Research Article

Protection against a Toxic Environment: Strategies for Planning the Radical Development of Engineering Faculty Members

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Self-protection and planned growth of faculty members of engineering institutions are linked together to develop engineering education when a toxic environment grows without any control. This demands the desired academic environment in all higher education institutions to overcome toxic workplaces. High-performing faculty members need safeguarding against the fast-growing toxic environment. Many faculty members need to safeguard their pension benefits and project gains, utilizing earned leave for undergoing desired advanced courses in a selected global university, and offering continuing education to employees. Sixteen areas have been identified for the desired protection of faculty members. Fifteen areas have been identified for planned radical growth. The faculty members have to do a SWOT analysis to identify their strengths, weaknesses, opportunities, and threats. Eight hundred and ten faculty members have contributed to checking the status of affairs in undertaking sponsored research and development programs, offering continuing education programs, undertaking internships in a global university, and offering diverse global faculty development programs. Their feedback shows the need for desired support from the government, Board of Governors, and industry clients, besides high-performing and achievement-oriented faculty members. Validation also confirms the need for support from all stakeholders. The limitation of this research is samples were selected from two states. Further research at the national level through five consortium institutes is recommended.

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1. Introduction

In 1947, India gained freedom from the British Government. Since 1947, the Indian Government has established a large number of central universities, national institutes of importance in engineering and technology, management institutes, national institutes of teacher training and research, industrial training institutes, polytechnics, national councils, commissions, etc. Almost all the institutes are empowered with academic, administrative, and financial autonomy. Most of the autonomous institutes are guided by a Board of Governors. All the institutes receive substantial funding from the Ministry of Education besides generating income through consultancy projects from various clients. Even though many detailed rules, norms, and standards are in place, in a few institutes toxic leaders are selected without following the established selection process, and the selected CEOs grow at a faster rate. In many institutes, the Chief Executive Officer takes substantial control of academic programs, recruitments, policies for growth, setting goals, planning faculty development programs, organizing various outcome-based educational programs, interacting with the industries,

overseas universities, state universities, etc. Even though there are academic councils to coordinate all academic activities, planning new programs, etc., they are very much constrained in planning innovative programs, interdisciplinary programs, multidisciplinary research projects, consultancy programs for state engineering departments, private companies, and International Development Agencies (IDA).

Desired Academic Environment in Higher Education Institutions: Higher education institutions have to establish a conducive, growth-oriented environment to facilitate the establishment of new and interdisciplinary graduate and postgraduate programs, undertake sponsored research and development projects, and continuously evaluate new theories, models, and planning methods. Further, these tasks have to be performed by outstanding faculty members, and they have to develop many followers. The administrators and managers of higher education institutes have to create a strategic policy to continuously support the abilities of the motivated and achievement-oriented faculty teams. These institutes should not turn into toxic workplaces. There is a need for counselors, coaches, and mentors who can assess the needs of the faculty members and offer services.

Toxic Workplace: Toxic workplaces normally emerge in many higher education institutes that are detrimental to the well-being of outstanding faculty members and their contributions to human capital and knowledge capital. This also affects the health of the faculty members. A toxic culture fails to promote diversity, equity, and inclusion. High-performing faculty feel disrespected, and unethical behavior increases. Most of the toxic leaders start bullying and never reward excellent service. All these have to be eliminated in higher education institutions; otherwise, the growth of human and knowledge capital will be impacted beyond improvement. Toxic leaders are supported by their coteries who do not have a vision for institutional development or contribution to both human and knowledge capital. They always plan booby traps to catch high-performing faculty members. They never tolerate the growth of dedicated and highly capable faculty teams.

Protection against Toxic Environment: Every high-performing faculty member has to learn the destructive impact of a toxic environment on their planned innovations. They have to learn about various rules, laws, constitutional rights, and opportunities available for further competency development, undertaking global projects, and contributing to the growth of the economy. This paper centers around the legitimate path of growth by overcoming all bottlenecks and traps.

