

### Research and Innovation Policy of L.J. University

# [Passed in the Research Council Meeting] <u>Dated 5<sup>th</sup> February, 2021</u>

#### **Prologue**

Generation of knowledge is the cornerstone of any Centre of Excellence in academics. Research creates the capacity to ask the right kind of questions and seek answers. It creates the capacity to think beyond the set boundaries and create something new and innovative. It calls for a culture of research and innovation, wherein every entity in the institution, from the faculty to its students, is an integral part of this culture. It needs a conducive eco-system to foster knowledge generation and meet the research community's expectations, engaged directly or indirectly, in generating ideas, extending the frontiers of knowledge, and fostering innovations. It is possi/ble only when 'research and innovation' become a culture in the institution.

No university or academic institution can work in isolation. It is imperative to keep open the organisation's door and windows to let the fresh air of thoughts flush the internal environment with the fragrance of new ideas. The University must welcome and encourage networking and collaboration within and outside to exchange and refine ideas and learn from others as much as share its wisdom. Therefore, the research policy of L.J. University aims to create an eco-system wherein new and innovative ideas germinate and grow; and, creativity leading to innovations is treated paramount. The rules and procedures of this policy are to facilitate researchers and innovators in accomplishing their endeavours.

#### **Objectives of the Policy**

This policy offers a broad framework to create and strengthen research and innovation culture at the University. The objectives of this policy are to:

- i) encourage the faculty and students to involve themselves actively in creating new knowledge through theoretical and applied research, collaborative research including external collaborations and networks;
- ii) motivate young minds in breaking the myth of 'impossible' by fostering innovations;
- iii) focus on quality and promote ethical values in research;
- iv) ensure free flow and integration of teaching and research;
- v) encourage innovation and creation of intellectual capital;
- vi) encourage patenting and commercialisation of innovations; and,
- vii) facilitate dissemination of knowledge, thus generated in the University, through publications, conferences, workshops, seminars, training programmes, lectures, faculty exchange, etc.

#### **Broad Contours of Promoting Research**

The Policy offers full autonomy to the researchers in working on any specific theme or developing an idea in the domain of their expertise and/or interest. The researchers will have the freedom to collaborate, internally or externally, with academicians who may be nurturing similar interest. They

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will also have the freedom and will be encouraged, to approach any external agency for seeking funding support for their research. The scholars will be encouraged to share their findings widely through publications, lectures, seminars, etc. Any constructive criticism of such work will be welcomed, as it will provide an opportunity to improve. However, the Policy mandates and cautions the researchers to scrupulously adhere to the established ethical practices and norms encompassing human rights, health, safety measures, cruelty to animals, etc.

The University shall facilitate research by allocating necessary infrastructure, including access to online journals and equipment. The University will also be providing seed-fund for piloting the studies, liberally. However, given the resource constraints, while it may not be possible to fund all the research proposals, it will endeavour to support as many research proposals as possible. The University will make adequate provision for research-related travel, visits to other libraries or laboratories. It will also prepare detailed guidelines to support research endeavours. Support will also be made available to researchers for developing research proposals, and patent filing, etc. However, it expects that the researchers will explore external funding to carry out large projects.

#### **Identification of Thrust Areas**

While the researchers will have complete freedom and autonomy to decide their research priority and themes, the University will prioritise contemporary themes that are socially relevant. To meet this desired goal, the University will encourage the Schools to prepare a basket of ideas that have a priority. Young scholars will be encouraged to pursue some of the ideas from this basket. However, this will provide a broad idea of priority, but in no way constrain any researcher to identify his/her idea to work. In case, the University wants to explore some new or contemporary issue, it will announce such areas/themes/topics twice a year, in January and July, and will encourage scholars by offering incentives. Such explorations will be restricted to top three project proposals, submitted by the faculty/students. A separate scheme will be created for this purpose.

#### Research at U.G. and P.G. Level

The New Education Policy identifies two types of universities viz. teaching driven, (ii) research-driven, and incentivises them differently. L.J. University is envisaged as a research-driven teaching university. Every attempt will be made to make education more creative and meaningful. Research carried out by the faculty, will be brought to the classrooms to enrich the teaching content. In this way, the students will not only learn about the current theory and practice in their domain; they will also get exposed to research. The University proposed taking such learning forward and encouraging students to get involved in their research activities.

