to unrelated external organizations.

1.2. Impact of Discrimination

Discrimination is due to the improper selection of chief executives who did not possess the minimum qualification expertise to lead the faculty members. Further, they failed to consult the high-performing and the most dedicated faculty members. When the growth of discrimination was not controlled, the return on investments (ROI) was reduced to a large extent. Best-performing faculty turnover increased, and the modern facilities were not used for new interdisciplinary programs and consultancy projects. The graduate students could not get well-paying jobs. The regional competitiveness decreases. Rebuilding the programs and improving the skills and abilities of the graduates decrease. Meanwhile, many competitors grow, and they attract faculty members. Best students are also discarded by the institute.

1.3. Commitment to Sustain Focus on Cultural Detox

A cultural detox is a process where leaders can drastically improve employees' experience and minimize unwanted attrition, disengagement, and other costs associated with a toxic workplace (Donald Sull and Charles Sull, 2022)[1]. Even though many laws were enacted, senior leaders lost focus on cultural change. Distributed leaders shape healthy microcultures, and they need coaches on nontoxic behavior. Make behavioral expectations crystal clear. Organizations have to establish healthy social norms. Allow high-performing faculty teams to define their social norms. Redesign work to reduce stress. Reduce nuisance work. Clarify job descriptions and responsibilities. Give employees more control over their work.

1.4. Engineering Institute's Culture

According to Stan Klimoff (2023) [2], an engineering institute's culture heralds educational leaders, chairpersons, faculty members, and students. Most of the engineering institutions, like national

institutes of technology, institutes of national importance, state technical universities, and autonomous institutes, are driven by engineering culture to create the best human and knowledge capital. He identified the following values to ensure an ideal engineering culture: Openness, motivation and morale, creativity, academic autonomy, decentralized environment, trust, and accountability. Next is continuous transformation to meet the challenges due to vulnerability, uncertainty, complexity, and ambiguity. Initially, most of the institutes are established as small-scale training institutes; then, based on continuous learning and expansion of resources, new goals are added. After mastering the needed abilities, these institutes are upgraded into national institutes.

1.5. Building a Winning Engineering Culture

According to Michael Mankina (2023) [3], the best-performing companies typically display the following set of performance attributes that align with the company's strategy and reinforce employee behaviors: 1. Honest, 2. Performance-focused, 3. Accountable and owner-like, 4. Collaborative, 5. Agile and adaptive, 6. Innovative, and 7. Oriented toward winning. According to Michael, culture plays a vital role in performance as an explicit output and fosters an environment that is conducive to generating the best possible results not just for employees, but for customers, suppliers, and, yes, even stakeholders. Paul Meekan (2008) explored what holds an organization together and motivates the employees within it to do the right thing rather than the easy thing. Their answer, for many top-performing companies, is cultural values, mindsets, and behaviors that constitute an environment conducive to success. According to them, a winning culture has two defining characteristics: 1. A unique personality and soul based on shared values and heritage; 2. Cultural norms and behaviors that translate the organization's unique personality and soul into customer-focused actions and bottom-line results. Companies with winning cultures are better able to execute on strategy; their employees think and act like owners-they take personal responsibility for overall business performance, not just a slice of it. According to them, companies that create and sustain winning cultures tend to implement the following key steps: 1. Perform a culture audit and set new expectations; 2. Align the team; 3. Focus on results and build accountability; 4. Manage the drivers of culture; 5. Communicate and celebrate. This is a promising approach for building a needed culture in engineering colleges.

Anna Dziuba [4] stated that industry leaders who outperform their rivals live in their robust engineering culture, a factor that drives daily operations, nurtures innovation, and encourages

collaboration. According to her, engineering culture is a vital necessity that defines the ethos of successful organizations. It helps administrators build an environment that fosters creativity, where ideas are born and nourished to maturity, and where teamwork is organically cultivated. A strong engineering culture creates product innovation and attracts and retains talent. A good engineering culture consists of open communication, regular feedback, lifelong learning and development, autonomy and ownership, a collaborative environment, adaptability, no discrimination, rewarding of the best performers, and scaffolding the faculty teams whenever they need the administrator's support. Establishing clear goals and smart objectives creates a path for progress. Further, the institute leaders have to develop a vision statement through the active participation of faculty members and staff.

1.6. Plan to End Toxic Workplaces in Higher Education

Richard Orbe-Austin (2023)[5] stated that besides damaging faculty health, toxic workplaces are detrimental to faculty retention and long-term satisfaction, so colleges must rid themselves of such toxic cultures. He suggested the following interventions: 1. Center diversity, equity, and inclusion as part of the institution's strategic plan; 2. Provide consistent, quality coaching and training for directors and chairpersons; 3. Have zero tolerance for forms of bias, discrimination, bullying, sexual harassment, and coercive tactics, and prioritize psychological safety; 4. End the notion of "doing more with less"; 5. Normalize self-care; 6. Stop the "we are a family" paradigm; 7. Outline a clear career development path for all faculty members and provide consistent feedback about performance; 8. Encourage healthy boundaries; 9. Truly collaborate with faculty members to create a new, innovative vision of the workplace; 10. Normalize joy and kindness in the workplace. These suggestions will enable leaders to integrate a winning institutional culture. Lilly Abdulrahman Mohamed (2021) explored strategies to resolve toxic leadership that impedes employee innovation. According to her, toxic leaders mismanage, threaten, and discourage employees from sharing their ideas, causing a decline in innovation. She suggested incorporating open and transparent communication, sustained counseling and training, teamwork, joint decision-making, and incentive and review frameworks. She recommended the use of sustained counseling and training to resolve toxic leadership styles. According to her, the implications for positive social change include the potential to improve the well-being and creativity of employees and favor the creation of innovative products and services.

1.7. Creating a Culture of Continuous Development

WikiJob published an article on how to create a culture of continuous improvement. Concerning higher education, the institutions that continue to thrive across the globe are those that adopt a culture of continuous improvement. Continuous improvement is the ongoing development of an institute's development process, new courses, interdisciplinary programs and research projects, graduates, researchers, consultancy services, leadership style, and often how the faculty members and technical support staff are treated. A culture of continuous development seeks to promote development throughout the entire human resources, a key factor of which is improvement from the bottom up. Where an institute's decision-making process is top-heavy and management-led, the resulting feeling of powerlessness generally felt by the faculty members can result in negative work that does not fulfill its productivity potential. Seeking to improve an institution through the combined effort and ideas of entire faculty members, regardless of their role or level of seniority, has come to be recognized as an effective way to create a sustainable development process of human capital which contributes to knowledge capital. Their acceptance of ideas from all faculty members, not just those in leadership roles, has been shown to improve faculty engagement and generally create a positive work culture.