Safeguarding Pension Benefits, Project Gains, Earned Leave, and Constitutional Rights: Many autonomous institutes don't circulate government orders connected with pension benefits, and as a result, many faculty members lose eligible benefits. It is better to consult friends who are working in other similar institutes about the circulars, orders, and changes in the norms. Many autonomous institutes don't share the project gains with the faculty members who are responsible for planning and implementing projects. As soon as the projects are completed, the project executives should submit a detailed proposal indicating the income, expenditure, and suggested distribution to the faculty and supporting staff as per the norms. If the due share is not distributed, it is essential to seek redressal through legal methods without losing any time. The faculty can use the earned leave accumulated for undergoing desired advanced programs at a desired university. Many CEOs may obstruct and may not grant leave. It is better to represent the Ministry of Education through the institute. If it fails, the next step will be to seek a legal process without any delay. Most of the constitutional rights are not considered, and many CEOs take discretion. It is better to seek redressal through the Ministry of Education. If it fails, it is better to seek a legal solution without any loss of time.

2. Literature Survey

According to MIT Sloan Management Review, the leading elements contributing to toxic cultures include failure to promote diversity, equity, and inclusion; workers feeling disrespected; and unethical behavior. According to Richard Orbe-Austin (2023), toxic culture includes bullying, not rewarding hard work, not respecting the boundaries of employees, and constantly discriminating against employees. In addition to damaging people's health, toxic work cultures negatively impact employee retention and long-term satisfaction. Richard Orbe-Austin suggests the following remedies: 1. Center diversity, equity, and inclusion as part of the institution's strategic plan, 2. Provide consistent, quality coaching and training for managers and senior leaders, 3. Have zero tolerance for all 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, including breaks during the workday and interruption-free vacations, 6. Stop the "we are a family" paradigm, 7. Outline a clear development path for all employees and provide consistent feedback about performance, 8. Encourage healthy boundaries, 9. Truly collaborate with employees to create a new, innovative vision of the workplace, 10. Normalize joy and kindness in the workplace. Gordon Hood assessed the possibility of staying sane/happy in a university where you have been seriously undermined and disrespected by leadership. Irina Dumitrescu (2019) suggests ten easy rules to escape from a toxic workplace. She stated that universities bend over backward to protect toxic personalities. CaptainHooktheCook assessed the checks and balances in academia for toxic professors.

3. Desired Protection for High-Performing Faculty Members

In addition to toxic heads, many others create trouble for the high-performing faculty members. The following table indicates the needed protection methods. If the faculty members fail to protect themselves from the toxic heads, they will face failure, the institute will lose its reputation, the return on investments will decrease, and it will lead to the ultimate failure of the educational system.

No.	Issue	Protection	Ultimate Solution
1	Excellent interpersonal connections	Better know your colleagues, their extraordinary skills, and readiness to join a team for planning interdisciplinary teams, and offering consultancy services to IDAs, the government departments, and private companies.	This process will enable you to build excellent high-performing teams. You can get more authentic information that you missed.
2	Toxic Leaders and their coteries may not enable you to become a consultant.	Prepare bid documents well in time and submit them to the CEO to forward them to the clients	Be prepared to reach top consultant
3	Academic Exploitation	Never agree to transfer the projects won to others or external agencies.	Safeguard your skills and accomplishments.
4	Health Hazards	Take needed insurance to face accidents and poisonous environments.	Protect your health even in tough environments.
5	Accidents during the execution of projects	Take all safeguards to overcome accidents while undertaking fieldwork.	Seek assistance while carrying out tough field work.
6	Academic Traps	Prepare more realistic financial bids to quote at a reasonable rate with a margin of safety.	Don't expect a friendly environment.
7	Untruly Students	Encourage, counsel, coach, and mentor students without career goals. Allot internal evaluation marks as per their performance.	Treat them very well so that they can realize their inner strength.
8	Unruly Colleagues	Negotiate to perform initially accepted tasks to contribute and guide to own the responsibilities	Welcome new ideas. Encourage competitive spirit.
9	Project Clients	Never accept to undertake additional subprojects which are not covered in the agreement.	Explain the rules and norms for taking on additional tasks and approval from the CEO.
10	Competitors	Never accept rumours about the desirable maximum cost of the project but follow the rules and standards	Develop the technical bid based on the terms and conditions. Use value analysis to check the cost.
11	Project Managers	When additional works are offered beyond the contract, prepare a financial bid, negotiate, and agree.	Refer to the legal aspects of the contract.
12	Not Sharing the Project Gains	Prepare a detailed report on the amount to be shared and the due project gains as per the norms and rules.	Refer to the approved norms and submit the proposal within one month of project completion.
13	Not Approving the Travel Plans	Prepare the travel plans as per the project norms, rules, and standards.	Travel plans have to be project-specific.

