COMMISSION FOR REFORMS IN HIGHER EDUCATION, 2022

Report

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Department of Higher Education
Government of Kerala

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EXECUTIVE SUMMARY

The Government of Kerala appointed three Commissions to suggest measures to improve higher education in the State. The objective was to guide public policy in higher education towards building a knowledge economy. This report is of one of three Commissions. It was asked to recommend a comprehensive set of policy initiatives to structurally transform the sector.

Our recommendations are essentially premised on a goal to promote a higher education ecosystem that guarantees quality and excellence, while remaining faithful to the ideas of institutional autonomy, academic freedom, inclusion, social justice, and accountability. The report argues that the task of building a knowledge economy in Kerala must imply its **people centred** nature. The Government must play a leading role in the process, both as an investor and as a regulator.

An important goal the Government of Kerala has set for itself is to raise the State's gross enrolment rate in higher education (GER_{HE}) from the current 38.8 per cent to 75 per cent. In this report, we provide a road map to achieve a **60 per cent GER_{HE} by 2031** and **75 per cent GER_{HE} by 2036**. We note that achieving this target would imply fresh enrolment of 5.35 lakh persons by 2031 and 9.54 lakh persons by 2036. For this to be attained, Kerala needs a drastic restructuring of the system of higher education. For this, we recommend in Chapter II that the State would need to establish a few new and large cutting-edge institutions; begin new programmes in the existing institutions; expand student strength in selected existing programmes; and optimally use the possibilities of digital education avenues.

While aiming for this quantitative target, Kerala must also ensure that the spread of higher education is **equitable** across regions, social groups, gender and the differently abled – these would go a long way in bringing in new sections of the population into higher education as well as ensuring that the expansion is truly mass in character.

The system of higher education in Kerala needs to be transparent, efficient, and effective. At present, there are far too many systemic features that restrict possibilities, delay processes, and end up harassing, discouraging and disincentivising the core stakeholders viz., students and teachers. In Chapter III, we offer a set of major changes to ensure that there is a **dignified student life** and a **dignified faculty life**. There must be a Charter of Student Rights and a Charter of Teacher Rights to guide this process in each institution – our view is that services in higher education must acquire the status of a right for students and teachers. We also offer a series of specific measures that must be included in these Charters. We hope that all of this would converge to expand, what we call, the **Ease of Doing Education** for students and teachers.

The report also proposes that all unfair practices be rooted out in the recruitment of teachers, and measures be instituted to ensure quality of teachers recruited. We propose a comprehensive law on "Prevention of Corrupt Practices in Higher Education". We recommend that all faculty appointments in the government-aided institutions be passed over to a **Higher Education Faculty Recruitment Board (HEFRB)**. The HEFRB must also periodically conduct an eligibility test and publish a list of eligible candidates, only from which appointments may be made into private unaided institutions.

Improving the quality of higher education and meeting the challenges of the future need consistent engagement with **curricula and syllabi**. In Chapter IV, we recommend an improved implementation of the semester system, a drastic decentralisation of syllabus preparation and evaluation, and an expanded provisioning of credit sharing and transfer. We also recommend a comprehensive reform in undergraduate curriculum with effect from 2023-24, where a **four-year structure** with a single lateral exit option must replace the present three-year structure. We build this pathway further into the postgraduate and doctoral programmes, where the fourth year of the undergraduate stream must be integrated with the first year of the postgraduate stream.

To make its imprint as a knowledge economy, Kerala needs to place a strong foot forward in the sphere of **science, technology, and innovation**. Higher education must play the critical role of a hub in this transformation – by linking universities and industry, promoting entrepreneurship and start-ups among teachers and students, and building a strong infrastructural backbone to aid these changes. In Chapter V, we have recommended a critical set of measures to enhance Kerala's strength and presence in these spheres. This includes building new cutting-edge institutions, knowledge consortiums, transdisciplinary centres, research parks and analytical services. We argue for a **holistic approach** to nurture research and innovation; we also provide potential drafts of official policies on innovation and incubation.

Just as in science, technology, and innovation, we also propose the establishment of institutional networks and missions for **interdisciplinary and transdisciplinary research** in social sciences, humanities, languages, and arts. At a time when research on social sciences and humanities is facing hostility from policy quarters across the globe, we believe that the Government of Kerala has a unique responsibility to promote research in these fields. In Chapter VI, we recommend the establishment of new institutions in these subjects. We also recommend building a network for research on translation of texts as well as in technology and processing in Malayalam.

Even as we establish new institutions, what is obvious to us is that the real thrust to a rise in quantity and quality in higher education must come from the existing university departments and

colleges. This is where the largest share of students is and will continue to be in the future. In Chapter VII, we propose a set of sweeping changes in Kerala's higher education ecosystem. Kerala urgently needs to **declutter its fragmented university network**. We propose an end to mono-disciplinary universities and to gradually cluster the existing smaller universities into larger and viable entities. All universities in the State must be brought under the Department of Higher Education for improved coordination and smoother faculty and student mobility. We also recommend a move towards complete internal assessment, mid-course evaluation and semester-end evaluation in higher education over a period of ten years.

We also see the need to adopt specific steps to improve the functioning of government colleges. As an important first step, we propose the elevation of top 20 government colleges in the State as **constituent colleges**. These colleges will not only have autonomy, but also will receive specific development grants from the Government, have a closer link with university departments, have freedom to offer their own courses, and have freedom to recruit their own faculty as per needs. We also suggest a regrouping of the existing faculty in the government colleges to be appointed into the constituent colleges, where their jobs will remain non-transferable.

At the systemic level, we propose a strengthening of the Kerala State Higher Education Council (KSHEC) to equip it to discharge the programme of reform that we have suggested in this report. For this purpose, we recommend the creation of an enabling academic and administrative structure for the KSHEC.

As the overall higher education ecosystem changes, university structures would also have to change. In Chapter VIII, we suggest a reform programme for the university system based on **five pillars**: academic freedom; financial autonomy; governance from within; bottom-up structure of representation in academic and administrative bodies; and a complete separation of academic and administrative strands of governance. We provide a clear pathway for this reform with the constitution of new functional **bodies**, such as the Board of Regents, and a hierarchy of **principal officers** for the university. The principal officers of the university will be the Visitor, the Chancellor, the Vice-Chancellor, and the Pro Vice-Chancellor, supported by the Registrar, the Finance Officer, the Deans, and the Heads of Departments.

The Chief Minister will be the **Visitor** of public universities. Each university will have a **Chancellor**, who must be a person of eminence who has distinguished herself/himself in public life through a lifetime of excellence and leadership. The **Vice-Chancellor** must be a distinguished academic, selected through public notification, and a world-wide search. A new process for selecting the Vice-Chancellors is proposed.

There must be a major improvement in the library networks and digital infrastructure in the higher education system of Kerala. In Chapter IX, we locate the **library as a central component of the teaching-learning process**. We suggest enhanced funding and new designs for libraries and argue for them to become repositories of Open Education Resources (OER). Expansion of GER_{HE} is also envisaged by us through an expansion of digital learning. For this, the digital infrastructure in universities and colleges must be significantly improved and brought up to global standards.

All these reforms are premised on a leadership role by the Government in investment and regulation. The Commission gives a clarion call in Chapter X for a **major step-up of public investment** in higher education if the targets set for raising GER_{HE} are to be achieved. We provide six scenarios of future expenditure requirements across which these targets may be viewed, with variable roles for the extent of enrolment in the government system. To achieve 75 per cent GER_{HE}, the required government expenditure in 2036-37 would be between Rs 22,953 crore and Rs 32,771 crore (up from Rs 5731 crore in 2019-20). To achieve 60 per cent GER_{HE}, the required government expenditure in 2031-32 would be between Rs 15,269 crore and Rs 20,245 crore (again, up from Rs 5731 crore in 2019-20).

We believe that these targets of expenditure can be met if the State's plan expenditure on higher education rises consistently by 12 per cent per annum till 2036. As a share of the total education expenditure, we recommend a rise of public spending in higher education from the existing 28.6 per cent to 33 per cent by 2031-32 and 40 per cent by 2036-37. An increasing share of expenditure on higher education must come from the plan, and an increasing share of such expenditure must be directed towards capital expenditure. This would mean that the non-plan components of public expenditure must be gradually brought down; we, thus, suggest to cap the Government's pay out of salaries of teachers in the government-aided colleges at the present level.

While the Government remains the important investor in higher education, we must also focus on three distinct alternatives to supplement public expenditure. We discuss this in Chapter XI. First, we must encourage and incentivise colleges and universities to raise their **own resources** including by adopting a differential fee structure. We suggest that tuition fees must be fixed based on three factors: (a) input costs; (b) market demand; and (c) student's economic background. Thus, while tuition fees may have to be raised, a progressive system of graded tuition fee waivers based on family income slabs must be ensured. There should be full fee waiver of tuition fees for the socially and economically marginalised. Higher education institutions must also be encouraged to mobilise a range of other non-fee revenue sources.

Secondly, even when the Government remains an important enroller of fresh students, the task of raising GER$_{HE}$ would remain incomplete without the participation of the private self-sustaining sector. We suggest that policy in the State be aligned with the promotion and regulation of such self-sustaining institutions. To ensure their social regulation, we recommend the setting up of a regulatory structure called **Board of Self-Sustaining Institutions in Higher Education (BSSIHE)**.

Finally, we also recommend that selected aspiring self-sustaining institutions may be elevated to the status of private universities after ensuring that they abide by the philosophies of scholarship and social justice. The system of approving deemed to be universities must be ended. We also specifically recommend the enactment of a **Kerala State Private Universities Act**.