1.8. The Outcome of Continuous Culture Improvement

- Continuous improvement not only helps institutions that adopt it into their culture but also the faculty members who work for them.
- Institutions that adopt a continuous improvement culture are likely to have a competitive edge over other institutions in the country/world as their entire faculty members seek to improve their educational programs, interdisciplinary research works, consultancy projects under the international development agencies, implementing sponsored research projects, but not simply their management.
- Empowering Faculty Members: A culture of continuous improvement promotes knowledge and human capital. It also helps the administrators discover talented faculty members within the institute who may be suitable for promotion and leadership roles.
- A culture of continuous improvement includes the faculty members in the development of services and products.

- Increases Creative Problem-Solving: In continuous improvement, faculty members are invited to find a way to solve complex academic problems such as developing outcome-based interdisciplinary postgraduate programs, and bidding for consultancy projects under multinational companies (MNCs) and international development agencies (IDAs).

1.9. Synthesis of Findings of Various Researchers

The following are some of the significant findings/suggestions made by the researchers:

- The growth of toxic leadership impedes the winning culture of engineering institutions
- Discrimination destroys the achievement motivation of well-performing faculty members
- Engineering culture focuses on the continuous growth of faculty teams, improving the resources, planning needed industry-specific curricula at graduate, postgraduate, and doctoral levels, undertaking consultancy projects from various national and international agencies, assisting the graduates to become industry-ready with needed skills, cognitive abilities, attitudes, continuously developing the faculty members and sharing the project gains, and improving the return on investments and continuously getting recognized by all stakeholders.
- All the global engineering institutions have established a continuous focus on the needed culture.
- The outcome of the excellent culture enabled not only their reputation but also supplemented the growth of the economy
- Without the needed culture, the investments in capacity development will not enable the institutions to achieve their mission.

It is observed that excellent institutional culture plays a major role in planning and implementing outstanding programs, offering needed cognitive services to all stakeholders, and getting recognized for creating human capital. The board of governors or trustees approves the development based on the culture.

2. Existing Cultural Models of Corporates

The following seven cultural models of industrial corporations have been chosen for synthesis:

2.1. Spotify Model [6]

Spotify Model focuses on nurturing an engineering culture that puts community and trust over hierarchy. It provides a high level of autonomy and freedom to organize the faculty members' academic tasks, like planning innovative and interdisciplinary programs and projects, in the way the project team sees fit. Autonomy is challenging with added accountability and responsibility. In the project teams, there are many groups like the technical proposal team, financial proposal team, negotiation team, contract draft preparation team, training video production team, print materials development teams, multimedia learning package development team, accounting team, training the trainers team, training packages evaluation and improvement team, billing and reconciliation team, project completion report preparation team, and preparing the proposal for sharing the project gains.

2.2. Schein Three-Level Corporate Culture Model [6]

Schein's model of culture provides an in-depth analysis of institutional culture by dividing it into three interlinked levels.

Level	Focus	Conflicts
Artifacts	Visible aspects of the corporate culture. Include things like rituals, symbols, business practices, and the visible institutional structure.	Ambiguous and misleading; can be manipulated to give a desired impression.
Espoused Values	Values and norms that are officially propagated by the institution. Set out in mission statements. Ideas and principles that the institute claims to follow.	The discrepancy between espoused values & actual values.
Basic Assumptions	The deepest and most difficult level to grasp is deeply rooted, often unconscious beliefs and values that significantly influence the behavior of employees in the institution.	Hierarchy, command, and obedience are seen as the only acceptable values in the institution.

Table 1. Schein Three-Level Corporate Model

2.3. Greet Hofstede's Cultural Dimensions [6]

These provide a framework for examining cultural differences and their impact on institutions and societies.

Dimension	Contributions to Cultural Identity	Desired Actions in Educational Institutions
Power Distance	Describes the extent to which a culture accepts inequality and power differences. In cultures with high power distance, there is a strong hierarchy and subordinates are expected to show respect and obedience to superiors. In cultures with low power distance, hierarchies are flatter, and communication between employees and superiors is more open.	Newly recruited faculty should not face low respect. Entry-level faculty members are not to be discriminated.
Individualism Vs Collectivism	In individualistic cultures, the emphasis is on freedom, self-responsibility, and individual achievement. Collective cultures emphasize community, family ties, and cooperation.	Individualistic culture is more needed in higher education. Collective culture is useful for newly recruited and inexperienced faculty members.
Masculinity Vs Femininity	Masculine cultures are characterized by emphasized differences between the sexes, competition, and striving for success.	In educational institutes, equal respect has to be given to both sexes.
Uncertainty Avoidance	Refers to a culture's ability to tolerate uncertainty and change. In cultures with uncertainty avoidance, there are strict rules, a low tolerance for avoidance, and the acceptance of uncertainty and change is higher.	In higher education, institutions should have more ability to tolerate uncertainty and fast change in disruptive technology.
Long-term Orientation Vs Short-term Orientation	Long-term-oriented cultures focus on thrift, perseverance, and the fulfillment of future goals. Short-term-oriented cultures place more value on traditions, immediate rewards, and maintaining the status quo.	For investments in interdisciplinary research and the offering of consultancy to various organizations, a long-term-oriented culture will be needed in higher education.

Dimension	Contributions to Cultural Identity	Desired Actions in Educational Institutions
Indulgence Vs Restraint	Describes a culture's relationship to indulgence and self-control.	Educational institutions should have high self-control, self-discipline, and restraint.

Table 2. Geert Hofstede's Cultural Dimensions

2.4. Denison's Organizational Culture Model [6]

Provides a useful structure for analyzing and improving the institute's culture.

Dimension	Description	Desired Actions in Educational Institutions
Mission	It represents the overarching goal and vision of the institute. The mission must be clear and inspiring, as it sets the direction and motivates faculty members.	Vision, mission, and goals are very essential for the institute's transformation.
Consistency	Refers to the unity and clarity of values and practices within an institute.	It is required in education.
Participation	It deals with the extent to which employees are involved in decision-making processes.	In educational institutions, academic councils and project-specific meetings involve all the faculty members.
Customization	Adaptability is of crucial importance as it describes the institute's ability to manage change and adapt to new circumstances.	Educational institutions should respond to new opportunities and challenges. This demands the promotion of a learning and innovation climate.