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No.	Issue	Protection	Ultimate Solution
14	External Project Associates	Select the external project associates based on their expertise, health, and capacity.	When there is a need, select the best associates.
15	Experts from National Laboratories	Select needed experts based on the project complexities from national labs.	Choose the best experts who have established their leadership.
16	Internal Auditors	Get the financial proposal audited before submitting it to clients	Get the financial proposal audited.

Table 1. Issues, and Needed Protection

4. Faculty Development

Dean Andrea Goldsmith (2021) suggested undertaking strategic planning to drive the school's growth over the next decade and to maximize its positive impact on humanity. Sandra M. Linder, Cindy M. Lee, Shannon K. Stefl, and Karan A. High (2023) edited a Handbook of Stem Faculty Development which is organized around three constructs viz, inputs, mechanisms, and outputs. The development mechanisms construct focuses on topics related to the actual implementation of STEM faculty development. Mark Vincent Huerta, et al. have suggested a process of conceptualizing and creating a strategic plan for the Engineering Faculty Impact Collaborative (EFIC) to support faculty development and mentorship. Kam Juddev (2007) suggested a set of advice for new engineering faculty which is based on insights gained from faculty development programs. They are an orientation to new engineering faculty on policies, support services, regulations, colleagues in the department, and faculty development resources; mentors for different needs; and a dean who can socialize into the department and assist in developing reasonable annual work plans. Inken Gest, et al. (2022) suggested supporting the well-being of new university teachers through teacher professional development. Lynn University developed a policy to enumerate the faculty development opportunities for full-time faculty members. Maryellen Weimer suggested the following four steps to introspect the gains of faculty development: A sense of discovery, a Quest for self-improvement, the Ability to scaffold development, and a sense of mattering. Rob Kelly focused on teaching and learning at mid-career. She suggested a multi-disciplinary approach. According to Rob Kelly, the Jump Start program prepares faculty to teach online. Further, according to Rob Kelly, technology-enhanced faculty learning communities expand development opportunities. Academic Leadership suggested the following five key points as strategies for faculty professional development initiatives:1. Professional development should be mandatory, 2. Professional development should be intentional, 3. Professional development should be individualized, 4. Professional development should be connected, and 5. Professional development should be in-depth.

In engineering education, faculty development should be linked to the growth of industries, product development, testing, improvement, manufacturing, and maintenance. It should be mandatory. Ultimately, faculty members should contribute to the attributes of the graduates, and they should serve the companies through their expertise.

4.1. Planned Radical Growth

Every faculty member should plan a radical growth path and create a vision for higher growth in this competitive environment. Each faculty member has to create a smart goal for their flawless growth to reach global expertise in their area of specialization. Possible issues to develop the desired radical planning and the ultimate outcomes are presented in Table 2.

No.	Issue	Radical Planning	Ultimate Outcome
1	Planning Flawless Academic Growth	Identify your goals and plan to update your skills. Utilize self-directed learning.	Consider a reasonable period to achieve your goal.
2	Planning Interdisciplinary Graduate and Postgraduate Programs	Plan needed interdisciplinary graduate and postgraduate programs to meet the attributes of the learners. Get the approval, resources, and associate faculty members.	Programs should meet the employer and learner needs. Organize internships and include industry-specific dissertations.
3	Research Projects under External Funding	Assess the needs of the fast-growing companies and plan needed research support and get funds from the Council of Scientific Industrial Relations (CSIR), All India Council for Technical Education (AICTE), University Grants Commission (UGC), Defence Research and Development Organization (DRDO), Department of Science and Technology (DST), etc.	Ultimately your department should grow to meet the research-based suggestions.
4	Establishing Continuing Education Centers	Establish a continuing education center to offer needed training programs for employees of the companies.	Connect with the training needs of the employees based on the new product manufacturing.
5	Undertaking Sponsored Research and Development Projects	Look for the needs of various engineering departments, and ongoing projects under international development agencies.	Establish reputation and leadership. Create linkages with the companies in the region.
6	Planning Internships under Global Universities	Look for bilateral training programs, offer medium-term training and development programs, and government-funded internships.	Internships will improve branch-specific skills and abilities. Global exposure is essential.
7	Planning Training Programs under Bilateral Projects	There are many new opportunities for planning bilateral projects. Plan needed training and development programs.	Consider fast-growing countries and develop new in-country training organizations.
8	Planning Diverse Global Faculty Development Projects	Plan development programs as a part of diverse faculty development programs.	Encourage the selection of needed project-specific projects. Create sustainable leadership.
9	Developing Outstanding Instructional Materials	Most of the time, institutes may not find curricula-specific learning packages. Develop needed textbooks, laboratory manuals, drawing manuals, and case studies.	Review the materials every year and update them. Select an outstanding publisher and enter into a contract for publishing them periodically.