I

INTRODUCTION

Preamble

Kerala occupies a leading position among the Indian States in social indicators of development, such as literacy, life expectancy rates, access to healthcare, infant mortality, and birth rates. The state also features among the top three in the performing grading index of school education. In this context, with the aim of raising higher education to similar levels of high performance, the Government of Kerala has initiated steps for the reform of higher education through the setting up of three Commissions. The first is to make proposals on policy changes in the structure, content, and institutional practices of higher education; the second is to suggest changes in the legal and regulatory mechanisms of higher education institutions, and the third is to review the present systems of evaluation and examinations in higher education. Our Commission is the first, entrusted with putting forward proposals for the reconstruction of the entire system of higher education in the State (see Appendix I for the government order and the Terms of Reference).

Our mandate is to recommend to the government a comprehensive set of policy initiatives that are intended to structurally transform higher education in Kerala, making it relevant and responsive to the State's unique historical, socioeconomic, and spatial contexts and needs, and setting it on a trajectory towards the highest standards of excellence. The mandate for our commission has definite interfaces with those for the other two commissions. While ours may be in terms of broad strokes on a wider canvas with a longer timeframe for transformation, we also attempt to suggest roadmaps to get there.

We have tried to engage with issues in higher education in the most comprehensive way possible – its core processes, institutions, structures, statutory provisions, resource support, an enabling policy environment and the larger ecosystem in which it is located. We attempt to address the needs and aspirations of its major constituents, particularly students and teachers, as well as the broader expectations of Kerala society. It has also been our endeavour to take on board the perspective of the community, particularly those who are outside the higher education system and aspire to participate in it. We realise that this involves envisioning likely future scenarios in higher education in Kerala in a 10-15 year span and work backwards in terms of specific sets of intermediate goals.

We are realistic in that we need to work with what is available – the institutional structures, systems, statutory provisions, processes, people and what is familiar and comfortable to them, as they manifest at present, and then work incrementally forward towards our vision. In doing

so, we will have to strike a balance between stability and inertia of the old order and the dynamism and disruption involved in creating a new order. In other words, what we are proposing is not a tinkering of the present system, which will only serve to reduplicate the present problems in another form or fashion, but a fundamental revisioning of the entire structure of higher education to enable it to face up to contemporary and future challenges.

We proceed from the assumption that institutions of higher education are essentially self-governing communities of scholars and practitioners working within the broad framework of their social mandate. This will need to be reflected in the way governance structures and processes are envisaged. We believe that working on old institutions and institutional cultures are as important as proposing new institutions. There is something about the overall cultural context that contributes towards the short shelf lives of our institutions. It is important to transform the inertial elements of the institutional culture and at the same time, strengthen the organic connections with the social and historical contexts of existing institutions. It is equally important to propose setting up of new institutions with a distinct set of organisational conditions. Their design must be to promote an institutional culture based on academic freedom, dignity, collegiality, accountability to students and peers, and institutional autonomy.

Expanding the reach and inclusiveness of higher education with acceptable levels of quality (i.e., access coupled with quality and success) on the one hand, and creation of institutions of excellence set to international standards on the other are not mutually exclusive alternatives. These will have to go hand in hand.

There is an incremental progression in higher education starting from the undergraduate level through the postgraduate level, culminating in research at the doctoral and postdoctoral levels. Emphasis on any one level at the cost of the others is bound to create imbalance in the entire structure since all these various levels contribute and feed into each other. Consequently, our approach is a holistic approach, which takes the undergraduate level as the foundation. Other levels must build on this foundation, providing the competence base for subsequent advanced study and research, citizenship and effective participation in the economy and society. We look at higher education as a nursery for rational and critical thinking, creativity, and compassion, and striving for excellence; together, these constitute the foundation of a progressive, humane, and civil society built on core social values of equity, democracy, constitutional morality, and secularism.

The creation of a "knowledge economy" cannot be disengaged from efforts to create a "knowledge society". The cardinal principle of this approach is the idea that all knowledge ultimately belongs to the people and must be deployed, not for the benefit of a few, but for the

greater social good. In this sense, what we wish to put forward is the concept of a "**people-centred knowledge society**" that considers the huge richness of Kerala's social diversity and the varied aspirations of the diverse groups that constitute it.

We propose strategies for bringing about flexibility, dynamism, responsiveness, efficiency, academic freedom, autonomy, and accountability, not merely at the systemic and macro levels, but right from the cellular level, which is at the level of an institution, all of which facilitate a movement towards freedom and dignity for all constituents of the higher education community.

Aims and guiding principles

The major aims towards which our report is oriented are:

- To restructure the system of higher education in Kerala in alignment with the objectives of a knowledge society;
- To re-energise its universities as houses of knowledge production and skill generation;
- To ensure that higher education institutions in the State are centres of critical thinking geared to developing and maintaining the core social values of equity, democracy, scientific temper, secularism, and constitutional citizenship;
- To suggest measures that will promote flexibility, academic autonomy, and accountability in the administration of higher education;
- To propose new institutions and structures that will be future-looking and address the upcoming challenges and aspirations of Kerala society;
- To propose an innovation policy to create, protect, and market the intellectual property created in higher education institutions;
- To recommend the principles and practices to be followed by institutions to establish research parks, incubate Section 8 companies and start-ups, and to determine the role, mandate, and responsibilities of such institutions; and
- To make recommendations by which the advanced analytical, computational, and other instrumentation facilities needed for knowledge creation are maintained, upgraded, and made accessible to higher education institutions.

The important guiding principles that we have adopted in writing our report are as follows:

- Expansion of access to higher education to raise GER to 60 per cent and 75 per cent over a specific time frame;
- Improvement in the quality of higher education at the levels of research, teaching, and learning;

- Establishment of State-level, national and international networks of institutions and academics to enhance possibilities of learning and research;
- Reforms in the administration of universities to ensure academic autonomy and excellence;
- Promotion of opportunities for movement, exchange, and collaboration across institutions of higher education;
- Assurance of "ease of doing education" based on a rights-based framework;
- Guarantees for a "dignified student life" and a "dignified teacher life";
- Adapt new technology and practices to improve quality, facilitate experiential learning and take higher education to masses;
- Institution/improvement of library-centred learning and improve library infrastructure and networks;
- Drastic enhancement of public investment in higher education; and
- Development of strategies to mobilise resources from other sources.

Methodology

For arriving at the discussions and recommendations contained in this report, the Commission adopted a multi-pronged methodology of work, comprising the following:

- Study of previous reports of commissions/committees on higher education;
- Analysis of the existing data on the demographics, geographical distribution of institutions, institutional structures, affiliation patterns and funding patterns;
- Collection of data on faculty, employees, student enrolment, examinations and evaluation from the universities, colleges, and other institutions;
- Offline and online consultations with thought leaders, eminent academics, technologists, and industry leaders from within the State and outside;
- Discussions with officials of the Kerala State Planning Board, Public Service Commission (PSC), cultural academies, and government departments;
- Site visits to representative institutions and consultations with faculty, students, administrators and staff;
- Public sittings to field opinions and suggestions from the representatives of faculty/employee/student organisations, NGOs, and members of the public;
- Discussions with individuals and groups working in specific areas of education, gender, and social inclusion;
- Online survey to collect information and opinions; and
- Collection of suggestions from the public through email and post.

In addition to the above, we had detailed and prolonged consultations within the Commission to formulate our perceptions and approaches and to ensure that they not only reflect the aspirations of the stakeholders of the system but also represent the best of potentialities for the higher education system of Kerala.

During our field visits, along with an intense and informed tendency for critique, we have also witnessed tremendous hope and expectation for higher education among the various constituencies: students, teachers, staff, community, and other stakeholders, as well as thought leaders. The seriousness with which people are looking at possible transformations in higher education has convinced us that the time has come for some very major structural reforms to be initiated in higher education. When the time has come for an idea, there is no stopping it.

The report: An overview

We had submitted an interim report in February 2022 that sought to share our perceptions and perspectives based on our explorations till then, in terms of field visits, interactions and study of documents. We also shared with the Government a few tangible proposals that we thought needed to be prioritised. We were very pleased that some of these suggestions were readily taken on board by the Government. Some of them needed budget outlays, and we were happy to see higher allocations to higher education announced in the State's budget for 2022-23. The interim report focused on building a base for quality higher education, particularly at the level of colleges. Here, in our final report, we work on a wider canvas and address issues concerning higher education in a comprehensive manner.

- The Chapter 2 is on *Access and Equity*. It tries to explain the implications of the target of GER that the Government has set for itself. It proposes a strategy to reach there and the ways in which along with considerations of access and intake of students, the questions of equity and social justice need to be addressed.
- The Commission considered institution as the unit in which reform must find its place. The issue of dignity in participating in higher education, whether as a teacher or as a student, is of prime concern. This and the associated issues are the focus for the Chapter 3, *Ease of Doing Education.*
- *Curriculum Reform* is the focus of Chapter 4. It is about reforms in curriculum development as well curriculum restructuring at the undergraduate, postgraduate, and doctoral levels.
- Chapter 5 is on *Scientific Research, Innovation, and Incubation*. It presents a whole landscape of institutions that will scaffold science and technology, and its applications.