Table 3. Denison's Organizational Culture Model

2.5. Cameron and Quinn's Competing Values Framework [6]

This is a powerful model for analyzing institutional culture and consists of four main cultures.

Culture	Description	In Educational Institutions
Clan Culture	It emphasizes collaboration and teamwork. Employees are often connected to each culture, and they are connected like a family. In this clan culture, the development of common values and relationships, and the sharing of knowledge are forefront. Value is placed on maintaining relationships and faculty members' satisfaction.	This clan culture is very much needed in higher education institutions. The faculty members have to be connected to develop innovative and interdisciplinary graduate and postgraduate programs. Teamwork is welcomed.
Adhocracy Culture	This is an innovative culture, flexible and experimental. It promotes creativity and openness to change. In this culture, faculty members are encouraged to develop new ideas and take risks.	This culture is very much suited for higher education institutions. Every faculty member has to be encouraged to undertake sponsored consultancy and research projects.
Hierarchy Culture	This culture emphasizes control, efficiency, and clear structures. In this culture, there are clear hierarchies, processes, and responsibilities.	The focus is on efficiency and results orientation. Best-performing senior faculty members can undertake supportive leadership.
Market Culture	This is comprehensive and results-oriented. The focus here is on competition, achieving goals, and maximizing economic success.	This culture promotes faculty performance, a focus on goals, and a willingness to operate in a competitive global market. Faculty members are encouraged to deliver outstanding performance in knowledge and human capital development.

Table 4. Cameron and Quinn's Competing Values Framework

2.6. Handy's Cultural Types[6]

Culture	Description	In Educational Institutions
Administrative Culture	It is made from the top down and the emphasis is asserting authority and control.	Faculty members are controlled by administrative authorities.
Task Culture	Focuses on task, efficiency, and goal orientation. Employees are trained to complete the tasks effectively.	This is an emphatically institutional environment to focus on various academic tasks to complete tasks effectively and efficiently.
Personal Culture	This focuses on the needs and satisfaction of employees. Full importance is placed on the relationships between the management and faculty members.	Faculty members in a people culture are often part of a close-knit community in which personal needs and social interaction play an important role.
Role Culture	This emphasizes compliance with rules and procedures.	Institutions follow a clear set of rules. Faculty members are guided by their specific tasks and functions.

Table 5. Handy's Cultural Types

2.7. Iceberg Model [6]

The iceberg model emphasizes that institutes have to develop a healthy and effective culture to address both visible and invisible cultures. A positive institute culture should promote faculty members' job satisfaction, academic performance, and ultimately the success of the institution.

Elements	Description	In Educational Institutions
Visible Elements	These are easily recognizable such as the institute's missions, values, symbols, rituals, and the way employees dress or how the office is designed.	All the institutions display their vision, mission, goals, and objectives. A few institutions of national importance provide a handbook to all faculty members and conduct an orientation course.
Invisible Elements	These include the deeply rooted beliefs, values, norms, and assumptions that shape the behavior of faculty and the decision-making processes in the institution.	Many institutes move to develop new interdisciplinary programs and research courses. They look for more cutting-edge programs.

Table 6. Iceberg Model

3. Significant Cultural Models Of World-Class Universities

The following six cultural models of world-class universities have been chosen for synthesis:

3.1. Harvard University's Model Program for Recognition of Faculty [7]

This suggests "cultivating a culture of appreciation." Their principles: " Cultivating a culture of appreciation—knowing your faculty members, and being generally appreciative—is important. We all appreciate when others recognize our contributions and achievements. As managers, our recognition lets faculty members know that we care about creating an environment where faculty members feel appreciated for their contributions and their accomplishments. Through recognition, we also build a culture that attracts and retains the best talent."

3.2. Ohio State University's (OSU) "Principles for Faculty Reward Systems in a High-Performance Academic Culture" [8]

It describes the university's focus on developing all aspects of a high-performing culture in which outstanding achievements are aligned with carefully guided decisions about resource allocations. This university follows a dynamic process that involves continuous coaching in which guidance is provided, and linkages between performance and resource availability are constantly clarified.

3.3. Significant Guiding Principles for High Performance are:

- OSU is committed to developing policies guiding faculty reward systems that are clear and equitable.
- Annual performance appraisals involving a written/face-to-face interaction are essential; without such actions, the connections between contributions and reward distributions will be murky and subject to inaccurate assumptions.
- Research achievements should weigh the most heavily.
- Acknowledge greater contributions to teaching and service missions.
- Develop an explicit agreement with each faculty member on their achievements in a given year.
- They should achieve the mission of the department, school, and university.

3.4. Stanford University's Retention Strategies [9]

- Departments, schools, and the university should provide appropriate support and recognition of individual faculty members.
- Outstanding performance should be recognized through salary and other forms of compensation and, as appropriate, through opportunities for leadership or initiatives of special interest to the faculty member and institution.
- Schools should reward faculty members appropriately for their productivity and contributions regardless of their mobility or their interest in pursuing outside offers.
- Schools should strive to ensure that professors feel appropriately valued and to dispel perceptions that outside offers are the only way to gain rewards.
- Among the factors that contribute to the advancement and retention of faculty is a climate within the department, school, and university as a whole that is collegial, values, and supports the professional development of faculty, and respects the contributions of each member.
- Unique program: "Award-Winning Teachers on Teaching", which invites faculty winners of Stanford's major teaching awards to deliver a lecture on a teaching topic of their choice.

3.5. University of Alabama (UAB)– Birmingham, USA [10]

Goal: "Recognizing Faculty for their contribution to the areas of teaching, research, and service is an important part of UAB's Culture"

Significant Awards of UAB:

- Presidents Awards for Excellence in Teaching

- Caroline P. & Charles W. Ireland Prize for Scholarly Distinction

- Odessa Woolfolk Community Service Award

- 2013 Elen Gregg Ingalls/UAB National Alumni Society Award for Lifetime Achievement in Teaching

- Distinguished Faculty Lecturer Award

3.6. Strategies for Improving Faculty Morale and Improving Performance

- Transparency and equity in the merit review process

- Recognitions for outstanding contributions to research, interdisciplinary program development, and services like offering consultancy projects under international development agencies and multinational companies

- Welcoming active participation in Academic Council and Board Meetings

- Scaffolding to plan international conferences

- Approving to undergo internships at various international universities when the faculty members have been selected.

- Support to offer diverse global faculty development.

- Undertaking sponsored research projects through a consortium.

- Offering guidance to various institutions to prepare detailed project proposals for capacity development, quality improvement, and efficiency improvement.