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No.	Issue	Radical Planning	Ultimate Outcome
10	Establishing a Research Cluster	You may need more centers to undertake the research projects. Develop a set of institutes as partners of a consortium.	Sharing the research projects through the consortium will accelerate the completion of the projects.
11	Fellowships at various National Professional Associations	Always look for national fellowships of professional associations. Develop needed skills and apply for a fellowship.	The academic ability will be improved and respected.
12	Fellowships at various International Professional Associations	Improve your research publications, human capital, and knowledge capital. Be an outstanding researcher. Get the fellowships of International Professional Associations.	International Fellowship is a hallmark that certifies the outstanding quality of the fellow.
13	Offering MOOCs to Overseas Universities	Develop needed massive open online courses for engineering students and working professionals.	Offer needed MOOCs at a global level.
14	Developing Intellectual Products and Patenting them	Try to optimize the products, get patents, and license the companies to use them.	Improve the intellectual products based on further research.
15.	Conducting Technical Working Group Meetings for Diverse Global Participants under International Development Agencies	Many International Development Agencies like UNESCO, UNDP, USAID, Asian Development Bank, and World Bank sponsor technical working group meetings. Utilize the opportunities and offer courses under this opportunity.	Get recognized and improve the reputation of the institute, department, and faculty members.

Table 2. Issues, Radical Planning, and Ultimate Outcome.

Radical growth will not only assist the growth of the faculty members but also ensure the radical growth of the institute and valuable contribution to stakeholders.

4.2. SWOT Analysis

Every faculty member has to analyze their strengths, weaknesses, opportunities, and threats.

STRENGTHS	WEAKNESSES
Total Career Planning Capable of undertaking sponsored research projects Capable of planning interdisciplinary research and development programs Capable of planning diverse global faculty development programs Capable of offering selected courses to overseas universities Capable of bidding for complex faculty development programs under IDAs Capable of getting global recognition for accomplishments	Ever-growing toxic environments Leaders' autonomy without any accountability Unstoppable racial discrimination Corruption in all academic activities Limited resources Centralized administration Poor interpersonal relations No scaffolding for high-performing faculty Too much of unrelated works Limited vision Poor mission Limited institutional goals
OPPORTUNITIES	**THREATS**
Need for establishing continuing education programs for employees and executives Need for planning consultancy projects under IDAs, private organizations, government departments Need for offering in-house faculty development programs for engineering faculty members Need for establishing interdisciplinary postgraduate programs	The CEO offloads the won consultancy projects to nontechnical external agencies Many private organizations without any qualified technical people unethically compete to get the projects An institution's reputation decreases Return on investments reduces Best faculty leave the institution due to nonrecognition of their contributions

4.2. Strategic Planning

The high-performing faculty members have to prepare strategic plans to grow and research global leadership. They have to assess the impact of disruptive technologies on engineering education. They have to prepare long-term as well as short-term plans based on the changes in industrial demands for trained human resources. Further, they have to develop their abilities in problem-solving, risk analysis, and value engineering, and create several associates for succession planning. Tactical plans will be required to undertake annual plans and implementation.

5. Statement of The Problem

“The faculty members need self-protection against discrimination and exploitation. Further, they need to plan their growth to reach excellence. These are to be incorporated in the faculty development plan, and they are to be counseled, coached, and mentored. This process enables the better academic performance of the faculty members, graduates, and the institution. All will enable the faster growth of the economy.” The return on investments (ROI) will be substantial. Not all institutes pay desired attention to this relevant development of human resources and the flawless growth of the institute. This research focuses on these aspects.

5.1. Objectives

The following are the objectives of this research:

1. To suggest desired protection against the toxic environment for high-performing engineering faculty members
2. To suggest needed faculty development for high-performing engineering faculty members

5.2. Research Methodology

The research methodology depends on the social science approach suggested by Guba and his associates. Discussions have been held on the existence of toxic environments in many engineering institutions. Further, the desired growth of the high-performing faculty members has been invited.