To promote research interests among students, L J University will introduce the research component in its curriculum. An attempt will be made to introduce at least one course on research methodology in most undergraduate and postgraduate programmes, in the final year of their courses. The students will be encouraged to undertake Minor Research Projects, under the guidance of their teachers. They will also be encouraged to get involved in the projects being carried out by the faculty. As per the New Education Policy, the students who opt for 4-year graduation programme, will, in any case, have to take up a major research project, in the field of their interest, under the guidance of the faculty and submit the dissertation for evaluation. The dissertation's evaluation will

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be followed by the viva voce, subject to clearance of both the dissertation and viva voce; they will be eligible for the Degree certificate. The research projects will also be an integral part of the post-graduation programmes at the University.

#### Ph.D. Programme

The Doctoral Programmes will be given a significant thrust in the University. All the Schools constituting the University will be required to mount doctoral and post-doctoral programmes. The programme will be open to full-time scholars as well as part-time scholars who might be working. It will also be open to professional degree holders such as Chartered Accountants, Company Secretaries, etc., subject to the equivalence of their qualifications with a Master's Degree. The University will announce the recruitment of doctoral students, every year in December. Post-graduation in the subject for which one is applying, with a minimum of 55 per cent marks at the last degree will be mandatory, except in the case of SC/ST and SEBC, for whom a relaxation of five per cent marks will be made admissible, as per the Rules of the University Grants Commission. The applicants will have to clear an entrance test comprising of a written test and viva voce. All the candidates who clear the entrance examination will be inducted in the Doctoral programme. The programme's duration is envisaged to be 3-4 years, with a provision of conditional extension of the period up to six years, after which the registration of the student shall be cancelled.

The University may not have expertise in all the areas of research interest of the doctoral students. To meet such exigencies, the University proposes to collaborate with reputed institutions like Institutions of National Importance and centres of excellence in their respective field, such as Physical Research Laboratory (PRL), Indian Space Research Organization (ISRO), Indian Institute of Plasma Research (IPR), etc. in the public sector; and, a few select R&D Centers of reputed industries such as Zydus Cadila, Torrent Research Center, Intas Pharmaceuticals, etc., in the private sector, and will recognise such organisations as research centres for research work leading to the degree of Ph. D.

The University shall earmark a budget line for doctoral fellowships and creating necessary research infrastructure in different Schools.

The University will encourage its faculty and research scholars to attend national and international workshops/seminars/conferences, for which a limited fund will be made available by the University. The University will encourage the researcher to explore external funding/grants for attending especially international conferences and workshops.

It will be prudent to mention that facilitating a Ph.D. for L.J. University will not be a surplus generation activity. It will be treated as an investment in capacity building of the researchers. It will give back to the scholars more than what it will charge as fees.

#### **Collaborative Research Projects**

The University realises the gap in the academia-industry interaction. It also realises that this collaboration is a backbone of academic excellence. The University has already set up an 'Industry-Academia Council' under the Vice-Chancellor's chairmanship. The main agenda of the Council is to:

(i) create a 'Vision Industry 4.0' for L.J. University, and evolve a strategy to implement the same;



- (ii) strengthen Industry-Academia Linkage through research and consultations;
- (iii) undertake advocacy with the Central/State Government departments to strengthen policy framework for Industry 4.0, and beyond;
- (iv) design relevant skill development programmes for making available well-accomplished and industry-ready human resources to industry; and
- (v) undertake any activity in pursuance of the above objectives.

With these objectives in mind, the University has planned the following activities:

#### (i) Industry-Sponsored Research Project:

The University proposes a two-prong strategy to foster and strengthen this interaction, viz. (i) identifying the problems -technical and managerial - in the industry and attempting to solve those problems. In such cases, the industry could be charged a subsidised consultancy rate; (ii) industry may identify a problem and approaches the University for a Solution. In this case, the industry will be expected to meet the full cost of the intervention. Sometimes, the intervention may lead to inventions and require patenting. In such a case, the faculty will be the innovator, and the industry and the University, will be the assignees in equal proportion.

In several cases, the projects call for an inter-disciplinary approach. In such cases, experts from related disciplines will be drawn to offer support to the industry. Creating such inter-disciplinary teams could be difficult for the industry, whereas it could be done easily by the University. It will be a win-win situation for all. The industry will get a solution to the problem, a researcher will acquire learning, and the University will get branding as a centre of excellence.