- Creating an academic environment for establishing a printing unit.

- Providing funds to start a unit to develop multimedia learning materials packages.

3.7. Synthesis

Most well-performing global universities focus on excellence in research, teaching, and services. They recognize the best-performing faculty members and reward their heroes. They continuously concentrate on developing all aspects of a high-performing culture regarding resource allocations.

3.8. Culture of Excellence [11]

Most of the vice-chancellors, directors, deans, principals want immediate results, accelerated performance, and lasting change. However, many leadership, institutional culture, and faculty

training and development programs produce only short-term gains that fade away as faculty members go back to their old habits. The key to moving an institution from mediocre to a state of excellence requires a fundamental shift in the institute's culture. When leaders build an institute's culture of excellence, they have to create a culture of excellence, they have to improve institutional capacity, and a structure that empowers, focuses, and engages faculty members. Further, they have to equip the faculty teams with the right mindset and cognitive abilities, motor skills, and attitudes to achieve excellent results.

3.9. Key Characteristics of a Culture of Excellence

1. A Compelling Institutional Vision that is Communicated to all Faculty Members and Understood.
2. Clear Purpose and Meaning.
3. Mastery of Tasks and Focus on High-Performing Faculty Members.
4. Resilience to Change and Challenges.
5. Highly Collaborative Faculty Teams.
6. Achievement Mentality.

3.10. Expected Bottom-Line Results

1. Significantly improved engagement, alignment, and team collaboration.
2. Committed and engaged faculty members working toward common goals.
3. Loyalty and commitment to the vision and values of the institution.
4. Faculty members who are happy and proud to be part of something "Big" that they are creating together.
5. More satisfied clients that keep on coming back.
6. Increased efficiencies and productivity.
7. Overall improvements in productivity and market share.

4. Statement of The Problem

"Most of the developing countries have globalized their economy, and a substantial number of multinational companies (MNCs) have established their design and manufacturing centers in these countries. They look for the best-talented graduates who can create innovative products through analysis, design, development of prototypes, testing, improvement of the quality, manufacturing,

export to foreign countries, and maintaining the products. *This calls for a faculty members-specific culture, an environment free of toxic leadership, and continuous focus on the growth of outstanding programs and projects, a culture that promotes excellence in developing interdisciplinary graduate and doctoral programs, and offering diverse global faculty development, and enhanced abilities of the faculty members to undertake sponsored research development projects. All of these centers around the institutional culture".*

This research work focuses on the deficiencies in the existing culture and suggests a needed engineering culture that will scaffold the faculty teams to reach excellence.

4.1. Objectives of Research

1. Assess the harms created by the toxic leaders in distorting the academic culture of autonomous engineering institutions in India that implemented institutional development projects under various international development agencies.

2. Explore appropriate methods to eradicate the toxic leaders' actions on cultural distortions that prevented the radical growth of knowledge capital and human capital.

3. Suggest a set of needed winning engineering cultures to facilitate institutional growth to meet the challenges of many disruptive technologies.

4. Identify a set of strategies to institutionalize the winning culture in autonomous Indian engineering institutions to facilitate their radical growth to contribute to the growth of innovative products.

4.2. Research Methodology

Invited 1253 senior faculty members of various project institutions who implemented capacity development, quality improvements, and efficiency improvement under various externally funded projects. Conducted open face-to-face discussions on the prevailing academic culture, its impact on the growth of programs, interdisciplinary research, additions to emerging technology, and how they obstruct the attributes of graduates and their employment.

4.3. Demography of the Participants

Male 780		Female 473		Qualification				Teaching Experience		
Institution		Institution		Engineering				Years		
University	Autonomy	Univ.	Auton.	Ph.D.		Masters		<5 years	5-10 years	>10 years
273 35%	507 65%	121 25.58%	352 74.42%	406 Male	91 Female	374 Male	382 Female	Male 401 Female 214	Male 273 Female 196	Male 106 Female 63
Urban 432 55.38%	Rural 348 44.62%	Urban 142 30.02%	Rural 331 69.98%	52.21%	19.24%	47.79%	80.76%	M:51.41% F:45.24%	M:35% F:41.44%	M:13.59% F:3.31%

Table 5. Gender-wise Distribution

Institution		Qualification		Teaching Experience		
University	Autonomous	Ph.D.	Masters	<5 Y	5-10Y	>10Y
31.44%	68.56%	39.66%	60.34%	49.08%	37.43%	13.49%

Table 2. Demography [Total Distribution]

The members were requested to identify cultural issues through quality circle meetings. The following cultural issues identified by them are presented in the following sections:

1. How to assess the harms created by toxic leaders in distorting the academic culture of autonomous institutions in India?

2. What are the possible methods to eradicate the actions and distorted cultures created by toxic leaders?

3. What are the needed academic cultures to facilitate institutional growth?

4. Who embodies a globally minded leadership quality?

5. What are the shortcomings of cultural development?

6. What is the impact of a dysfunctional culture?

7. What are the desired initiatives of internal leaders?

8. How do we build a new culture of excellence?

9. What are the key characteristics of a culture of excellence?

10. How can we initiate an institutional cultural change?

11. What are the key performance indicators in an engineering institute?

12. Identify the needed culture for creating and maintaining high-performance research teams in an engineering institution.

Based on an open open-thinking process, the stated issues are focused and possible creative actions are listed in the following sections that are based on the jugement.

4.4. Assess the harm created by toxic leaders in distorting the academic culture of autonomous institutions in India

The following harms were identified by various faculty members of the engineering colleges and polytechnic colleges:

- Not providing the needed period to join the college but ordered to join immediately
- Withdrawing the advance increments offered based on the years of service and accomplishments
- Informing the selection committee experts not to select highly qualified and achievement-oriented candidates
- Not approving the best candidates to join an international university as interns when there is no financial comment
- Not permitting the best-selected candidate to join a midterm faculty development program under a bilateral agreement

- Reducing the salary that was prescribed by the government
- Withholding the accomplishments, rewards, and recognitions received by the best candidate in the comparative statement to be placed before the high-power selection committee
- Not reimbursing legitimate travel expenditures incurred on official trips
- Not granting a legitimate share of the project gains as per the rules and standards
- Not communicating the letters of invitation to bid for the projects under multinational companies and international development agencies
- Delaying the consultative meeting to negotiate with the project managers of development projects
- Offloading the letters of invitations to external organizations
- Overloading teaching work beyond the limits prescribed by the national councils and commissions
- Not permitted to avail the leave
- Not recruiting faculty as per the norms
- Demanding bribes for selection
- Not forwarding the application for selection for a foreign technical working group meeting
- Not submitting the duly prepared proposal for implementing a summer school for nonresident graduates
- Not forwarding the diverse faculty development proposal to the coordinator of international programs
- Compelling to include external persons in the ongoing global projects
- Preparing bills for unrelated travel expenditures and compelling for payment
- Preparing double travel bills for one legitimate travel made
- Compelling to include his name in all research publications where he never contributed
- Not paying the contingency bills for the research project completed as per law
- Not permitting the outstation research scholars to stay in the students' hostel during public viva voce.
- Not signing the half-yearly progress reports of the research scholars
- Not permitting the conduct of public viva voce in the institute
- Not approving the constitution of doctoral committee members who have been approved by him

All these are some of the significant harms created by toxic leaders.

