

**Dr. MGR Educational & Research Institute**  
NH4 Highway, Maduravoyal, Chennai 600095



## **University Strategic Plan 2030**

{Revised/Updated-04/10/2021}

## **Preamble**

Dr. MGR Educational & Research Institute, vide a communication of the Union Ministry of Human Resource Development, in September 2003, was confirmed as a Deemed to be University, consisting of the erstwhile Dr. MGR Engineering College, Maduravoyal and the Thai Moogambigai Dental College, Mogappair, as its affiliates. Since at that point of time, these colleges, prior to the formation of the Deemed to be University, had their own rules and regulations. It was a decade later, that the ACS Medical College & Hospital, Vellapanchavadi was brought under the ambit of the University. Further, in 2018. Raja Rajeswari Medical College and Hospital, Bengaluru, came under the ambit of this University; and recently in September 2021, the Sri Lalithambigai Medical College and Hospital, Adayalampattu was started under the Faculty of Medicine of this University.

Under this background, it was felt that the various '*Policies of the Deemed to be University*' had to be recast to suit the vagaries of their different locations and requirements. All the Policies were re-drafted/ re-edited, taking into considerations the various directives from the University Grants Commission and the other connected statutory bodies. At the moment, the University operates with Fourteen Faculties.

## **Need for a Strategic Plan**

The strategic Plan for Dr. M.G.R. Educational and Research Institute consolidates on existing strengths and focuses on the future growth path of the Institute by identifying the most pressing issues that needs careful attention and requires distinctive actions, suitable action plans to achieve institutes aspirations and fundamental ideologies.

Even though the institute has become a deemed to be University after imparting quality education in Engineering, Medical and Sciences to student community for the past 35 years as the top ranking institute but as an University, it requires several academic examination reforms and good research eco-system in order to compete with standard and reputed global Universities. Further in view of fast changing dynamics of social, economic and technological changes, the Institutes strategic plans are critical and they need to be monitored and updated. These strategic plans provide an opportunity to bringout clearly the accomplishments of the Institute and to deliberate on what needs to be done and evolve strategies that will guide the Institute in the right direction Such strategic plans are essential as educational institutes face several challenges and risks in future. These strategic plans provide action plans to be implemented in a phased manner to fulfil the objectives set for the institute.

After a detailed discussion with all stakeholders, the strategic plan for Dr. M.G.R. Educational and Research Institute is driven by the following priorities.

- Academic Excellence
- Research & Innovation
- Internationalization of Higher Education
- Skill Development
- Manpower Development
- Institute-Industry interaction
- Good Value Systems

Before finalizing the strategic plan at the institute level, it is imperative that operational level planning is required. Since the academic departments are the basic units of

university structure, the department's vision missions have aligned with the institute's vision and mission. Accordingly the strategic plan of the institute has been prepared based on the strategic plan of the departments and to comply with the relevant recommendations of National Education Policy 2020.

The University Strategy is to embark on the following "Core Values":

### **CORE VALUES**

- Integrity
- Mutual Respect
- Inductiveness
- Compassion
- Institutional Social Responsibilities
- Innovation & Excellence

Based on each department's strategic plans and other inputs received from all statutory bodies of the university constituted as per UGC guidelines, Academic Council, various Advisory Committees, the following strategic goals have been identified.

### ***GOALS AND ACTION PLANS***

#### ***Goal 1***

#### ***To enhance the academic excellence to cope with International standards and benchmarks***

Since there is a paradigm shift from teacher- centric **to** student centric learning through the outcome based education, the universities must empower the students with higher order thinking skills. The conventional methods of teaching should be replaced with modern innovating teaching pedagogies which make use of ICT tools for imparting quality education to students. This in turn provides a good visibility and employability from various industries. Only then the students will be accepted globally as competent

professionals and knowledgeable in their respective domains.