#### (ii) Collaborative Research (Domestic and International)

In present days, the generation of knowledge is widespread. Various universities and institutions are working on the same or similar problems. It is likely to pay rich dividends if such pieces scattered all around could be brought at one platform. The output could be faster and much cost-effective and more efficient if done collaboratively, drawing upon the strengths of various institutions engaged in finding a solution to the same or similar problem. Thus, 'collaboration' is the name of the game, collaboration at local, regional, national and international.

L J University is negotiating and signing MoUs with reputed institutions across the globe (initially focusing France, Germany, UK, USA and South Africa), besides entering into a collaboration with centres on excellence in the country for conducting joint research in the areas of mutual interest.

#### Capacity Building for Research and Publication in the University

So far, most of our universities and colleges of higher learning have been focusing on teaching. Research has been an area that was less explored and relatively lesser, attended by the faculty. The New Education Policy, recently announced by Government of India, stipulates a binary of teaching-intensive universities and research-intensive universities. We envisage L J University to emerge as a research-driven teaching university. However, it will necessitate a reorientation of the faculty, as many have little research orientation. Even those who wish to engage in research find difficulty proceeding ahead due to their limited research skills. They may fall short on conceiving and writing

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a good research proposal, to begin with. Therefore, the University proposes to conduct a series of programmes on various facets of research for the faculty. A scheme for promoting research is being evolved, presently.

At present, very few faculty members can publish in reputed journals. Following the axiom of 'publish or perish', the University will lay heavy focus on publication. The University is evolving an incentive structure to encourage its faculty members to publish in reputed journals. Once research picks up, it is expected that increasingly a higher number of faculty members will be publishing their research outputs. Each school in the University shall prepare a list of reputed journals in their domain. The incentives will be offered in a graded manner, depending upon the reputation of the Journal.

It is also planned to begin with a working paper series in each of the schools, with an ultimate objective of bringing a peer-reviewed journal of high repute by the school, say in the next 5-7 years.

The schools shall also encourage the schools to organise research seminars, workshops and conferences to give a sound push to research endeavours. (Please see Annexure I)

#### **Promoting Innovations in the University**

Several students have very innovative ideas while undergoing their undergraduate studies. However, the present education system seldom allows them to develop their ideas, get patented and commercialise. Students have many ideas on which they want to The L J Group of Institutions have been supporting startups for quite some time. They also organise a well-known event "L J Innovation Village" in which about 100 innovators across the country participate along with their innovation prototypes. This platform also offers an opportunity to pitch before the investors for raising funds. It will also encourage the students to file and publish their patents. University will extend funding support and meet the cost of patenting the product/process of the students.

All this, however, starts from a nascent idea that the students might have. Therefore, it is imperative to facilitate the process of converting a raw idea into a viable and commercialised product. The University will encourage and foster such ideas and take them forward through its incubation programme. However, before joining incubators, the students will be encouraged to use idea labs created in each School of the University and reach the stage of the proof of concept. The Universality is evolving its incubation policy which will provide detailed guidelines for potential incubatees.

#### **Patenting and safeguarding Intellectual Property Rights**

The University envisages strengthening research that leads to patents. The University will encourage its faculty and researchers to come up with patentable research. The University will be happy to meet the costs involved in patenting the innovations, especially from its Schools of Engineering, Pharmacy, Biotechnology, architecture, and Sciences. The University will also be willing to extend this facility to its incubatees as well, on a selective basis, if need be. The University has been facilitating awareness about intellectual property rights among faculty, researchers, and scholars to know patenting requirements, including documentation required for the same.. Sources such as the Department of Science, and Department of bio-Technology, Government of India, and GUJCOST, Government of Gujarat, will be tapped to fund the patent. In case, the innovation has high potential for commercialisation, even the University will invest the required resources.

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While the University will bear the costs involved in filing a patent, it will be expected that the researcher will share the earnings with the University once it is commercialised. Guidelines will be developed to this effect.

#### **Establishment of Research Chairs**

The University also envisages the creation of Research Chairs in various disciplines. It will appoint Professors Emeritus and Chair Professors to occupy such prestigious positions. A Committee, consisting of reputed and well-known researchers will select such academicians from senior scientists or professors. They will be expected to research on cutting edge technology or some contemporary issue. Besides conducting research, they will also be expected to deliver at least one public lecture each year, besides mentoring the faculty and teaching at least one courses every year.