4.5. Methods to Eradicate the Actions and Distorted Cultures Created by Toxic Leaders

The Board of Governors has to constitute a standing committee to get quarterly feedback on the impact of ongoing decisions made by the academic leaders, the improvements in institutional performance, and the effectiveness of the policies and their relatedness to embedded culture. If bad culture obstructs the growth and performance of the faculty members and the graduates, the Board has to intervene and prescribe an appropriate cultural policy based on the growth-oriented mission. It can provide a guideline document for making decisions on approving the policies, distributing funds to the departments, approving the faculty members' deputation to overseas programs, bidding for consultancy projects under various international development agencies (IDAs), or offering diverse global faculty development programs that are funded by various government departments and IDAs. Don't reemploy the toxic leaders once their tenure is over. For further recruitment, assess the outstanding performance of the candidates, their achievements and intrinsic motivation, vision, attitude, mental health, and supportive leadership. Select the leaders who have hands-on experience on complex projects. Focus on creative talents.

4.6. Set of Needed Academic Cultures to Facilitate Institutional Growth

Academic leaders should focus on innovation in every planned academic activity and counsel, coach, and mentor the chairpersons/heads of departments, recognize the promising innovations in the interdisciplinary and industry-specific programs and research projects, prepare project proposals for getting research grants, and bid for consultancy projects under MNCs and IDAs. They have to review every proposal and suggest improvements wherever needed and also invite external experts to provide additional guidelines. The leaders have to identify a set of project-related innovations and suggest the faculty teams try and innovate through an alternative development process. Any failure should be audited, and remedial measures could be suggested and approved. Additional external assistance can be offered.

4.7. Globally Minded Leadership: A Cultural Approach for Leading Engineering Institutions

In this 21st century, all advanced nations open their doors to select the best candidates irrespective of nationality who can immensely contribute to many innovations. They focus on diversity and solving complex problems through a new cultural focus. Most of the graduate students go with their culture to

solve the problems from different perspectives. The culture enables them to visualize the problem from different angles.

4.8. Shortcomings of Cultural Development

Many institutes suffer from the following shortcomings:

- Shortage of team-building activities.
- Improper training of the graduates in cognitive abilities and skill development.
- Weak connection between culture and skills training.
- No focus on a culture-first approach to leadership coaching.
- Reaction and problem-solving are not the right strategies for change.
- Develop proactive skills in problem-solving.
- Not focusing on engaging every faculty at the core.
- Faculty members slip back into their old habits.
- Weak connection between the industry and academic departments
- Limited research proposals to get project grants

4.9. The Impact of a Dysfunctional Culture

The following are some of the significant impacts of a dysfunctional culture

- Drive the best talent away.
- No support for high-performing faculty teams.
- Not empowering to attract and retain a well-accomplished team.
- Not helping faculty members develop flexibility and resilience to deal with change, challenge, and uncertainty.
- Not ready to learn, absorb, and retain new abilities and skills.
- Not staying focused on institutional goals.

4.10. Desired Initiatives of Internal Leadership

The following are a few initiatives:

- Start practical coaching for excellent skills to sustain the momentum over the long term.

- Improve the coaching capacity through in-house faculty development programs and deputation to international universities under bilateral agreements.
- Decentralization for undertaking diverse global faculty development
- Creating desired linkages with International Development Agencies

4.11. Building a New Culture of Excellence

This consists of the following three kinds of excellence:

4.11.1. Mindset of Excellence

- This will drive a performance institution.
- Will engage and align every faculty member with the vision, mission, and values of the institute.
- Encourage them to plan excellence that will assist in capacity building for growth.
- Encourage them to become creative and innovative.
- Assist them in developing tolerance.
- Scaffold them to move forward and overcome challenges and disruptions.

4.11.2. Strategies for Excellence

- Keep the mindset of excellence.
- Guide them to focus on achieving their specific goals and plans for performance excellence.
- Support to build the cognitive abilities and competencies required to build the institute.

4.11.3. Sustaining Excellence

- Have a strong collective mindset of excellence in the institute and alignment with performance goals, and the skills and competence required to deliver excellence.
- Focus on developing strong leadership to ensure that the new mindset and promised skills learned are sustainable and simply become the way things are done.

4.11.4. Key Characteristics of the Culture of Excellence

1. A compelling institutional vision that is well communicated to all faculty members and understood.
2. Clear goals and meaning.

3. Mastery of tasks and focus on high performance.

4. Resilience to change and challenges.

5. Highly collaborative faculty and technically supportive staff teams.

6. Dedicated mentality of the leaders and administrators.

4.11.5. Desired Bottom-Results

1. Significantly improved faculty engagement and alignment.

2. Committed and engaged faculty members working toward institutional goals.

3. Loyalty and commitment to the institutional vision.

4. Happy faculty members will be proud to be a part of the institution of excellence that they are creating together.

5. More satisfied clients that keep on coming back.

6. Increased efficiencies and productivity.

7. Significant improvements in knowledge and human capital development.

4.11.6. Initiating Powerful Institutional Cultural Change

- Proactive initiatives and problem-solving.

- Engage every faculty member at the core.

4.11.7. Sustaining a Winning Culture

- Audit the existing culture and identify new expectations.

- Align the faculty teams.

- Focus on the results and build accountability.

- Manage the drivers of culture.

- Communicate and celebrate.