### ***Action Plans***

- To introduce flexible educational system with Choice Based Credit System and mobility across disciplines as recommended by NEP 2020
- To initiate new academic programmes in trans-disciplinary areas, so that Dr. MGREI could be a leader in the delivery of knowledge
- To introduce innovation pedagogies for sound delivery of knowledge with adequate ICT tools.
- To establish Centres of Excellence in cutting edge technologies across disciplines
- To bring out liberal arts experience in research driven universities as per recommendation of NEP 2020
- To focus on overall personality development of the students by offering skill development as well as professional courses
- To introduce suitable examination reforms to make sure that quality graduates emerge
- To recruit qualified research oriented staff for the university
- To train and pursue international collaborations so that our student with adequate skill sets and profound knowledge in their respective disciplines *becomes job creators and not job seekers.*

### ***Goal 2***

***To create a suitable eco system that enables DR. MGREI to attract more foreign students, so that it becomes a favourite choice of destination for International students***

Dr. MGREI could be referred as an international university only when the university would be able to attract Foreign students and faculty. The best way to attract **international talent** is to create an ambience for them to be comfortable in teaching and learning processes at the university. We have to bring out inclusive and diverse

system of education with cross cultural activities and cross national equity. The curriculum should also support this. In the context of globalization, the internationalization has become of global market driven process and all the institutes should gear up to meet this. This is also a mandate of NEP2020

### ***Action Plans***

- ✓ To draft a policy for recruiting international students and faculty
- ✓ To improve the academic as well as physical resources on par with the international standards
- ✓ Internship program at International levels are to be encouraged
- ✓ International collaboration in teaching/research and student exchange programmes with reputed Foreign Universities through MOU's
- ✓ To recruit adjunct / visiting Professors from foreign universities
- ✓ To identify highly qualified research professors from top ranking foreign universities and offer them as Honorary Distinguished Professors
- ✓ Memberships with International societies should be made as mandatory
- ✓ To be one of the research driven universities, so that it finds a place in the global research map
- ✓ To introduce cross cultural academic programmes in Fine arts and other disciplines acceptable to foreign countries.

### ***Goal 3***

#### ***Effective student engagement and staff , student diversity***

The University campus diversity efforts mainly concern with ethnic and racial diversity of students and staff with a good support system. In order to improve student engagement in this cross-cultural nature is really a challenging task and it requires well defined strategies at the institute level.

If may necessitate some structural changes and policies of the university. Further in the

new normal situation where the hybrid learning ,the student engagement become vital and challenging.

### ***Action Plans***

- To build an enriched environment conducive to diversity and develop orientation programmes to improve diversity
- Engage students with a spirit of discovery for service
- Adopt a model of learning and discovery based on integrating ideas from from the best practicing institutes and communities both public and private
- To introduce students to research early perhaps from UG level as envisaged by NEP2020
- To encourage students with leadership and event management skills
- To arrange number of short courses by foreign professors on topics relating to cross cultural ethnic aspects and advanced technical topics
- Effective communication skills, manners need to be practiced in the university
- To recruit councilors / mentors to work closely with staff and students
- Staff from different ethnic background have to be recruited, since the lack of diversity among staff can send wrong messages to student about the campuses; must be made available either through on-line or off-line modes
- Teaching methodology needs to be changed by resorting to innovative methods of teaching
- To introduce more group works and collaborations
- All the important resources, such as journal data bases and e-books for library, Labs should be made available either in off line or on line on 24/7 basis

## ***Goal 4***

### ***Infrastructure Development***

Any university aspiring to be a global university, should invariably develop a good ambience with more than adequate physical resources and academic resources of international standards. The University **has to identify** the dynamic requirements of the departments based on new academic programs initiated, research needs and resources required for internationalization. But at the same time, we should also know how to develop a university with limited funding. The infrastructure development should be aimed at three levels of achievements over a period of strategic plan. Consolidation of existing infrastructure, creation of new labs, Research labs, should be done early.

### ***Action Plans***

- ❖ Establishment of Central Instrumentation Laboratory to take care of sophisticated equipments to be repaired and maintained.
- ❖ To create specialized labs., based on the requirements of new academic programmes initiated
- ❖ Construction of separate block for each department with required infrastructure is required in order to compete with standard bench institutes at National as well as International levels
- ❖ Smart Class Rooms with all ICT facilities
- ❖ Good Seminar halls for each department
- ❖ Re-designing class room architecture for collaborative learning
- ❖ To setup an exclusive technology business incubation centre to promote startups at the university.
- ❖ Full pledged studio development need to be taken up for e-content development.
- ❖ To enhance efforts towards digital campus or smart campus
- ❖ To create virtual labs in collaboration with industries to meet the digital transformations taking places in teaching and learning process
- ❖ Industry supported labs to be encouraged and enhanced.