- Institutional networks and missions for interdisciplinary and transdisciplinary research in social sciences, languages and other allied areas and its policy applications are the theme for Chapter 6 *Research and Innovation in Social Sciences, Humanities, Languages and Arts.*
- Chapter 7 is *Higher Education Ecosystem*, which is about reform in the institutional layout and their relationships.
- The governance structures and of universities are the theme of Chapter 8 *University Governance*.
- Chapter 9 is about Library and *Digital Infrastructure.*
- Chapter 10 on *Funding* is about public finance of expansion of and reforms in higher education.
- The theme of Chapter 11 is *Mobilising Resources and Private Partnerships* in which the discussion is on finding alternative sources of resource support for higher education.
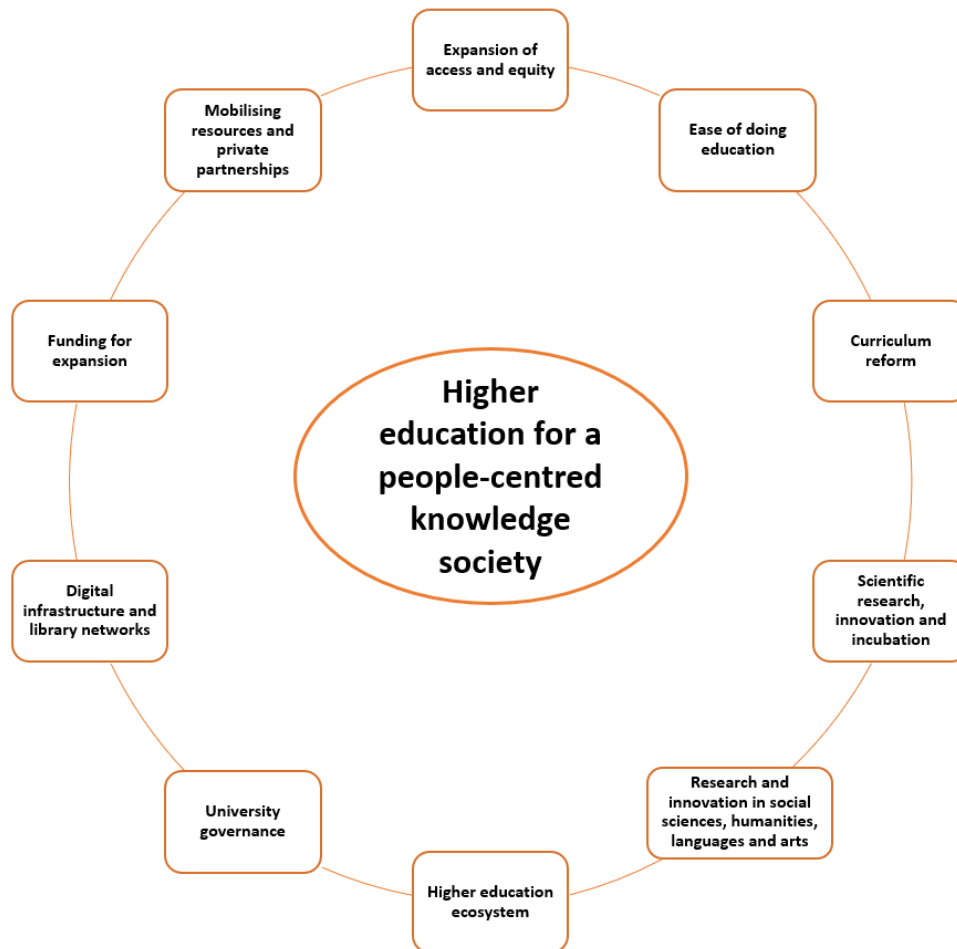
Figure 1 *A summary overview of the report*

II

ACCESS AND EQUITY

The status

The gross enrolment ratio for higher education (GER_{HE}) is an important summary indicator of the extent of access to higher education. It is estimated as a ratio of the number of enrolled students in the 18-23 years age group to the population in the 18-23 years age group. The data are annually put together in the All-India Survey on Higher Education (AISHE). The latest year for which data are available is 2019-20.

GER_{HE} is an indicator of socioeconomic development in a society. A higher GER_{HE} is not only associated in history with higher levels of economic growth and lower levels of poverty, but also with the advancements in the quality and health of the workforce. Societies with higher GER_{HE} are societies with improved skill acquisition in the workforce. As economies develop, and as they become increasingly reliant on new technologies and innovations, a workforce equipped to meet these new challenges becomes imperative. Over a lifetime, those with a tertiary education degree earn about twice as high a remuneration compared to those with high school education. Further, as youth population increases as a share of the population, aspirations in the society rise, leading to higher demand for quality tertiary education. In short, given the increasingly knowledge-driven global economy, expansion of tertiary education has come to be seen both as an important driver and a consequence of economic development.

Data on GER_{HE} across the world are evidence to such an understanding (see Table 1).

In the early-1970s, the only countries that had highly respectable GER_{HE} (at above 45 per cent) were the United States of America (USA) and the then Union of Soviet Socialist Republics (USSR). Even the United Kingdom and the Scandinavian countries had relatively lower GER_{HE} compared to these two countries. However, between the early-1970s and the early-1990s, tertiary education expanded rapidly across Europe. In the United Kingdom, for example, the adoption and implementation of the Lionel Robbins report in 1963 and other related initiatives led to a significant expansion of enrolment in higher education. Several new public universities were established, such as Sussex, Keele, East Anglia, York, Lancaster, Essex, Kent, Warwick, Salford, and Ulster. About 10 technical institutions were converted into universities, such as in Aston, City University of London, and Cardiff. By 2000-01, United Kingdom's GER_{HE} was above 50 per cent. Scandinavian countries increased their GER_{HE} more rapidly; their GER_{HE} was above 70 per cent by the early-2000s.

Table 1 *Gross enrolment rates in tertiary education (GER$_{HE}$) for a set of selected countries/regions, 1970-71 to 2018-19*, in per cent

Country	1970-71	1980-81	1990-91	2000-01	2010-11	2018-19
Australia	15.8	25.2	35.4	-	-	116.0
South Korea	6.8	14.8	37.6	79.6	100.7	98.4
Finland	13.1	31.7	44.5	82.3	93.4	93.0
United States	47.3	53.6	71.3	-	-	87.9
Netherlands	19.7	29.1	35.6	52.3	63.7	87.1
Russian Federation	45.6	45.2	55.0	55.8	-	86.4
Norway	15.8	25.3	38.4	69.3	73.5	83.2
Denmark	18.9	28.4	34.1	57.2	73.6	81.8
Sweden	21.7	36.4	30.7	67.1	73.7	77.3
Canada	-	-	90.5	59.1	61.7	75.7
Germany	-	-	-	-	-	73.5
European Union	17.3	23.2	28.9	49.5	65.0	73.1
France	18.6	25.2	36.9	50.6	54.9	68.4
United Kingdom	14.6	18.8	26.5	58.5	58.9	65.8
Japan	17.3	30.3	29.4	46.2	-	64.1
Switzerland	10.0	17.9	25.6	37.8	52.9	63.3
Brazil	-	-	-	18.2	43.5	55.1
China	0.1	1.1	3.0	7.6	24.2	53.8
Cuba	3.6	17.5	21.3	22.0	94.9	44.3
Vietnam	-	2.4	2.8	9.5	22.8	28.6
India	**4.9**	**5.0**	**5.9**	**9.5**	**17.8**	**28.6**
South Africa	4.3	-	12.6	-	18.4	23.9
World	**10.1**	**12.4**	**13.6**	**19.1**	**29.4**	**39.4**

Source: World Development Indicators, World Bank.

On the eastern side of the globe too, there were rapid expansions in GER$_{HE}$. Japan, South Korea, and China are important examples. South Korea raised its GER$_{HE}$ from 6.8 per cent in 1970-71 to 98.4 per cent in 2018-19, while Japan raised it from 17.3 per cent to 64.1 per cent. China was late in the expansion of tertiary education; its GER$_{HE}$ was only 7.6 per cent in 2000-01 but rose remarkably over just about two decades to 24.2 per cent in 2010-11 and 53.8 per cent in 2018-19. Studies show that the Chinese expansion of higher education in the 21st century – termed as "the world's largest higher education expansion" – was a result of the rising demand for skilled personnel in the work force as well as a higher public demand for higher education with a rise in per capita incomes.

India has been a laggard in this regard. Its GER$_{HE}$ was higher than in China in 2000-01 at 9.5 per cent but rose only to 17.8 per cent in 2010-11 and 28.6 per cent in 2018-19. China's example shows that it is possible to raise GER$_{HE}$ over a short period. However, poor planning and lack of

political will has meant that it has set a rather unambitious target of raising GER_{HE} to 50 per cent by 2035.

Within India, however, Kerala's record in raising the GER_{HE} has been superior. In 2019-20, the GER_{HE} in Kerala was estimated at 38.8 per cent, which was higher than the national average of 27.1 per cent. To put this in perspective, Kerala's GER_{HE} in 1972-73 was 5.9 per cent and in 1986-87 was 4.5 per cent.[1]

A comparison of India and Kerala leads us to some interesting inferences. In Figure 2, we have provided the GER_{HE} of India and Kerala for the last decade and a half i.e., between 2006-07 and 2019-20. Kerala significantly improved the GER_{HE} over this short period. In 2006-07, the GER_{HE} was 12.4 per cent in India and 11.8 per cent in Kerala. After 2009-10, however, Kerala's GER_{HE} began to rise rapidly till it reached 38.8 per cent in 2019-20. There was a major improvement in the GER_{HE} over the last five years; between 2015-16 and 2019-20, Kerala's GER_{HE} rose from 30.8 per cent to 38.8 per cent. India's GER_{HE}, on the other hand, grew at a much slower pace and reached only 27.1 per cent in 2019-20.

In 2019-20, Kerala ranked sixth among the major States in the GER_{HE} (Table 2). Tamil Nadu had the highest GER_{HE} at 51.4 per cent, followed by Delhi at 48 per cent, Puducherry at 46.3 per cent, Uttarakhand at 41.5 per cent and Himachal Pradesh at 40.8 per cent. Notably, several States that recorded rapid economic growth rates in the recent period had lower GERs than Kerala: Gujarat (21.3 per cent), Haryana (29.3 per cent), Karnataka (32 per cent) and Telangana (35.6 per cent).

Female GER_{HE} were significantly higher than male GER_{HE} in Kerala in 2019-20: 44.7 per cent for women and 32.9 per cent for men (see Figure 2 and Table 2). The national female GER_{HE} was 27.3 per cent. Interestingly, if we consider female GER_{HE} among major States, Kerala ranked fifth among the major States; the top performers were Puducherry (52.6 per cent), Delhi (51.8 per cent), Tamil Nadu (51 per cent) and Himachal Pradesh (46.4 per cent).