4.11.8. Key Performance Indicators in Engineering Institutions

The following are key performance indicators in Engineering Institutions

- *Organizing certificate, graduate, postgraduate, and doctorate programs in emerging technologies with maximum impact on Human Capital.*

- *Planning diverse global faculty development programs and ensuring engineering without any borders.*

- *Substantial contributions to industries through consultancy projects.*

- *Completing development projects under various international development agencies like the Asian Development Bank, Danish International Development Agency, UNESCO, UNDP, USAID, and the World Bank.*

- *Creating intrapreneurs*

- *Substantial contributions to knowledge capital through research articles, intellectual capital, patents, copyrighted books, laboratory manuals, design and drawing manuals, case studies, and Item banks.*

- *Periodically conducting national and international conferences.*

- *Establishing in-house faculty development programs*

- *Approving the faculty participation as interns in international universities*

- *Approving participation of faculty teams in international training programs organized by international development agencies, universities, and multinational companies*

- *Generating internal revenue through services, consultancy*

- *projects and undertaking sponsored research projects*

- *Assisting graduates to get high-end jobs*

- *Creating entrepreneurship*

- *Creating a conflict-free environment*

- *Retaining all well-performing faculty members*

- *Training the faculty members from recruitment to retirement*

- *Rewarding incentives for excellent performance*

- *Sharing the project gains based on the norms*

- *Scaffolding the well-performing faculty members to reach global leadership*

- *Continuously improving academic culture*

- *Creating an ecosystem that will direct the faculty to constantly reduce the gap between the industry and the institution*

- *Constantly improving the resources and infrastructure of the institution*

4.11.9. Needed Culture for Creating and Maintaining High-Performance Research Teams

- Leadership with equity, empowerment, ethics, integrity, empathy, and excellence

- Opportunity for lifelong learning

- Freedom to bid for global projects and diverse global faculty development programs

- Freedom to include adjunct resource persons from the national laboratories, private industries, and government departments

- Continuous updating of modern resources

- 24x7 access to the department, library, and laboratories

- Updated vision and mission

- Faculty handbook on rules, regulations, and desired performance

- Frequent auditing of the projects and programs

- Guidelines for preparing the financial bid

- Assessment of project outcomes

- Rewards for excellent performance

- Complete circulation of the ministry letters, rules, and policies

- Initial funding for bidding on global projects under MNCs and IDAs

- Academic audit of all projects and programs to identify excellence and shortcomings

- No discrimination against any faculty

- Support for the faculty through coaching, counseling, and mentoring

- Freedom to offer any industry-specific programs

- Freedom to undertake sponsored research and development projects

- Never transfer letters of invitation to outside organizations

4.11.10. Culture-based Coaching and Mentoring

- Linking vision with coaching and mentoring

- Selecting outstanding emeritus professors to offer needed abilities

- Including adjunct professors to train the young team members in the consultancy teams

- Providing funds to undergo selected massive open online courses offered by international universities

- Reimbursing the cost of handbooks, advanced journals, and research reports

- Encouraging faculty to publish advanced textbooks

4.11.11. Inspiring a Culture of Appreciation

Rochester Institute of Technology stated that "Faculty, at all ranks, are just like everyone else when it comes to wanting to be appreciated by colleagues and recognized for doing good work". Their

research study on "Strategies for Improving Faculty Morale and Elevating Performance' reflects that recognition for faculty contributions in teaching, research, or service not only demonstrates the value of faculty but also affects faculty retention. Further, faculty likely appreciate some other recognition for their work, such as participation in governance activities, flexibility in teaching responsibilities, fewer course preparations, or preferred teaching schedules. Further, appreciation and recognition efforts have to be low-cost and/or have a minimum time commitment. Showcasing individuals who have done amazing things and having a reception to say thank you goes a long way for recognition. Small forms of recognition such as cash awards can be effective morale boosters. Honored titles that faculty can use on their curriculum vitae are also a form of recognition that faculty can use".

4.11.12. Reputation and Legitimacy: Key Factors for Engineering Institutions' Sustained Global Competitive Advantage

- Sustaining the research and development programs based on the institutional gains
- Planning short-term visits to various global universities
- Offering diverse faculty development courses under an international development agency
- Offering internships to overseas faculty members under an International Development Agency
- Planning faculty development programs in a foreign university based on funds from donors

4.11.13. Viable Methods to Eliminate Toxic Culture from the Workplace

- Fix targets to achieve planned academic programs
- Fix targets to generate internal revenue through consultancy projects
- Fix targets to publish research papers at international conferences and reimburse the cost
- Share the project gains as per the norms of the institute
- Never permit offloading letters of invitation to external organizations
- Reward the high-performing faculty members

4.11.14. Creation of Distributed Leaders to Shape Healthy Microcultures

- Empower the high-performing faculty members as leaders in planning new projects
- Decentralize the administration
- Open the workplace 24x7 to undertake continuous research work
- Permit research assistants based on the funds from the project grants

- Celebrate the success of project completion by informing the Board of Governors

- Include their success on the website

- Include a short success story in the newspaper

- Recommend them to apply for fellowships in reputed international professional associations

- Permit them to avail sabbatical leave to undergo needed advanced study

4.11.15. Establish Healthy Social Norms

- Welcome the faculty to contest for the academic council of the university

- Encourage them to contest for Professional Association Organization leadership positions

- Encourage the outstanding faculty to join the boards of governors in other institutions

- Encourage the well-accomplished faculty member to take up the chairman position in planning conferences

4.11.16. Redesign Work to Reduce Stress

- It is better to redesign various academic tasks based on the available software tools

- Use search engines to get up-to-date references

- Use various software tools to edit the reports and papers

- Recruit needed research associates

- Include emeritus faculty to review the completed works

  a. **Nurture a Healthy Engineering Culture**
  - Establish a healthy work environment

  - Develop excellent interpersonal relations

  - Design an ergonomic workplace

  - Provide needed required tools

  - Include up-to-date software and job-aids

  - Check the culture

  - Introduce appreciative inquiry methods

  - Solve the conflicts

  b. **Building a Winning Engineering Culture**
  - Support the growth of excellent educational programs and research projects through sufficient funding

- Review the vision and mission based on the challenges due to disruptive technologies

- Focus on global leadership

- Reward the achievers based on their success in innovative projects

c. **What makes a Good Engineering Culture**

- Provide an opportunity for redesigning the programs

- Include open communication

- Scaffold the faculty teams when they need the administrator's support

d. **Ensuring an Ideal Engineering Culture**

Every institute should be a heaven for developing needed outcomes to create a world without borders. All leaders should focus on creating the most supportive culture for innovations in human resource development and offering excellent services to humanity.

e. **Created a Successful Project Culture**

Without any exception, all the global universities have implemented the most conducive educational culture which supports their high-performing faculty teams and contributes to the growth of human and knowledge capital. All the developing countries have to emulate such a winning culture without any discrimination.