5.3. Population

Well-performing faculty members who have a minimum of five years of experience, possess master's degrees in engineering or technology, and have worked in various State Technical Universities, Deemed Universities, Affiliated Engineering Colleges, and Autonomous Engineering Colleges in Karnataka State and Tamil Nadu State form the focused population. Most of them have attended various faculty development courses in Curriculum Development, Institutional Development, Planning Consultancy Projects, and Offering Executive Development programs.

5.4. Sample

The research was conducted in three phases. Detailed consultations were held with around 300 faculty members in each phase. The details of the sample are presented in Table 3.

Phase	Total Number	Men	Average Qualification	Women	Average Qualification	Average Experience	Place
1.	296	198	Master Degree	98	Master Degree	5y1m	Chennai
2.	268	179	Do	89	Do	4y 6m	Chennai
3.	246	188	Do	58	Do	4y 9m	Chennai

Table 3. Sample

5.4. Areas

The following five areas are considered:

i. Undertaking Sponsored Research and Development Projects under an IDA
ii. Establishing a Continuing Education Center (CEC)
iii. Undergoing an Internship at Global Universities
iv. Industry-Specific Interdisciplinary Programs
v. Offering Diverse Global Faculty Training Programs

5.4.1. Questionnaire

1. How many of you plan to undertake sponsored research and development projects under an International Development Agency (IDA)?
2. How many of you plan to establish a Continuing Education Center (CEC) to offer training to employees of Micro Small Medium Enterprises (MSMEs)?
3. How many of you plan to undergo internships in global universities?
4. How many of you plan to offer industry-specific interdisciplinary postgraduate programs?
5. How many of you plan to offer diverse global faculty development programs under various bilateral schemes of the Government of India?

5.4.2. Feedback

Phase	Sponsored R&D programs under an IDA		Continuing Education Center (CEC)		Internships under a Global University		Industry-Specific Postgraduate Programs		Diverse Global Faculty Development Programs	
	M	W	M	W	M	W	M	W	M	W
1	51 /198 = 25.76%	32 /98= 32.65%	56 /198= 57.14%	45 /98= 45.92%	67 /98= 68.37 %	56 /98= 57.14 %	32 /198= 16.16%	29 /98= 29.59%	31 /198=15.66%	27 /98= 27.55%
2	45/179= 25.14%	37 /89= 41.57%	59 /179= 32.96%	61 /89= 67.74%	76 /179= 33.84%	59 /89= 66.29%	23 /179=12.84%	19 /89=19.39%	23 /179=12.84%	19 /89= 21.35%
3	65/188= 34.57%	27/58= 46.55%	69 /18= 36.70%	39 /58 =68.54%	69 /188= 36.70%	36 /58= 62.21%	38 /179= 21.23%	23 /58= 39.66%	39 /188=20.74%	21 /58= 36.21 %

Table 4. Feedback for five issues

5.5. Analysis Of Feedback

1. Sponsored R&D Programs under an IDA: 25.76 %; 25.14%; 34.57% (Men)
   : 32.65%; 41.57%; 36.55% (Women)
2. Continuing Education Center: 57.14%; 32.96%; 68.54% (Men)
   : 45.92%; 67.74%; 68.54% (Women)
3. Internships under a Global University:68.37%; 33.84%; 36.70% (Men)
   : 57.14%; 66.29%; 62.21% (Women)
4. Industry-Specific Postgraduate Programs: 16.16%; 12.84%; 20.74% (Men)
   : 29.59%; 19.39%; 36.21% (Women)
5. Diverse Global Faculty Development Programs: 15.60%; 12.84%; 20.74% (Men)
   : 27.55%; 21.35%; 36.21%(Women)

Average Scores

No.	Area	Men (%)	Women (%)
1	Sponsored R&D Program under an IDA	28.49	36.92
2	Continuing Education Center	52.92	60.73
3	Internship under a Global University	46.32	61,88
4	Industry-Specific Postgraduate Programs	16.58	28.39
5	Diverse Global Faculty Development Programs	16.39	28.37

Table 5. Average Scores

Men's Highest Score: Organizing Continuing Education Center: 52.92%

Men's Lowest Score: Offering Diverse Global Faculty Development Programs: 16.39%

Women's Highest Score: Internship under a Global University: 61.88%

Women's Lowest Score: Offering Diverse Global Faculty Development Programs: 28.37%

Poorest Areas: Organizing Industry-Specific-Postgraduate Programs and Diverse Global Faculty Development Programs

Women scored higher than men in all areas.