We shall now consider GER_{HE} by social groups and sex (Table 2). Among all scheduled castes (SC), Kerala's GER_{HE} was 26.7 per cent in 2019-20 and it was ranked only 11th among the major States. The national average was still lower at 23.4 per cent. Data show that such an inferior performance of Kerala owed to a very low GER_{HE} among SC men (18.7 per cent) compared to among SC women

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[1] The GER_{HE} of Kerala can be argued to be an underestimate for two reasons. First, the AISHE report for 2019-20 is based on recorded responses from institutions. While the response rate from universities was 100 per cent, the response rate from colleges was only 93 per cent and from standalone institutions was only 79 per cent. Secondly, there may be several students from Kerala who study in higher educational institutions in other States, such as Tamil Nadu, Karnataka, and Telangana. We could not estimate the total number of students from Kerala studying in other States. For this very reason, GER_{HE} in States like Tamil Nadu, Karnataka and Telangana may be inflated too.

(34.8 per cent). The corresponding national averages stood at 22.8 per cent and 24.1 per cent respectively. As a result, among the major States, Kerala's rank was fifth in SC female GER$_{HE}$ and 17th in SC male GER$_{HE}$. In other words, poor GER$_{HE}$ among SC men is a source of major concern in Kerala.

Figure 2 *Trends in gross enrolment rates in higher education (GER$_{HE}$), India and Kerala, 2006-07 to 2019-20*, in per cent
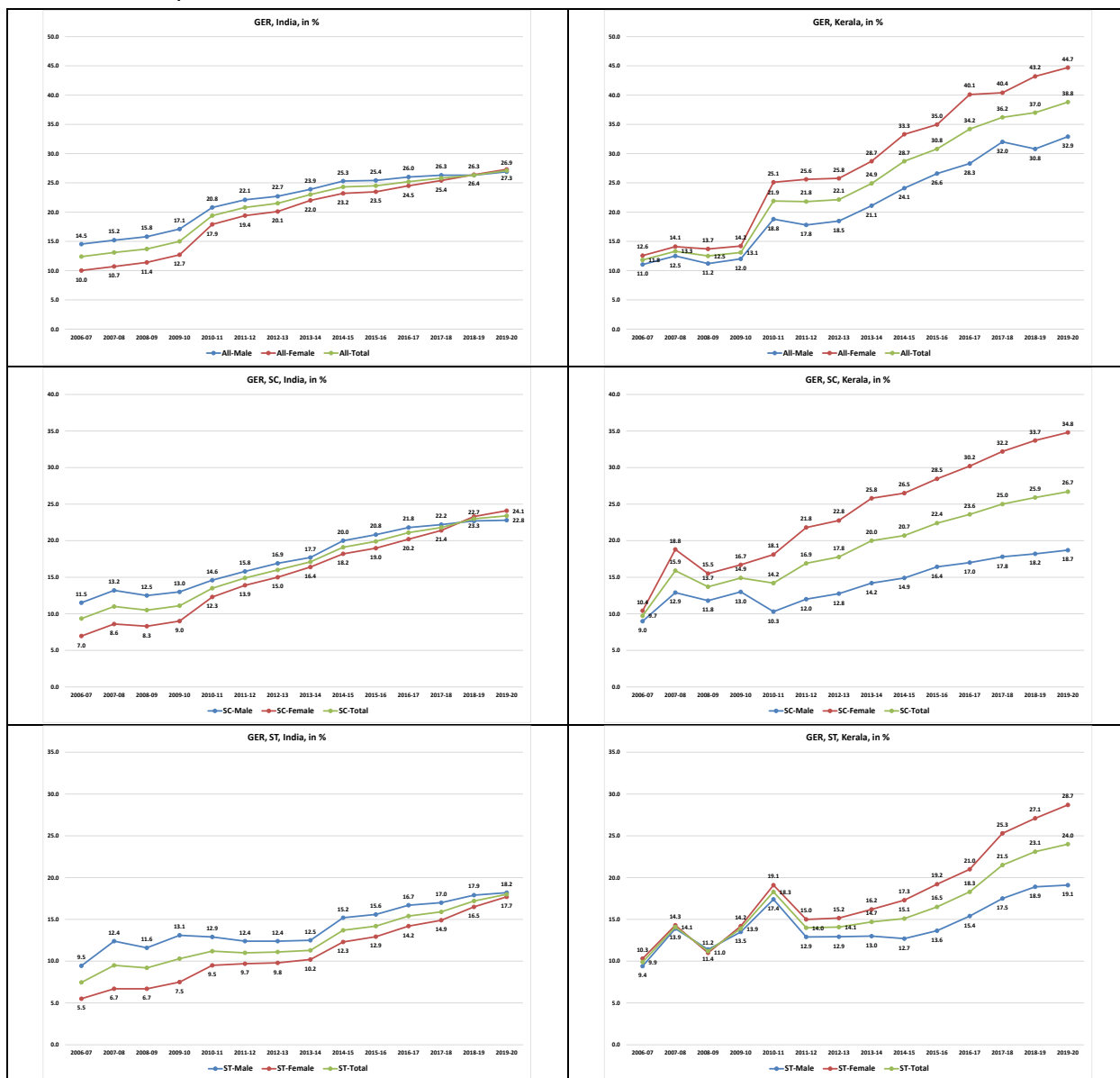
Source: AISHE reports, various issues.

Table 2 *Gross enrolment rates in higher education (GER$_{HE}$), major States, India, 2019-20*, in per cent

Sl. No.	State/UTs	All persons			Scheduled castes (SC)			Scheduled tribes (ST)		
		M	F	All	M	F	All	M	F	All
1	Tamil Nadu	51.8	51.0	51.4	38.8	40.4	39.6	43.8	37.7	40.7
2	Delhi	44.9	51.8	48.0	35.1	40.9	37.8	-	-	-
3	Puducherry	41.0	52.6	46.3	33.4	38.3	35.7	-	-	-
4	Uttarakhand	40.7	42.3	41.5	29.7	32.6	31.1	45.6	46.0	45.8
5	Himachal Pradesh	35.7	46.4	40.8	25.1	33.6	29.2	35.4	43.7	39.5
6	**Kerala**	**32.9**	**44.7**	**38.8**	**18.7**	**34.8**	**26.7**	**19.1**	**28.7**	**24.0**
7	Telangana	34.8	36.4	35.6	29.1	35.8	32.5	31.3	29.1	30.2
8	Andhra Pradesh	38.3	32.2	35.2	33.4	29.0	31.2	33.6	25.6	29.4
9	Jammu & Kashmir	31.7	33.2	32.4	17.3	23.6	20.3	23.0	19.2	21.1
10	Maharashtra	33.5	31.0	32.3	30.6	30.8	30.7	17.4	13.5	15.4
11	Karnataka	31.2	32.7	32.0	23.3	23.1	23.2	20.9	21.0	20.9
12	Haryana	26.6	32.5	29.3	17.4	21.6	19.3	-	-	-
13	Goa	23.8	34.6	28.4	30.4	33.2	31.7	20.6	32.7	26.4
14	Punjab	25.1	32.1	28.2	15.8	22.4	18.8	-	-	-
15	Uttar Pradesh	23.7	26.9	25.3	21.4	26.1	23.6	38.1	39.9	39.0
16	Madhya Pradesh	24.2	24.2	24.2	22.9	23.5	23.2	12.6	12.3	12.4
17	Rajasthan	24.3	23.9	24.1	21.5	21.4	21.5	22.2	22.3	22.3
18	Odisha	23.0	20.3	21.7	21.8	17.6	19.7	14.6	12.4	13.5
19	Gujarat	22.9	19.6	21.3	29.2	26.0	27.7	16.4	16.9	16.7
20	Jharkhand	21.0	20.9	20.9	17.0	15.1	16.1	14.7	16.5	15.6
21	West Bengal	20.3	19.6	19.9	15.1	14.8	14.9	11.4	10.6	11.0
22	Chhattisgarh	17.4	19.6	18.5	18.0	19.3	18.6	10.3	13.1	11.8
23	Assam	17.4	17.2	17.3	19.5	19.0	19.3	22.7	22.4	22.5
24	Bihar	15.8	13.1	14.5	14.2	8.5	11.4	24.2	18.7	21.4
25	**India**	**26.9**	**27.3**	**27.1**	**22.8**	**24.1**	**23.4**	**18.2**	**17.7**	**18.0**

Source: AISHE, 2019-20.
Note: States are listed in the descending order of total GER$_{HE}$.

Among all scheduled tribes (ST), Kerala's GER$_{HE}$ was 24 per cent in 2019-20 and it was ranked eighth among the major States (Table 2). The national average was, however, lower at 18 per cent. Here again, the differences across men and women were stark. The GER$_{HE}$ for ST men was 19.1 per cent while for ST women was 28.7 per cent. The corresponding national averages were 18.2 per cent and 17.7 per cent respectively. Among major States, Kerala ranked seventh in female GER$_{HE}$ but 17th in male GER$_{HE}$.

The GER$_{HE}$ figures from AISHE are comparable with the corresponding figures from the household surveys of the National Sample Survey Organisation (NSSO). The Gross Attendance Ratio for the post-higher secondary level (GAR$_{HE}$; i.e., the proportion of the number of persons attending a post-higher secondary level of education to the number persons in the 18-23 age group) in 2017-18 was 37.6 per cent in Kerala and 22.8 per cent in India. In fact, Kerala had the highest GAR$_{HE}$ among all the States for the post-higher secondary level.