4.12. Synthesis

All the above initiatives are learned from high-performing global universities. Unless the administrator and the leaders move towards all proven cultural initiatives, it is not possible to improve the performance of the institutes. All the dedicated faculty teams need scaffolding to resolve obstructions in time. It coincides with "when there is a will, there is a way". Culture is the foundation block to support superstructures like modern interdisciplinary graduate and postgraduate programs, multidisciplinary doctoral programs, and consultancy programs under various international development agencies, and multinational companies.

4.13. Discussion

The culture of corporate houses is based on winning global market share, high profits, and establishing a large number of design and production centers in various developing countries in Asia, Africa, and South America. Whereas the culture of engineering institutes is based on innovative engineering programs, interdisciplinary research-based consultancy programs, and reaching world-class status. Here, return on investment will assist the needs of the institutional budget. In both cases,

an excellent culture is the solid foundation. The growth of toxic leaders will destroy the initiatives of high-performing faculty members, leading to many opportunities and posing threats from competing institutions. Existing cultural models of corporates like the Spotify model, Schein three-level corporate model, Greet Hofstede's Cultural Dimensions, Denison's Organizational Culture Model, Cameron and Quinn's Competing Values Framework, Handy's Cultural types, and Iceberg Model offer insight into the success of various multinational companies in gaining high market share by carefully adopting a cultural model. All these corporate models need a few changes to suit higher education.

Significant cultural models of world-class universities are Harvard University's Model Program for recognition of faculty, Ohio State University's Principles for Faculty Reward System in a High-Performance Academic Culture, Stanford University's Retention Strategies, and University of Alabama's Culture for recognizing faculty for their contributions. All these models apply to universities.

An in-depth analysis of all these models will provide answers to the questions raised by the faculty members who participated in this research.

5. Conclusion

After studying the harms created by toxic leaders' cultures in autonomous institutes, methods to eradicate the wrong actions, and distorted cultures created by them, a set of needed academic cultures to facilitate institutional growth has been suggested. Major suggestions are building a new culture of excellence which comes from the mindset of excellence, strategies for excellence, and sustaining them. These will give the desired bottom-line results. It is recommended to improve key performance indicators in engineering colleges. Suggested components of academic culture are:

- Needed culture for creating and maintaining a high-performance research team,
- Culture-based coaching and mentoring,
- Inspiring a culture of appreciation,
- Identifying key factors for engineering innovations,
- Viable methods to eliminate toxic culture from the workplace,
- Creation of distributed leadership to shape a healthy culture,
- Establish healthy social norms,
- Redesign the work to reduce stress,

- Nurture a healthy engineering culture,
- Building a winning engineering culture

These ensure an ideal cost-free engineering culture. These will create a successful project outcome. The outstanding faculty members will be retained. Best graduates with needed attributes will be created.

5.1. Validation

This model has been implemented in three engineering institutions in two states. A team of chairpersons was briefed first. Later, a workshop was conducted. The management welcomed this cost-free cultural revolution aimed at improving the performance of the faculty members, winning consultancy projects, and improving the attributes of the graduates. In the long run, many institutions would also plan to introduce this model. This model can be implemented only when the management fully agrees to follow all the steps.

5.2. Shortcomings in this Research

This research work was based on the institutional development project sponsored by the World Bank. The capacity development and quality improvement components contributed to the success of this model. As such, it is difficult to eliminate the impact of the World Bank-assisted project on this model.

5.3. Suggestions for Further Research

This model can be replicated in various universities and colleges. The institutional problems have to be assessed first. The management of the colleges needs to be informed for wholehearted cooperation. The faculty members are to be trained in two two-day workshops. Then this model can be tried. If there is a need to bring any change, it can be added.

About the Author

Thanikachalam Vedhathiri, B.E. (1968, Civil Engineering, University of Madras), M.Tech. (1970, Soil Mechanics and Foundation Engineering, Indian Institute of Technology, Madras), Ph.D. (1975, Design of Filters for Earth Dams, University of Madras), M.S. (1988, Instructional System Technology, Indiana University, Bloomington, USA). FIGS., FIE., FFIUCEE., Former Nodal Officer of the World Bank Assisted Project in Technical Education, Senior Researcher under the Fulbright Scheme of the USA,

Post Doctoral Trainee in Technical Education Research, University of Illinois, USA, Former Professor and Head, Center for International Affairs, National Institute of Technical Teachers Training Institute, Chennai, India. Founder Professor of Diverse Global Faculty Programs sponsored by the Ministry of External Affairs, the Ministry of Finance, and the Indian Council for Cultural Relations (ICCR). Former Nodal Officer for the World Bank Assisted Projects in Technical Education.

Other References

- Academic Leadership Group. (2023). Leading the Way: Academic Leaders and a Culture of Innovation. https://academicleadershipgroup.com/blog/leading-the-way-academic-leaders-and-a-culture-of-innovation

- Ariel Tichnor-Wagner. (2019). Globally Minded Leadership: A New Approach for Leading Schools in Diverse Democracies. International Journal of Policy and Leadership. 15(2)2019, https://files.eric.ed.gov/fulltext/EJ1208569.pdf

- Bain & Company. Building a Winning Culture: A Companies Key to Success is in its Heart and Soul. https://media.bain.com/images/BB_Building_winning-culture

- Bravo. (2019). Intrinsic Vs Extrinsic Rewards to Improve Employee Engagement

- Donald Sull and Charles Sull. (2022). How to Fix a Toxic Culture. MIT Sloan Management Review. https://sloanreview.mit.edu/article/how-tofix-a-toxic-culture

- Giorgia Miotto, Cristina Del-Castillo-Feito, and Alicia Blanco-Goenzalez. (2020). Reputation and Legitimacy: Key Factors for Higher Education Institutions' Sustained Competitive Advantage. Journal of Business Research.V-112, P:342-353 https://doi.org/10.1016/j.jbuses.2019.11.076

- Paul Meehan. (2008). Creating and Sustaining a Winning Culture. Harvard Business Review. https://hbr.org/2008/02/creating-and-sustaining-a-winning-culture

- Joel Bates. (2021). Discrimination in Academia. National Alliance on Mental Illness. https://nami.org/Blogs/NAMI.Blog/October-2021/Discrimination-in-Academia

- Jose Manuel Martinez Sierra, Jean Monet, and Julio Lumbreras. RCC. HAVARD.EDU. Internationalization and Innovation in Higher Education (12HE) RCC.HARVARD.EDU. Real Colegie. Complutense