No score is more than 62.00%. This indicates many interventions are required at various levels like the Board of Governors, Government, Companies, All India Council for Technical Education, University Grants Commission, parents, and the students.

5.6. Validation

The suggestions are presented to five leaders of various engineering colleges. They appreciate and plan to implement them over four years. For undertaking sponsored research and development programs, they need outstanding faculty members, up-to-date resources, and support from the management and government. It will take a couple of years. To establish a center for continuing education, they have to get approval from the Board of Governors, linkages with the companies in the region, needed resources, and well-trained technical support staff. For implementing an internship under a global university, they need an up-to-date curriculum, outstanding faculty teams, and supportive policy from the Board of Governors and the Ministry of Education. To get all these, they require around three years. For organizing industry-specific postgraduate courses, they need linkages with companies, well-established laboratories, research setups, outstanding faculty teams, and good support from the Ministry of Industries. To plan and implement this, they need four years. To organize diverse global faculty development programs, they need support from various bilateral agreements, support from the Ministry of External Affairs, the Ministry of Finance, the Directorate of Technical Education, and the Board of Governors.

5.7. Discussion

Self-protection of the faculty members is the foundation for the planned growth of the faculty. National Education Policy 2020 suggests all these development processes. Many National Institutes of Technology, National Institutes of Technical Teachers Training and Research, Institutes of National Importance (Indian Institutes of Technology, Indian Institute of Information Technology, and Central Universities) started implementing many of these challenging developments. Their success is being considered by many state government universities. Ultimately, many deemed universities, state technical universities, and autonomous institutions will follow in their steps. It may take around one decade to realize substantial success.

5.8. Suggestions

The following suggestions would provide the needed academic ecosystem for protecting faculty members and accelerating the planned growth of faculty members (Table 6).

No.	Issue	Supporting Organizations	Training of the Faculty members	Institutional Leadership
1	Undertaking Sponsored R&D Programs under an IDA	Government & Management	Utmost Needed	Utmost needed
2	Organizing Continuing Education Programs for Working Professionals	Government, Industry, and Management	Utmost Needed	Utmost needed
3	Internship under a Global University	Government, Management & Foreign University	Utmost Needed	Utmost needed
4	Organizing Industry-Specific Postgraduate Programs	Government, Industry, and Management	Utmost Needed	Utmost needed
5	Organizing Diverse Global Faculty Development Programs	Government, IDAs, Foreign Governments, Management	Utmost Needed	Utmost needed

Table 6. Needs of the faculty members

6. Conclusion

Self-protection of the faculty members is essential for the planned growth of the faculty. As new technologies are adopted by industries, the faculty members have to follow them, master them, and introduce them into the curricula of various engineering courses. All of these are very essential for planning the self-development of the faculty members. Every engineering faculty member has to conduct a SWOT analysis and prepare a strategic plan and a tactical plan for continuous growth and professional development. The Ministry of Education, Directorates of Technical Education, Boards of Governors, the heads of the institutions, and the chairpersons of the departments have developed needed

policies, resources, funds, and continuous faculty development plans. They have to establish strong linkages with various industries for cooperation and collaboration. Both the higher education departments of engineering and technology depend on the conducive academic environment and ecosystem to facilitate the dynamic growth of the faculty members and prepare many interdisciplinary programs, consultancy centers, and collaborations through research and development. As such, there is a need for scaffolding of the faculty members and elimination of unethical discrimination against well-performing faculty members. Leaders need to develop and support high-performing faculty teams, create an inspiring culture of appreciation for fast-developing research teams, create a happy educational environment, and train the faculty members from recruitment to retirement. They have to generate smart goals through outstanding leadership with equity, integrity, ethics, humility, and an outstanding culture of focused growth. Individual faculty teams have to focus on radical development.

6.1. Limitations of this Research

This research is similar to action research with limited participants from two southern states. The purposive sample focused on young faculty members but not on seniors and heads of the institutions. The vision of the Boards of Governors, State Directorates of Technical Education, and other employers may affect the planning. These are the limitations of this research. Culture and the growth of companies will also affect the decision-making process.

6.2. Suggestions for Future Research

A region-level research project will yield a stronger outcome. A country can be divided into four or five regions, research can be undertaken, and all the outcomes can be compared. Each research project can be taken by a member of the consortium. They plan a unique research methodology. The GDP of each region will guide the educational organizations to undertake a strategic plan. National funding will assist the researchers to complete the projects early.

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