The results from the NSSO surveys were even more favourable to Kerala if we considered the Age-Specific Attendance Ratio (ASAR$_{HE}$; i.e., proportion of persons in the 18-23 years age group currently attending educational institutions, irrespective of the level or class in which they are studying). The ASAR$_{HE}$ in 2017-18 was 47.4 per cent in Kerala and 28.8 per cent in India. Here too, Kerala had the highest ASAR$_{HE}$ among all States.

The number of colleges per lakh population (18-23 years) is another useful indicator to judge the spread of higher educational institutions. AISHE data show that the national average stood at 30 colleges per lakh population. With 48 colleges per lakh population, Kerala stood fifth among major Indian States in this regard in 2019-20. Karnataka was on top with 59 colleges per lakh population, followed by Telangana (53), Andhra Pradesh (51) and Himachal Pradesh (49).

In terms of quality of education too, Kerala's record is superior to many other States. If we consider the ranking of colleges under the National Institutional Ranking Framework (NIRF) of the Ministry of Human Resource Development (MHRD) for 2022, there were 17 colleges from Kerala in the first 100 ranks (17 per cent), and 38 colleges from Kerala in the first 200 ranks (19 per cent). Seen against the size and population of the State, this was a remarkable achievement.

The National Education Policy (NEP) has instituted a target of 50 per cent GER$_{HE}$ for the country by 2030. Given the present Indian conditions, this appears to be an over-ambitious target and is unlikely to be achieved from the 27.1 per cent of 2019-20. Notably, the average GER in tertiary education (based roughly on the age range of 18-22 years) in 2020 was 79.4 per cent for high-income countries, 57.6 per cent for upper-middle income countries and 40.2 per cent for all countries.

The Government of Kerala has instituted a target of raising GER$_{HE}$ to 75 per cent. In our report, we wish to make a few comments on the attainability of this target of raising GER$_{HE}$ to 75 per cent. For the same reason, we work with two GER$_{HE}$ scenarios: 75 per cent and 60 per cent.

The challenge

We believe that the outstanding foundation provided by the universalisation of school education can help Kerala raise its GER$_{HE}$ to 60 per cent by 2031 and 75 per cent by 2036. The 60 per cent GER$_{HE}$ for Kerala in 2031 would be a remarkable achievement for Kerala and may be realistically expected to be significantly higher than the expected Indian average for the same year. From a 60 per cent GER$_{HE}$ in 2031, moving to a 75 per cent GER$_{HE}$ by 2036 would be difficult though not impossible. Hence, we suggest that the achievement of a GER$_{HE}$ of 60 per cent in 2031 must be set as the proximate goal for public policy in the State.

A GER$_{HE}$ of 60 per cent would be a reasonable scenario to draw for 2031 for one more reason. Many students from Kerala may continue to travel outside the State to study in the future as well.[2]

The aggregate numbers involved in this expansion are provided in this section. These numbers in this final report are slightly different from those presented in the interim report, as we had not used projected population sizes for our estimations in the interim report.

We begin with a discussion on the projections of population in the age group 18-23 years till 2036. Without these population projections, it would be difficult to assess the quantitative dimensions of expansion in GER$_{HE}$ to 60 per cent by 2031 and 75 per cent by 2036.

The latest AISHE report for 2019-20, which reported a GER$_{HE}$ of 38.8 per cent for Kerala was not based on official projections of population. The usual practise in India was for the Registrar General and Census Commissioner to release age-wise projections of population at the national and State levels soon after the census data were released. These projections were used by reports, such as AISHE, to estimate GER$_{HE}$ for the inter-census years. However, such an official projection of population from the 2011 census – authored by the *Technical Group on Population Projections* – was not published till July 2020. AISHE 2019-20, which was released in June 2021, did not use these projected population figures to estimate GER$_{HE}$. Only the AISHE 2020-21 is expected to use the officially projected figures of population.

The difference in the estimates of GER$_{HE}$, estimated using the old data and the new projections, are rather significant. At the national level, AISHE reports a GER$_{HE}$ of 27.1 per cent in 2019-20.

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[2] While there is an unmet demand for higher education, there are also substantial numbers of unfilled seats in many colleges. This could well mean that the demand is only for quality higher education that is relevant, diversified and demonstrably linked to employability. There is also a possibility that the demand and supply do not match in terms of spatial contexts.

However, if we re-estimate the GER_{HE} based on the projections of the *Technical Group on Population Projections*, the GER_{HE} comes to only 25.6 per cent. For Kerala, as per our estimates, the GER_{HE} would decline from 38.8 per cent to 36 per cent. These changes are primarily because the projections of population in the 18-23 age group are higher as per the *Technical Group on Population Projections* than what the AISHE 2019-20 assumed.

In this report, we have estimated the quantitative dimensions of the rise in GER_{HE} in Kerala based on the projections of the *Technical Group on Population Projections*.

As per Census 2011, the total population in Kerala within the age group of 18-23 years was 31.83 lakh. The *Technical Group on Population Projections* notes that the population would gradually fall from 31.83 lakh in 2011 to 29.25 lakh in 2031 and 27.98 lakh in 2036 (see Table 3). The decline in population is significant because Kerala would be looking to cater to the needs of 3.94 lakh less persons in the 18-23 age group between 2011 and 2036.

Table 3 *Projected population in the 18-23 years age group from 2011 till 2036, Kerala, by sex*, in numbers

Year	All persons	Male	Female
2011	31,83,000	15,67,000	16,16,000
2021	31,55,000	16,24,000	15,31,000
2026	30,24,000	15,57,000	14,68,000
2031	29,25,000	15,07,000	14,19,000
2036	27,89,000	14,41,000	13,48,000

Source: Report of the "Technical Group on Population Projections", Ministry of Health and Family Welfare, Government of India, July 2020.

As per AISHE 2019-20, 11.38 lakh persons were enrolled in higher education institutions in Kerala. If GER_{HE} were to rise to 75 per cent by 2036, a total of about 20.9 lakh persons would have to be enrolled; this implies an additional enrolment over 16 years of 9.53 lakh persons i.e., 5.95 lakh men and 3.57 lakh women (see Table 4, and Figure 3 for a summary).

If GER_{HE} were to be raised to 60 per cent by 2031, the total enrolment must be raised from 11.38 lakh in 2019-20 to 17.55 lakh in 2031. In other words, an additional 6.17 lakh persons would have to be enrolled, of whom 4.19 lakh persons would be men and 1.98 lakh persons would be women. Of course, if the target of 60 per cent GER_{HE} is delayed to 2036, only an additional 5.35 lakh persons would have to be enrolled (3.79 lakh men and 1.55 lakh women).

Such an increase in GER_{HE} should not be based on traditional college enrolment alone; it should be based on a diversification of opportunities in higher education and skill generation. This

necessitates the expansion of higher education in the State in multiple directions. We need a **restructuring of governance in higher education**; we need a few **new and large cutting-edge institutions**; and we need **new courses/programmes** in the existing institutions**.** We also need to rope in the non-university sector of tertiary education, as well as the Open and Distance Learning (ODL) sector, including digital education avenues, in addition to addressing several issues within the current system that adversely affects access to higher education.

Table 4 *Projections of number of students to be enrolled if GER$_{HE}$ must rise to 75 per cent and 60 per cent, Kerala, 2011 to 2036*, in numbers

Item	All persons	Male	Female
Baseline enrolment, 2019-20	11,37,853	4,84,849	6,53,004
Scenario 1: Raise GER$_{HE}$ to 75 per cent			
Total expected enrolment at each year:			
2026	22,68,000	11,67,750	11,01,000
2031	21,93,750	11,30,250	10,64,250
2036	**20,91,750**	**10,80,750**	**10,11,000**
Additional enrolment required over 2019-20 at each year:			
2026	11,30,147	6,82,901	4,47,996
2031	10,55,897	6,45,401	4,11,246
2036	**9,53,897**	**5,95,901**	**3,57,996**
Scenario 2: Raise GER$_{HE}$ to 60 per cent			
Total expected enrolment at each year:			
2026	18,14,400	9,34,200	8,80,800
2031	**17,55,000**	**9,04,200**	**8,51,400**
2036	16,73,400	8,64,600	8,08,800
Additional enrolment required over 2019-20 at each year:			
2026	6,76,547	4,49,351	2,27,796
2031	**6,17,147**	**4,19,351**	**1,98,396**
2036	5,35,547	3,79,751	1,55,796

Source: Computed by the Commission using data from AISHE 2019-20 and the report of the "Technical Group on Population Projections".