#### **Establishment of Research Directorate and Research Review Board**

To promote, monitor and incentivise research, the University shall set up a Research Directorate to administer various research related activities. It is also decided to set up a Research Review Board, to be chaired by the Vice-Chancellor. It will also have the Deans/heads of the Schools as its Members. Director of the Research Directorate will be the ex-officio Member-Secretary of the Board. The Board will invite research proposals from the faculty twice a year. It will evaluate the proposals and decide funding support for successful proposals, monitor the progress, every quarter, and assess the outcome/output of the research. The Directorate will also coordinate the patenting of innovations and dissemination of the research findings.

The Board will also encourage organising seminars, workshops and conferences by various schools, and also encourage publication of the volume based on the papers submitted by various researchers. The Directorate, under the guidance of the Board, will put in place a quality Assurance Framework.

The Board will meet every quarter to take the activities forward.

#### **Research Misconduct**

The University has a strict Ethics Policy. Any violation of the L J University Ethics Policy will be treated seriously. The areas covered under this domain include any misconduct such as falsification or plagiarism in proposing, performing or reviewing research or reporting research results, and other violations of the University such as sexual harassment. Severe disciplinary action will be taken against the alleged person if found guilty after a fair inquiry.

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#### **Review of the Policy**

The policy will be reviewed after three years.

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# Annexure 'I' Scheme for Promoting Research among the Faculty Members of the L J University

L J University's vision is to emerge as a front-ranking, research-led teaching university in the country. This is possible only when the university faculty members generate a significant output of original and cutting-edge research. The University would like to follow the axiom of 'Publish or Perish'. Therefore, the University endeavours to promote and strengthen quality research among its faculty members. The faculty will be encouraged to publish his/her research outcomes as books published by reputed publishers and research papers published in top-ranked research journals. Besides publication, they will also be encouraged and supported to present papers in seminars/conferences of repute, within and outside the country, organise seminars and conferences, hold colloquiums and special lectures, enhance quality research and create a culture of research in the University.

However, the University is aware that research needs resources, human and fiscal. The University would like to facilitate the faculty members to research by creating time and resources. To operationalise the vision, this scheme has been evolved so that the faculty University starts generating a wealth of knowledge. This will earn national and international recognition for the concerned faculty and bring laurels reputation for the University. This document, henceforth known as "The Scheme for Promoting Research in the L J University". This scheme is created specifically to promote research among the faculty of the University. The scheme will facilitate research by offering incentives of various kinds viz.:

- 1. Funding Research Proposals of the faculty
- 2. Financial Incentive for Publications
- 3. Awards, prizes and recognition
- 4. Support for attending national/regional workshops, seminars and conferences
- 5. Support for attending international seminars and conferences
- 6. Incentive in terms of more weightage for the career advancement

#### 1. Funding Research Proposals:

The faculty members are encouraged to submit their research proposals to their respective Heads of the Department. The theme of the proposal should be contemporary and should extend the frontiers of knowledge. The format for submission of the proposal is attached as Annexure-I. Once submitted, the proposal will be sent to two external experts for referral and will be sanctioned only if the referees' feedback is positive. However, the concerned faculty may resubmit the proposal after integrating the external referees' suggestions/concerns. Rs.1,00,000 will be made available to the faculty for conducting research. Based on the research, the faculty members are expected to explore external funding for a larger study that could also be an extension of their study.

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#### 2. Financial Incentive for Publication

To encourage publication by the faculty members, the University will give cash awards to the faculty members who publish their papers in reputed journals. The amount of the cash reward will vary depending upon the reputation of the journal; the paper has been published in, as follows:

- (i) Grade 'A' Journals in science and engineering streams such as Nature, Science, and the like (Journals with more than 4.0 SJR or more than 280 H Index or more than 6.0 Impact factor) Rs. 100,000/- per paper
- (ii) Grade 'A' Journals in social sciences and management like the Academy of Management Annales, Academy of Management Journal, Harvard Business Review, and the like (Journals with more than 3.0 SJR or more than 150 H Index or more than 5.0 Impact factor) Rs. 100,000/- per paper
- (iii) Grade 'B' Journals in the science and engineering streams like Lancet, Journal of American Chemical Society, Nature Microbiology, Microbiology and Molecular Biology Reviews. Nature Methods, Nature Biotechnology and journals of similar standard (Journals with more than 3.0 SJR or more than 150 H Index or more than 5.0 Impact factor): Rs. 50,000/-.
- (iv) Grade 'B' Journals in social; sciences and management with more than 2.0 SJR or over 100 H Index or more than 4.0 Impact factor.: Rs. 50,000/-
- (v) Grade 'C' Journals with more than 1.0 SJR or over 75 H Index or over 2.0 Impact factor: Rs. 25,000/-
- (vi) It may be noted that the Impact Factor published only by Clarivate Analytics (Thomson Reuters) will be considered for the awards.
- (vii) Grade 'D' Journals listed in Web of Science or ABDC or Scopus, etc. Rs. 11,000/-
- (viii) Grade 'E' Journals listed in the University Grants Commission Care List Group II: Rs. 5,000/-
- (ix) Grade 'E' Journals listed in UGC Care List I: Rs. 2,100

If more than one person writes the paper, the cash reward will be divided equally. However, papers written jointly with a Ph. D. Scholar will not qualify for this reward by his/her research supervisor.

The list of such journals by each discipline will be made available to the researchers/authors.

#### 3. Awards, Prizes and Recognition

- (i) A faculty who published more than 5 papers in a year in at least Grade 'C' Journals will be felicitated publicly in the University in a specially organised function and given a certificate of merit, and Rs. 11,000/- as a cash reward. A person who publishes at least 3 papers in Category 'C' Journals will be given a Merit certificate and a cash award of Rs. 5,000/-.
- (ii) Similarly, if a faculty publishes a scholarly book (not a textbook), (s)he will be felicitated publicly and given a cash reward of Rs. 11,000/-, subject to the condition that the book should be published by a reputed publisher like Sage, Springer, Oxford University Press, Tata McGraw, Elsevier, John Wiley & Sons,

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Taylor & Francis, Sage Publications, Blackwell Publishers, Cambridge University Press, etc. However, for the first two years, the books published by other reputed publishers will also be considered for the award.

- (iii) For Best Paper Award Published in an international/national journal: A matching amount given by the journal.
- (iv) For Best Oral Presentation award at National/International conferences: Matching amount as given by the organisers.
- (v) For Best Poster Presentation award at National/International conferences: Matching amount as given by the organisers.
- (vi) For awards like Shanti Swaroop Bhatnagar award, Young Scientist Award, Scientist of the year award: Rs. 25000/-.
- (vii) Best teacher of the year award, Lifetime achievement award by national bodies/State and Union governments: Rs. 10,000/-.
- (viii) An incentive worth Rs. 15, 000/- will be awarded if a faculty bags an external research grants higher than Rs. 15,00,000/-.
- (ix) For International Patent and its conversion into deliverables/marketable product: Rs. 20,000.
- (x) For National Patent and its conversion into deliverables/marketable product: Rs. 10,000
- (xi) For All Other Patents: Rs.5,000/-.

## 4. Support for Attending National/Regional Workshops, Seminars and Conferences

The faculty can attend one conference/seminar/workshop of academic standing and repute, once in two years if her/his paper is accepted for presentation in the conference/seminar/workshop. The faculty will be reimbursed 2-tier A.C. railway fare for travelling between Ahmedabad and the conference place, besides registration fees (if any) of the conference, and Rs.250 per day toward out of pocket expense for conference/seminar/workshop days, as well as travelling days. However, if more than one person writes a paper, only the principal author will be entitled to this facility. The University will notify the Conferences that will be eligible for faculty members to support.

#### 5. Support for Attending International Seminars and Conferences

The faculty can attend one International conference/seminar/workshop of academic standing and international repute, once in five (5) years, provided that her/his paper is accepted for presentation in the conference/seminar/workshop. The faculty will be reimbursed economy airfare from Ahmedabad to place of conference, besides registration fees (if any) of the conference, and US\$ 50 per day toward out of pocket expense for conference/seminar/workshop days, plus one day before and one day after the event.

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However, if more than one person writes a paper, only the principal author will be entitled to this facility. The University will notify the International Conferences that will be eligible for faculty members to support.

## 6. Incentive in terms of Higher Weightage in the Career Advancement

All the above achievements will be converted into points and will have a weightage of 25 per cent in the advancement of their career.

Note: A faculty who avails such benefit under any other university scheme will not be entitled to avail benefit of these schemes. For example, a university faculty registered for the Doctoral Programme will be entitled to either of the schemes but not for both.

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