## **Goal 5**

### ***To establish Centres of Excellence to promote foundational research and creativity***

*Gartner defines "a COE as a physical or virtual center of knowledge concentrating existing expertise and resources in a discipline or capability to attain and sustain world-class performance and value. This definition can be broken down into four key elements.*

*First, COEs need to focus on a tight scope defined around a specific capability such as marketing analytics or digital commerce. Next, consider the location of the COE (physical vs. virtual). Third, COEs should optimize and leverage resources internal to the organization, not external vendors or agencies.*

*Lastly, COEs should focus on pushing beyond standard performance norms to deliver incremental value to the organization. COEs should not conduct business as usual around a capability. Instead, drive toward excellence in a medium or a channel".*

This can be achieved through pooling resources or expertise across the institute and establish COE which are open to all departments for carrying out interdisciplinary innovation projects and Students projects. Then COE can add value to enrichments in a myriad ways across all departments due to their specialized research areas and expertise.

### **Action Plans**

- ❖ Identify some thrust areas where there are a large number research publications and groups working in thrust areas and establish Centres with Research excellence
- ❖ To approach government agencies for the establishment of such centres with enough justification for such centres

- ❖ To set-up a Centre of Excellence in 'environmental appraisal' at Dr. MGREI
- ❖ To set-up some Centres of Excellence with industry support or industry sponsorship and focus on innovation and product development
- ❖ Some suggestive COE's are
  - COE in Smart Manufacturing
  - COE in Data Analysis
  - COE in Cyber Security & Digital Forensics
  - COE in DevOps& Agile Technologies
  - COE in DRONE Technologies
- ❖ To strengthen the existing COE's and start new COE's in basic ***medical, Paramedical and Clinical disciplines***

### ***Goal 6***

#### ***Professional development and training activities to improve the employability of students***

In order to prepare industry **ready** graduates, it is pertinent that student should have exposure to industry environment and work culture. The students should undergo industry working experience to supplement their professional development. This type of industry experience can be **materialized** into the regular culture as industry internships. Students will undergo 3 months of training in the industry. Student will be able to decide on what sector of an industry they prefer to work. In order to bridge curricular gaps among students exclusive skill based courses and soft skills training programs need to be conducted.

#### ***Action Plans***

- To introduce pre-placement training from the second semester onwards and continue till they get placed

- Each department shall send minimum of 70% of students for industry placements. This may attract major industries for campus placement
- To conduct mock sessions and training programs by industry professionals on industry related tasks and projects
- To take necessary steps to attract more core industries for the campus placement by conducting institute-industry meets periodically
- Career focused training from first year onwards for job / Civil Services / GATE
- To improve the technical quality of students so that they can be placed in well reputed industries with good pay packages
- To increase the percentage of eligible students to improve placement percentages as this could be one bench mark for good admissions

### ***Goal 7***

#### ***Engaging Alumni to have better Alumni Network in order to get better perception than before for our University***

The Alumni are the brand ambassadors for the institute. We need to connect with them digitally since their graduation. There is a need to change our policies in order to empower Alumni to actively participate in all the development activities and institute statutory bodies such as Academic Council, Planning and Development etc

A database of Alumni may be created to get connected to them digitally or through social networks. The Alumni involvement should be more in the curriculum development of the institute so that more and more of our students will get placed in major industries

#### ***Action Plans***

- The institute should offer a portfolio of services and support that will be of some value to Alumni.

- We should bring out some policies and programmes that empower Alumni to serve the institute.
- The institute must seek regular feedback from alumni to measure the effectiveness of current efforts and the need for future programs and shape these future programs.
- To provide a good support to Alumni who own small businesses by leveraging the alumni network.
- To make use of Alumni Network to mentor students to carrier guidance and opportunities.
- Success stories of reputed Alumni could be conducted through webinars periodically through this network
- Create content work sharing with Alumni through social networks like LinkedIn, Institute Alumni Network
- To collect non funded donations for the development of libraries, labs and the institute.
- To focus on demand driven software development activities with alumni

### ***Goal 8***

#### ***Shaping the research agenda of the institute to have proper eco-system for research and development***

A very good research eco-system leads to consistent efficiency in research output and at the same time should be sustainable in the **long run**. There should be research culture to be followed by all the faculty. A University is best known globally only through the quality of research publications. This is a need to develop a good infrastructure for carrying out research in order to have good connection with good researchers across the globe. Due to rapid development in technology, the academic world will witness new form of funding models, methods of collaboration and new metrics for quality research.