We have dealt with the financial aspects of expansion in detail in Chapter X. However, in this chapter, we would like to focus on a few aspects of exclusion from higher education in Kerala, which, if addressed effectively by policy, would go a long way in increasing the GER$_{HE}$ (see Figure 4 for a summary).
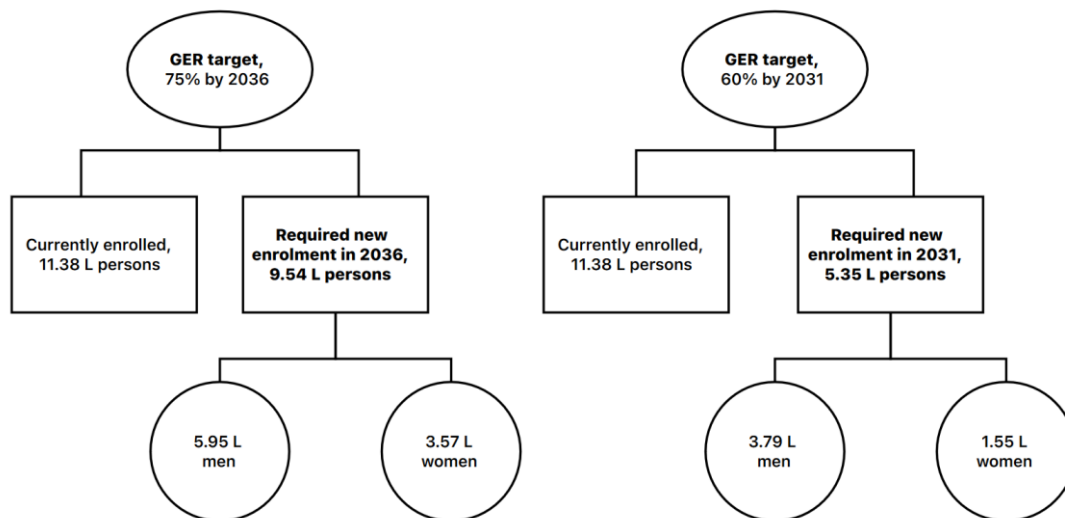
Figure 3 *The challenge of raising GER$_{HE}$ to 75 per cent and 60 per cent: A summary*
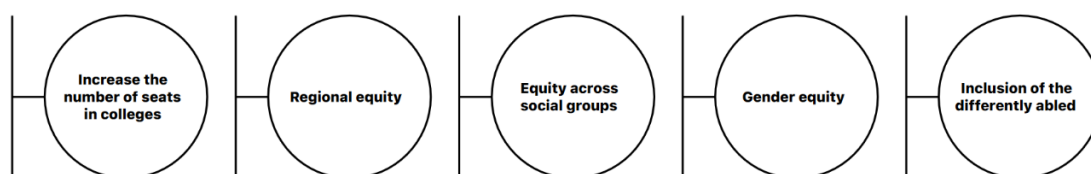
Figure 4 *The core principles of justice in the strategies to raise GER*

Increase in the number of seats

To begin with, creating adequate number of seats in higher education institutions is an important aspect of justice in raising access to higher education. In our view, Kerala needs to urgently increase the number of seats for *selected existing courses* within the present university framework.

AISHE data show that the number of colleges in Kerala rose from 962 in 2010-11 to 1417 in 2019-20, and the number of colleges per lakh population rose from 29 in 2010-11 to 48 in 2019-20 (see Table 5). These represented a faster rise in the number of colleges per lakh population compared to India, which has helped Kerala move rapidly ahead in raising its GER$_{HE}$ over the past decade. In terms of the number of colleges per lakh population, Kerala's rank in India improved from 7th in 2010-11 to 5th in 2019-20. These were commendable achievements.

Table 5 *Number of colleges and enrolment in colleges, State-wise, India, 2010-11 and 2019-20*, in numbers

States/UTs	Number of colleges		Number of colleges per lakh population		Average enrolment per college	
	2010-11	2019-20	2010-11	2019-20	2010-11	2019-20
Karnataka	3098	4047	44	59	414	415
Telangana	-	2071	-	53	-	545
Andhra Pradesh	4780	2750	48	51	493	547
Himachal Pradesh	297	344	38	49	535	541
Kerala	**962**	**1417**	**29**	**48**	**557**	**575**
Puducherry	82	79	54	46	483	668
Tamil Nadu	1985	2610	27	38	574	872
Uttarakhand	346	454	28	38	1224	634
Rajasthan	2435	3380	29	37	725	517
Punjab	956	1079	29	35	724	521
Haryana	1054	1087	33	34	766	590
Maharashtra	4512	4494	35	34	756	670
Goa	47	58	25	31	705	670
Gujarat	1815	2275	27	31	624	528
Uttar Pradesh	4049	7788	17	31	1351	692
Madhya Pradesh	2009	2411	23	27	611	771
Chhattisgarh	574	810	20	26	646	557
Jammu & Kashmir	216	316	14	26	1392	721
Odisha	1089	1087	23	24	600	659
Assam	485	558	13	15	1009	870
West Bengal	857	1411	8	13	1655	1179
Delhi	184	179	8	8	1081	1620
Jharkhand	187	323	5	8	2376	1938
Bihar	629	874	5	7	1794	1703
India	**32974**	**42343**	**23**	**30**	**700**	**680**

Source: AISHE reports, various issues.

In terms of the average enrolment per college, Kerala's rank did improve from 19th in 2010-11 to 16th in 2019-20. At the same time, the Commission believes that the average enrolment per college must substantially rise in the State from 575 in 2019-20. For example, Tamil Nadu had an average enrolment per college of 872 in 2019-20. During our deliberations with teachers in Kerala, a suggestion that was consistently offered was that the number of students in most undergraduate and postgraduate colleges can rise, or even double, in many cases. We recommend that more seats must be offered to students in the admissions for selected programmes in the colleges of Kerala. **Average enrolment per college must be raised from 575 to at least 700 by 2031** without affecting quality standards and distributional concerns; this itself can raise total enrolment in higher education by about 1.8 lakh.

There will be several infrastructural and manpower constraints to this expansion of number of seats. We have recommended a series of measures to optimise the use of resources in colleges to allow for more seats to be offered. To begin with, a separate classroom complex will be required in many colleges, with larger and technologically better-equipped classrooms. Finances will have to be identified for this purpose.

Apart from creating new infrastructure, there could be optimisation of the existing infrastructure. For example, we found that the current allocation of classrooms in the colleges are department-wise, with the result that many classroom spaces are not utilised optimally. While some classrooms are in high demand, other classrooms lie unutilised. Such a system should give way to a centralised system of management and allocation of classrooms based on a pre-determined timetable and academic calendar. With an increase in the number of students, laboratories, libraries, and other facilities would also have to be expanded both in size as well as with the availability of instruments, equipment, and materials.

Regional equity

Kerala needs to address regional inequalities in access to higher education. There is a clear backwardness in the spread of higher education in the erstwhile Malabar region compared to the Cochin and Travancore regions (See Table 6). Rough estimates based on population data from 2011 and the number of colleges in 2019-20 show that the average population (all age-groups) per college was 135,619 in erstwhile Travancore, 135,961 in erstwhile Cochin and 185,521 in erstwhile Malabar.

There are also clear differentials in the spread of colleges within Malabar. Most districts in Malabar, except Wayanad, are poorly served by colleges as evidenced by the high levels of population per college. While private colleges have played a catalytic role in Travancore and Cochin, higher education in Malabar was primarily based on the growth of government colleges.

Kasaragod is the most poorly served district in Kerala with respect to the average population per college, followed by Malappuram, Kannur, and Palakkad. The average population per college in Kasaragod was 217,100 while the state average stood at 153,860. There are only four government colleges and two private colleges in Kasaragod. The population served by a government college was 3.26 lakh, while the population served by a private college was 6.51 lakh – three times the state average and seven times the average for Kottayam. According to data made available to us, there were 12,589 students in 2019-20 who passed out of the +2 stream

and became eligible for higher education in Kasaragod. However, there were only 7,246 seats available in all the higher educational institutions in the district – a deficit of 5,343 seats.

Table 6 *Average population served by one college, by districts, 2019-20, Kerala*, in numbers

District	Population served by one government college	Population served by one private college	Population served by one college	Rank in population served by one college
By districts:				
Kasaragod	325,650	651,300	217,100	1
Malappuram	513,870	316,227	195,760	2
Kannur	631,409	280,626	194,280	3
Palakkad	401,556	351,362	187,393	4
Kollam	13,14,852	202,285	175,314	5
Kozhikode	308,954	386,193	171,641	6
Alappuzha	21,21,943	176,829	163,226	7
Thiruvananthapuram	330,728	275,607	150,331	8
Thrissur	622,065	182,960	141,379	9
Idukki	553,727	184,576	138,432	10
Wayanad	408,279	204,140	136,093	11
Ernakulam	819,965	156,184	131,194	12
Pathanamthitta	11,95,537	132,837	119,554	13
Kottayam	19,79,384	89,972	86,060	14
Kerala	**547,339**	**214,024**	**153,860**	**-**
By erstwhile regions:				
Malabar	**418,748**	**333,095**	**185,521**	**1**
Cochin	**710,021**	**168,163**	**135,961**	**2**
Travancore	**725,959**	**166,774**	**135,619**	**3**

Source: Government documents and census figures for 2011.

A rise in overall GER$_{HE}$ must be accompanied by a rise in regional equity. We recommend a focused effort to **increase the spread of colleges in the Malabar region in five years**, especially in the more backward districts like Kasaragod, followed by Malappuram, Kannur, and Palakkad**.**

Equity across social groups

Kerala needs to focus on raising the GERs among SC and ST men. Kerala has historically been at the forefront of affirmative action for underprivileged communities and groups through its diligent implementation of constitutional guarantees as well as schemes directed at greater inclusion of disadvantaged groups. However, when it comes to higher education, Kerala lags with an 11th rank among the major States in the GERs for SC and ST men. This calls for more focused and protracted action, not only to attract more students from the SC/ST communities to higher

education, but also to create the environment that will ensure their continuation and success in it.

It appears that more men among SCs and STs are opting for employment opportunities once they complete Class 10 or Class 12. Female labour force participation rates are low in the State, and this may be aiding the higher GERs among female SCs and STs compared to male SCs and STs. A strategy that combines **new educational opportunities for SC and ST men,** which also incorporates a **strong component of skill generation and employment potential**, can help raise GERs among male SCs and STs**. We will also recommend a complete waiver of tuition and hostel fees for the yet-to-be-enrolled SC and ST students** to incentivise them to join the higher education system**. We will elaborate on the details elsewhere in the report.