- Karen Tonso. (2006). Teams that Work: Campus Culture, Engineer Identity, and Social Interactions. Journal of Engineering Education. January 2006 DOI:10.1002/j.2168-9830.2006.tb00875.x

- Laura F. Huenneke, Diane M. Stearns, Josse D. Martinez, and Kelly Laurila. (2017). Key Strategies for Building Research Capacity of University Faculty Members. Innov High Educ. 42:421-435, DOI:10.1007/s10755-017-9394-y

- Maria Olenick, Monica Flowers, Tatayana Maltseva, and Anna Diez- Sampedro. (2019). Research in Academia: Creating and Maintaining High-Performance Research Teams. Review Article, Article ID 8423460, https://doi.org/10.1155/2019/842360

- Marletta Del Favero and Nathaniel Bray. The Faculty-Administrator Relationship: Partners in Prospective Governance. A Journal for the Scholar-Practioner Leader, 3(1) p 53-72

- Matthew Lippincott. (2017). Want High-Performance Teams? Invest in Coaching and Mentoring. https://www.keystepmedia.com/authors/matthew-lippincott

- Maura Bostengo. (2008). Creating a Culture of Assessment within an Engineering Academic Department. 38th ASSE/IEEE. Frontiers in Education Conference. Saratoga Springs. NY. DOI:10.1109/Fie:2008:4720449

- Mitchell D. Feldman, Patrica A. Arean, Sally J. Marshall, Mark Lovett, and Patrica O'Sullivan. (2010). Does Mentoring Matter: Results from a Survey of Faculty Mentees at a Large Health Sciences University. Medical Education Online. Taylor and Francis. Doi:10.3482/meov15i0.5063

- NCBI. (2016). The Culture of Undergraduate STEM Education. https://ncbi.nlm.gov/books/NBK368176

- O'Meara, K. (2002). Uncovering the values in faculty evaluation of services as scholarship. Review of Higher Education, 26(1), 57-80. Retrieved from https://search.proquest.com.ezproxy.rit.edu/docview/622019567?accountid=108

- Principles for Faculty Reward Systems in a High-Performance Academic Culture (n.d). Ohio State University. https://oaa.osu.edu/assests/files/documents/facultyrewardsystems031809.pdf

- Riordan. C. (2013). Foster a Culture of Gratitude. Harvard Blog Post, Harvard Business Review, 2013. https://hr.fas.harvard.edu/recognition

- Sae -hoon Lee, Hyun-chul Kang, Jong-sung Kim, and Woo-yeul Back. (2023). Effects of College Faculty Members' Entrepreneurial Orientation on Organizational Performance: Case of South Korea. Sustainability 2923, 15,4283. https://doi.org/10.3390/su15054283

- Stanford University. Recognition as a part of Retention Strategies. https://facultydevelopment.stanford.edu/recruitment/recruitment-retention-guidelines/returntion

- Stan Klimoff. (2023). The 5 Values of Engineering Culture for Organizational Success. https://forbes.com/sites/forbestechcouncil/2023/05/18/the-5-values-of-engineering-culture-for-organizational-success

- Terri E. Givens. (2018). The Collaboration Imperative. https://www.insidehighered.com/sites/default/server_files/media/iStock-493208o648.jpg

- University of Alabama- Birmingham. Faculty Awards. https://www.uab.edu/faculty/awards

- University of Michigan. (2023). Culture. Ensuring diversity, equity, and social impact in engineering. https://strategicvision.engin/umich.edu/pillars-of-excellence/Culture

- Victor Prince. (2021). 5 Leadership Lessons from Basketball Coaching Legend Pat Summit. History's Leadership Lessons. Stories from the Past to Teach Leaders Today

- Wendy F. Weiner. Establishing a Culture of Assessment. American Association of University Professors. https://www.aaup.org/article/establishing-culture-assessment

- Anne Matrie Canale, Cheryl Herdklotz, Lynn Wild. (2014). Inspiring a Culture of Appreciation@ RIT, The Walance Center: Faculty Development Services. http://wallacecenter.rit.edu/tis/faculty-stories

References

1. ^*Dharmesh D. Gadhavi, Nirav Joshi, Abhishek Parikh, and Dharmendra Thaker. (2021). Employee Wellbeing and Employee's Happiness: A Study of an Indian University. Academic of Strategic Management. Academic of Strategic Management. 20(6S):2021 https://researchgate.net/publication/35637505_EMPLOYEE_WELLBEING_AND_EMPLOYEE'S_HAPPINESS*

2. ^*The Collaborative on Academic Careers in Higher Education (COACHE) Faculty Job Satisfaction Survey. (2013). Provost's Report. Rochester Institute of Technology. Available at https://www.rit.edu/provost/sites/rit.edu.provost/files/coache_provost_report_2013.pfd*

3. ^*Michael Mankins. (2013). The Defining Elements of a Winning Culture. Harvard Business Review. https://hbr.org/2013/12/the-definitive-elements-of-a-winning-culture*

4. ^*Anna Dziuba. (2023). How to Build a Winning Engineering Culture: Expert Insights.. https://relevant.software/blog/build-engineering-culture*

5. ^*Richard Orbe-Austin. (2023). A 10-Point Plan to End Toxic Workplaces in Higher Ed. Advice for how colleges can avoid or end toxic work cultures (opinion) https://insidehighered.com/advice/2023/02/28/advice-how-colleges-can-avoid-or-end-toxic-work-culture*

6. a, b, c, d, e, f, g*Lisa Maria Hober. (2024). Top 5 Organizational Culture Models (No Need to Read All 12). https://www, dynamicachievement.com/wp-content/uploads/2018/06/Culture of-Excellence-eBook-Feb*

7. ^*Harvard University. Recognizing and Rewarding Your Staff. Faculty of Arts & Sciences. https://hr.fas.harvard.edu/recognition*

8. ^*Ohio State University. Principles for Faculty Reward Systems in a High-Performance Academic Culture. http://oaa.osu.edu/assessts/files/documents/facultyreardsystems031809.pdf*

9. ^*Shake. Bug & Crash Reporting. Spotify Engineering Culture. https://shakebugs.com/blog/engineering-culture-examples*

10. ^*VP of Delivery at Relevant Software. How to Build a Winning Engineering Culture Expert Insights? Transforming Teams with Effective Engineering Culture. https://relevant.software/blog/build-winning-engineering-culture*

11. ^*Dynamic Achievement. (2018). Culture of Excellence: The Secret to Creating a High-Performance Organization. https://www.dynamicachievement.com/wp-loads/2018/06/Culture-of-Excellence-eBool-Feb*

Declarations