## ***Action Plans***

- To attract and recruit full time faculty with the potential for carrying out highend research that will be recognized globally by peers
- To provide a seed grants to the faculty for carrying out preliminary research to develop a base for sponsored research and patents
- To provide multi-disciplinary innovative research and fundamental research to provide solution which are socially and industry relevant
- To support in an **adequate** manner the innovation from research Centres of Excellence into scalable, deployable solutions
- To create Research Chairs at the university to be occupied by internationally known researchers to drive research policies and projects at the university
- Promote an inter-disciplinary and collaborative research with institutes of great reputation
- Focus work on applied research besides basic research that solve societal, Industry, National and International problems
- Efforts may be initiated to have joint collaboration with Ph.D. programmes with top ranking universities abroad
- To focus on demand driven research activities and establish a footprint in specialized areas of research
- Creation of *Research Working Centre* which assists in quality research publications, preparing project proposals for funding so that every faculty becomes a better writer, reader and critical thinker
- To increase full time research scholars should acquire Ph. D. degrees by 2025
- All department should have faculty with a Ph. D. by the end of the year 2025
- To identify and recruit faculty who are good at research and encourage them to concentrate only on research and sponsored projects given minimal teaching load.
- More and more faculty may be encouraged to attend International Conferences so that they can initiate collaborative research

## **Goal 9**

### ***Catalyzing the Institute-Industry interaction***

Various industries located in and around the Chennai and Bengaluru was linked through Industry Institutional Planning Cell of the university for enhancing knowledge among students. Number of MOU's may be signed with corporate companies for augmenting the current knowledge in the field of Medicine, Dentistry, E & T, Architecture, Health Science, Humanities and Social Sciences, Management and Education.

Incubation Centre and startup are created through IIC, NewGen IEDC funded by MHRD, Government of India in turn of industrial collaboration, and an innovative approach is used to build an eco-system that can nurture emerging talents and instill a *Culture of Social Responsibility*. It is still a long way to achieve desired results in industrial consultancy and entrepreneur from the university.

### ***Action Plans***

- ✓ To improve industry institute interaction through continuous dialogues, meetings and interaction in various forums including Alumni Network
- ✓ To initiate industry relevant curriculum so that more and more industries are involved in the curriculum delivery and in establishing suitable labs.
- ✓ To enhance industry internships through a well known corporate and industrial visits, so that the students are aware of the industry work environment
- ✓ To conduct periodically institute industry meets to showcase the strengths and researches of the university, that may induce the industry to come for consultancy
- ✓ Senior executives from the industry could be initiated as Honorary Professors of the university and to occupy as Research Professor Chairs to be established at the universities

- ✓ Joint academic program collaboration with major industries can be encouraged
- ✓ Staff members based on their research interests can spend one or two members in industry to work on collaboration projects with consultancy
- ✓ A separate centre for sponsored research with industrial consultancy could be started

## ***Goal 10***

### ***Branding / Image Building Exercises***

In view of the proliferation of all types of media, social networks or other....., it is not that easy to present an unified image acceptable to all sections of society and all stakeholders. The university should focus on building the brand, not just the name recognition. The image building exercise should be target oriented and highly focused on making the benefits from the university reachable to stakeholders. This type of branding will improve public perception. That is why the branding is essential for any reputed university.

### ***Action Plans***

- ❖ Expand the reach of social welfare programs across regions, and introduce innovative ways to improve social and national well being
- ❖ Train a group of highly quality brand ambassadors from among the students, faculty and administrations
- ❖ All staff and students are to be encouraged to become members of professional networks, such as IEEE, ACM, ACME, AICHE, ASME, CSI... and so on, and establish Chapters to conduct relevant professional activities that reach global level.