The Commission also recommends the introduction of focused affirmative, anti-discriminatory policies and awareness programmes on social justice, caste, and community rights in higher education to create an appropriate affirmative action environment.[3] These will include:

- The adoption of a full-fledged policy to promote higher education and employment among SC/ST youth, which shall include **targeted schemes to ensure SC/ST students' continuation** in higher education, and the creation of a knowledge pool and a mentor pool from the same communities;
- The establishment of **more post-matriculation hostels**, especially for women and in urban areas;
- An SC/ST Cell in the Kerala State Higher Education Council (KSHEC) – in coordination with the Social Justice Department and the SC/ST Welfare Directorate – to periodically review policy, suggest changes and moot new schemes, and the introduction of **capstone courses** after undergraduate/postgraduate education to equip students with employable skills;
- The establishment of a **Centre for Indigenous People's Education**, preferably in a district with a large tribal population like Wayanad, to suggest policy initiatives and programmes, work at an international level to create collaborations with similar institutes and initiate work to protect languages and cultures of the tribal communities;
- The introduction of **constitutional reservation for SC/ST students** for admission to Ph.D. programmes, both per supervisor as well as per department, and, if necessary, even in a supernumerary manner.

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[3] For universities that choose to conduct all-India admissions, the Commission recommends the incorporation of a deprivation points framework, of the kind employed by the Jawaharlal Nehru University (JNU), as a feature of its admission policy. This policy of selection assigns weightages to persons hailing from backward districts of India based on a regional- and gender-deprivation index, in service of the constitutional goal for equity and development.

The current online system of notifications, admissions and upfront payment of initial fees creates terrible distress for disadvantaged students because of lack of internet access. To address this issue, we shall also be recommending parallel, alternate arrangements.

The differently abled students

There are other issues of access too, which need attention. The higher education system needs to be responsive to the needs of students with different disabilities. The **design of institutions** must be modelled to meet the requirements of the differently abled; **libraries must be modernised** with facilities of reading and writing for visually challenged students, all **teaching material must be made available** to them in a readable format, and **examination systems** must fully consider their specific requirements.

In addition, we recommend that:
- There should be representation for the differently abled in the decision-making bodies of the university and colleges.
- Standard rules must be introduced that enable the differently abled in examinations and evaluations.
- A comprehensive policy for the differently abled should be formulated by the KSHEC, in consultation with institutions and voluntary organisations specialised in the matter, which shall include measures to ensure the necessary physical infrastructure, availability of appropriate study materials and resources, systems for special attention, and other support systems.
- The Commission also recommends a rationalisation and enhancement of scholarships for the differently abled in higher education in tune with other scholarships and the living index.

Concerns of gender equity

In the Commission's understanding, a knowledge society is one in which the governance and culture of higher education institutions guarantee equal access, opportunity, and treatment to women, trans persons, and sexual minorities. All higher education institutions must, therefore, recognise the specific disadvantages that patriarchal society can create for women and sexual minorities, and must strive to become spaces in which the constitutional rights of women, trans persons, and sexual minorities and the respective legal provisions are guaranteed. All higher education institutions must also seek to redress any grievances arising from acts of discrimination. We accordingly recommend the following:

(1) All members of the management as well as employees (at all levels, starting from the head of the institution) **must be obligatorily enrolled in an orientation seminar/workshop**, on the assumption of any administrative office at the time of their joining the institution, on the rights of women, trans persons, and sexual minorities and the protections afforded by law.

(2) All higher education institutions must conduct gender-sensitisation activities amongst employees and students throughout the year. We recommend the inclusion of an **obligatory component of gender sensitisation** in college orientations, through **a Gender Sensitisation Committee** constituted for this purpose. Such a committee should be adequately representative of all sections (students, teachers, staff) and all levels of employees of the institutions. This Committee shall also be responsible for conducting sensitisation programmes directed at different sections (teachers, administrators, students, and staff) from time to time. Adequate funds must be allocated to these bodies to make such sensitisation work feasible.

(3) The higher education institutions must implement the **Sexual Harassment Act 2013, in accordance with the SAKSHAM Guidelines.** We recommend that a government directive be issued specifying the composition, duties, and responsibilities of Internal Complaint Committees (ICC), along with their rules and procedures. Most importantly, the effective functioning of these committees can only be achieved if (a) training programmes specifically tailored to educate members of the ICCs are devised and delivered; (b) ICCs are provided with a budget, office staff, and office space; and (c) ICCs are extended the support of legal services to assist it in the inquiries.

(4) We also recommend the institution of **a regular gender audit** as a component of the accreditation process of all educational institutions**.** Components of this audit should include evaluation of the institution's gender sensitisation activities, the time-bound effectiveness of its complaints and redressal system, and the absence of discriminatory practices, such as gender-differential curfews, college-imposed dress codes and segregative practices.

(5) Flexible course structures should be incorporated into the programmes to enable women to complete their studies. Facilities such as longer times of completion with "zero semesters", complete flexibility in time frames and completion of programmes seen more in terms of credits rather than completion of semesters should be made automatic parts of the course structures.

(6) Currently, there are no affirmative policies to enable the entry of transgender students to higher education programmes either by way of reservation of seats or by way of relaxation of eligibility criteria. There are also no support mechanisms, such as scholarships or special hostel facilities for them. An affirmative policy should be formulated by the Department of Higher Education, which will provide greater access to transgender students. It should include special

reservations/supernumerary seats, allowances in the eligibility criteria on par with SC/ST students, institution of scholarships and establishment of special hostel facilities. Awareness workshops on the rights of transgender students and their requirements must be given to administrators, faculty, and students.

(7) Finally, we recommend the inclusion of **women's studies as part of the core curriculum** in undergraduate and postgraduate studies**.** Research in the field of women's studies and gender studies should be actively encouraged through the creation of Ph.D. research scholarships as well as faculty positions.

EASE OF DOING EDUCATION

Students and teachers constitute the two mutually complementing, inter-dependent presences of any higher education system. The venture that they are collaboratively engaged in, even as it is partially the pursuit of individual goals, is also an endeavour for the greater social good. This being the case, ideally, they should function as partners in the immensely relevant social venture of the creation and dissemination of knowledge. A sense of self-respect and self-esteem must be built up among both students and teachers as an integral component of the higher education academic work culture. However, such self-respect can never be generated unless there is also a visible culture of trust and confidence that the system reposes in the students and teachers, and where it is manifestly seen to be doing so. Unfortunately, there is a sense of disenfranchisement and frustration in both students and teachers today.

Our interactions with a range of stakeholders brought out several issues that hinder the smooth and efficient functioning of higher education institutions. Despite efforts to modernise institutions and processes, the faculty and students face several administrative, legal, and technical delays in accessing services, which otherwise are their right.

In this context, the Commission recommends the introduction of two institutional paradigms, viz. **"A Dignified Student Life"** and **"A Dignified Teacher Life"**. Central to this paradigm will be the adoption of two separate but linked Charters of Rights: a "**Charter of Student Rights**" and a "**Charter of Teacher Rights.**" Our premise is that higher education is a matter of right for all and a domain of utmost social relevance. There must be the assurance of a culture of dignity, equity and equal opportunity, respect for diversity and difference in life and work, and the elimination of discrimination or exclusion of any kind. In addition, the charters shall also contain clear provisions for the right to expression and for association, freedom from administrative harassment and the right to due process.

We recommend that the Government of Kerala enact these two charters as legal frameworks to be incorporated within all University Acts, after due consultation with the stakeholders and legal experts. This set of laws should guarantee the basic rights and freedoms of students and teachers in terms of the specific domain of higher education with special provisions for redressal, accountability, and punitive action.

A dignified student life

As partners in the endeavour of higher education, students should be assured of a stable, supportive, and enabling environment to guarantee minimum hindrance and maximum facilitation of their academic, intellectual, and creative pursuits. There should be sustained efforts to create a systemic awareness among all the other participants of the higher education sector that students are not only the primary beneficiaries but also the protagonists of the educational process – in fact, its *raison d'être* – and that our hopes for a knowledge society ultimately rest on their success.

In our interactions, we found that students face multiple violations of their rights. The most significant issue is the absence of an academic calendar across universities. At one end, admissions are never completed within a specific period after the first teaching date. We found that if classes begin in September, the admissions close only by December. Different extra-curricular activities, which are essential but not aligned with the academic calendar, disturb the teaching schedules, and shrink the number of workdays in a year. At the other end, examinations are indefinitely delayed or postponed repeatedly. They are rarely held immediately after a semester; there have even been cases of examinations for the first semester being held after the third semester. Students are also forced to run from pillar to post while accessing basic services, such as a copy of the mark sheet, a degree certificate or a scholarship; even when the services are provided there are inordinate delays due to archaic office systems. These issues adversely affect the chances and morale of many students, who may want to apply for higher studies or access an opportunity within a timeframe.

To create such an enabling environment, in addition to the Charter of Student Rights and an attitudinal change on the part of the administrators and other participants in the higher education process, the Commission makes the following specific recommendations.

For undergraduate/postgraduate students

1. *A stable academic calendar*. A long-standing demand on the part of students has been the establishment of a stable academic calendar and the timely completion of courses/programmes. Most often semesters and entire programmes run late, creating grievous damage to plans of further education or research outside Kerala and to employment possibilities of many students. To remedy this, **a fixed academic calendar common to all universities** in the state should be established with clearly demarcated dates for the beginning and end of semesters and for the publication of examination results. This would also require substantial decentralisation in the

administration of course syllabi, examination and evaluation, and significant levels of faculty autonomy in all these processes.

2. *Timely completion of examinations and evaluations*. All examinations and evaluations should be completed within **a stipulated time frame** as announced in the academic calendar, with mark lists/certificates being made digitally available to each student immediately afterwards.

3. *Greater choice in course selection*. A major grievance raised by students in their submissions to the Commission is the absence of regular updating of the curricula and syllabi of most undergraduate/postgraduate programmes and the lack of sufficient student choice in course selection. Most students felt that this prevented them from learning courses that could adequately reflect their interests/aptitudes or keep them abreast of contemporary developments in different fields. In this context, the Commission recommends that there should be a greater **number of elective courses** in the pool connected to each programme and that the students should be given the opportunity to make choices instead of the college or the department determining what electives to teach according to their convenience and workload.