- ❖ Articulating the role of the brand ambassadors in every aspects of Dr. MGREI starting from orientation to graduation and from community outreach to national service
- ❖ List out all top legacy of achievements of the institute and should reach all social networks periodically and reach out for right media for right causes
- ❖ To perform brand audit to find out periodically the public perception about the institute
- ❖ Digital marketing techniques can predominantly be used while using the traditional marketing techniques

### ***Goal 11***

#### ***Good value system with collaboration culture and good ambience for students / staff***

AICTE has taken a keen initiative to introduce human values in the engineering curriculum. The importance of human values and ethics are to be taught right from the first year orientation programs. Exploring and **building** human values can help to enhance higher level thinking skills among students. After graduation the students are expected to practice “ human values based education framework “.

### ***Action Plans***

- Provide a proper eco system that supports students leadership development opportunities in order to develop student potential and foster student success
- Develop a strong, vibrant , integrated community and approach to integrity to broaden the university culture
- To maintain diversity, equity and inclusiveness in the university
- Give periodical training on human values in education to faculty as well as administrative staff
- To develop a robust employer – employee relationships



- To enhance the scope of parent teachers meeting and hinting the parents on the well being of wards
- To periodically conduct leadership and managerial excellence training programs for senior executives
- Rewards based on merit following the transparent faculty appraisal for teaching and non teaching

### ***Goal 12***

#### ***Promote number of start-ups and software consultancy***

The university is consistent in getting admission in Computer Science, IT and Computer Applications. Altogether more than 1000 students are being graduated from UG and PG programs. There is a great potential for software development through the final year project at UG and PG level. Most of the students are capable of pursuing good innovative projects. The university needs to consolidate schemes for good incentives for in-house project development by these departments. There is ample scope for carrying out software consultancy.

#### ***Action Plans***

- The institute ERP package can be developed in a phased manner by Computer Applications department
- To identify potential projects in the final year B.Tech, M.Tech. and MCA programs for product development and may be recommended to Technology Incubation Park of the university
- Dr. MGR Software Park can be established on similar lines of IIT Research Park to give some fillip to the startups in software applications

- Centre of excellence in IOT, Data Analytics and AI & Machine Learning to diversify on software consultancy and software development, besides other research activities
- Image building exercises need to be taken to give more visibility to the department of CSE, IT and MCA
- To study the work flow of the university and identify various projects to be developed

### ***Goal 13***

#### ***Autonomous status for all academic departments***

It is the Policy of NEP2020 that the educational institutes should become autonomous and function independently in all administrative or academic matters. Following this direction the academic departments which are the basic units of any university should have some limited autonomy in academic matters, for example terminal examinations as well as assessment tests can be conducted by departments and results published. For all the development activities of the departments, they have to get the final approval only from Vice Chancellor / Principal of the university. As far as possible the existing hardships could be removed

#### ***Action Plans***

- Video Conference facilities for each department are to be established to promote collaborative research with National / International institutions
- Strengthening and bonding of alumni to the departments need to be enhanced by conducting regular alumni reunions at department level

- Provide departmental support for increased intellectual property infrastructure including marketing of existing assets and good financial support for faculty and student entrepreneurship activities
- Create department academic freedom to offer courses based on the dynamic requirement of the industries without the normal bureaucracy

## **Goal 14**

### **Decentralized system with well defined roles and responsibilities**

Administrative decentralization seeks to redistribute authority, responsibility and practical resources among different levels of university operations, purely for operational convenience. The departments must be empowered to take minor decisions relating to student academic matters without going through usual routes. But the university can evolve some checks and balances so that the administrative system will not go out the loop. This decentralization has been achieved in Dr. MGREI to some extent.

### ***Action Plans***

1. To encourage students participation in important academic bodies of the university such as Board of Studies and Academic Council.
2. To remove the gap between staff, student and administration and create a climate for trust and close cooperation between them.
3. To encourage local leadership in various departments.
4. To avoid inevitable delays in the decision making process and fuel the growth of the university.

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## **Strategic Planning Implementation**

### **Strategic Planning Executive Committee**

1. Vice Chancellor – Chairman
2. Dr. G.Gopalakrishnan (Provost)
3. Dr. Vishwanathan (Rector R&D)
4. Dr. Ravichandran (Pro VC)
5. Dr. K.M.Mehta (Advisor CS)
6. Dr. C.B.Palanivelu (Registrar) – Member Secretary

### **Strategic Plans Implementation and Monitoring Committee**

The Strategic plan 2030 consists of 4 major components

1. Academic Excellence.
2. Research Eco – System
3. Extension & Out-reach
4. Administrative Structure