To this end, there should be a more flexible and rational approach to the determination of the workload of teachers that leaves enough space for the introduction of more electives, the cross listing of courses, active support and encouragement to teachers for offering courses in new, cutting edge areas of contemporary relevance, the introduction of electives with employment and research potential, the facilitation of credit transfer and the possibility of choosing courses from other universities/institutions/CEC in the online mode, etc.

4. *Common/shared bank of credits*. To maximise the possibilities of course selection for students and to optimise the faculty resources of the state, we feel it necessary to introduce a common/shared bank of credits for different undergraduate/postgraduate programmes among the universities of Kerala. This shall enable students to learn courses of interest that are unavailable in their universities but offered by teachers in other universities, and the credits of which will be factored into their programme. This would also open the possibility of **greater levels of hybridity** in the teaching process through the progressive inclusion of online teaching/learning modalities. In due course of time, it is also envisaged that such sharing can involve institutions and universities outside Kerala and even India. Establishment of such a system will require clear guidelines and regulations, which should be evolved by the Government and KSHEC in consultation with universities and experts. Such inter-university transactions, thus introduced, must also be incorporated into the ERP of each university for better academic management.

5. *Guidelines for inter-university transfer of students*. At present, students have little possibility of transfer from one university to another due to the lack of such provisions in the rules of the universities and the incommensurate nature of most programmes between one university and another. This is one contributory reason for students dropping out of higher education, especially when they are constrained to move from one place to another. In this context, a rational set of **guidelines should be evolved for inter-university transfer** of students to reduce the dropout rate and to prevent loss of time. These systems must also be incorporated into the ERP of universities for smoother academic management.

6. *Student friendly classrooms and study spaces*. Most classrooms in colleges and universities are just rectangular rooms inadequate in terms of modern equipment, technical facilities, and space. They must be upgraded to **state-of-the-art facilities** that are suited for different forms of pedagogy and learning strategies. In addition, classrooms must be **comfortable, functional, and environmentally friendly** spaces for the effective transaction of the curriculum. The dimensions of the rooms, the facilities for seating and storage, display and demonstration facilities, audio-visual and internet services, light, ventilation, and safety conditions should all meet specific and prescribed contemporary standards. There should also be other areas for study and recreation that meet similar criteria. It is also recommended that there are **regular audits** on the classroom infrastructure to address the lacunae.

7. *Improvement of laboratories, libraries, online resources*. From our consultations and visits, it has become apparent that there has been very little progress made in the last few years in the infrastructural facilities of laboratories and in the building up of the stocks and online academic resources of libraries. It is our recommendation that a concerted effort is made to significantly **enhance these facilities** so that the most contemporary courses can be taught/learnt at our colleges and universities. We will also be proposing that the Higher Education Council take the initiative to provide to all higher education institutions **site licences for online databases** that provide access to journals, books, dissertations, and other forms of publications.

8. *Upgradation of hostel facilities*: A major point of concern, particularly regarding students from marginalised sections of society and low-income groups is the availability of hostel facilities, which could make all the difference between a student being able to enrol for higher education or not. This is especially the case with SC-ST students, as reported by several students in their submissions to the Commission. In this context, the Commission proposes the **construction of more hostel facilities**, especially in urban areas, **for the socially and economically backward students**. The condition of many existing hostels is also poor, making them unfit even as living spaces, let alone living-study spaces. We recommend that there should be a set of specific guidelines that shall function as **Minimum Standards for Higher Education Student Hostels**, and

that a comprehensive drive to modernise existing hostels should be undertaken based on such standards.

9. *Payment of stipends and scholarships on time*. A major complaint, especially of SC/ST students, is that their stipends and scholarships are not disbursed on time, leading some to even discontinue studies. It is recommended that procedures should be put in place to ensure that such delays do not happen, including direct payment of fees to the institutions, provisions for advance payment by institutions subject to reimbursement, and complete exemption for scholarship holders from fines and punitive measures for delayed payment of fees.

10. *Expand and enhance the number of scholarships*. Even as Kerala has an extensive system of scholarships and stipends for needy students, it is recommended that the number of **scholarships should be enhanced** to address the "most poor" and **to draw into higher education specific groups that lag in access**. These scholarship schemes will have to be **targeted programmes** that clearly identify the beneficiary groups in advance so that they become an effective intervention in the enhancement of the GER. It is also possible to rope in assistance from philanthropic institutions, CSR funds, alumni associations, and local communities for the purpose. To this end, apart from State schemes, each institution should be required to form scholarship committees comprising faculty, alumni and local community leaders that shall actively campaign for such assistance.

11. *Internet facilities*. The internet today is no longer a luxury or a privilege, but a necessity. It is now considered as part of fundamental rights and constitutes an essential part of the infrastructure of freedom of speech and expression.[4] With the emphasis on online teaching/learning modes and online resources increasing each day, the access to the internet is an absolute necessity in higher education. The Commission recommends that every student who enrols for a higher education programme should be provided with access to the internet as a matter of right, through free Wi-Fi available at the institutions and through subsidised data plans for the socially and economically backward for use at home. We also suggest the **initiation of a scheme by the Government by which students who cannot afford to buy mobile phones/tablets are provided with one** through innovative philanthropic contributions and state collaborations with device providers.

12. *Student evaluation of courses*. Right now, except for the largely impressionistic assessments of the efficacy of courses by faculty, there is no reliable system by which courses, curricula, syllabi, and teaching practices are being evaluated. Even the changes being brought in with

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[4] See WP(C). No.19716 OF 2019(L), Faheema Shirin vs State of Kerala, High Court of Kerala.

curricula or syllabi are largely either based on the models of universities elsewhere or because of interventions from above, say the Government or the University Grants Commission (UGC). For this to change, a comprehensive system of **regular audit of courses and programmes** at all levels of university and college education should be introduced, in which **student evaluations** shall play a major part. The feedback so received from students should be discussed by the Department Councils.

For research students

1. *Fellowships for all research scholars*. At present, there is great disparity among the Ph.D. scholars of the state, with a few receiving Junior/Senior Research Fellowships (JRF/SRF), a few receiving university research fellowships, and most scholars registered at research centres at affiliated colleges without fellowships. As a result, many bright young scholars suffer, and some drop out. The Commission feels that to meet the rising demands for qualified teachers and researchers in the coming years, there should be sustained support for Ph.D. research. To this end, the Commission recommends:

(a) *Kerala State Research Fellowships*. These fellowships must be to the tune of **Rs 15,000 per month** to all Ph.D. research scholars who are not in receipt of any other fellowship including the current University fellowships. However, the KSHEC may need to develop a system of regularly monitoring the progress of students; the continuation of the fellowship to an awardee must be contingent on satisfactory progress.

(b) *One hundred Chief Minister's Research Fellowships*. These fellowships must be similar to, and **in parity with, the UGC's JRF/SRF** and of five years' duration, to be awarded on the basis of merit assessed through an examination.

(c) *Award for outstanding Ph.D. students*. There must be a scheme to reward exceptional performance in research by doctoral students.

2. *Laptops for non-JRF Ph.D. scholars*: To facilitate ease of research, all research scholars who are not in receipt of JRF should be given a basic laptop. The State Government can enter into an understanding with laptop manufacturers to provide these.

3. *Conference travel fund and leave for research scholars*: A major part of Ph.D. research is attending conferences and presenting papers. It provides the research scholars with the opportunity not only to present and test out their findings but also to interact with senior researchers in the field. However, such possibilities are severely curtailed by the lack of adequate

financial assistance for travel both inside and outside the country, especially for those research scholars who are not in receipt of JRF/SRF. In this regard, the Commission recommends the setting up by the KSHEC of a **Conference Travel Fund** for research scholars.

6. *Easing of Restrictions and Rules***:** We are also concerned with complaints of research scholars having been denied permission to attend conferences or residential programmes at premier national and international institutions due to narrow interpretations of rules of attendance. We recommend that the KSHEC formulate clear **rules/guidelines for leave** that shall enable research scholars to attend such programmes.

7. *Equity, dignity, and accountability in Research*: A culture of equity, dignity and accountability should be created in research where the conventional hierarchical relationship between the supervisor and the student is replaced by a relationship of partnership and collegiality. To this end, a **Research Grievance Redressal Cell** should be established in all research institutions, composed of heads of departments, research supervisors and research scholars, where all forms of harassment and mistreatment are addressed and resolved. In addition, higher education institutions must evolve policies aimed at promoting the participation and retention of women in research, particularly in areas where a gender gap is evident, such as science, technology, engineering, and mathematics.

8. *Unified and centralised workshops*: To equip research scholars with **essential skills related to writing, research methodology and software**, a scheme of rolling and incremental workshops should be formulated, to be conducted preferably by existing inter-university centres or by University Departments with assistance from the KSHEC.

General schemes

1. *Merit-cum-means Loan Scholarships*: To meet the rising demand for higher education from groups who are economically weaker, the Commission recommends the institution of 2,000 Merit-cum-means Loan Scholarships at simple interest (1,500 for undergraduate students and 500 for postgraduate students) every year for five years for the whole duration of the course/programme that the student is admitted into. This scheme should be funded and managed by the **Kerala Higher Education Fund (KHEF)**. The scholarship amount should cover tuition fee and subsistence expenses and should be adjusted and revised incrementally every year for inflation.

2. *Placement cells and the employability of students*: Even though there are a few placement centres in universities, it has become evident in our consultations with students that these are

far too few to meet the actual demand. As a result, students are forced to rely on incomplete information from peers and other sources for possibilities of study and employment. In this situation, a **Higher Education Career Guidance and Placement Centre** should be established by the Department of Higher Education or the KSHEC. It should have a website with comprehensive information about the opportunities and **extension centres in major cities** where students can seek advice from qualified career guides. The Centre should also liaise with companies, industries and the like and hold regular career workshops, placement fairs and on-campus job selections.

3. *Zero tolerance to gender/caste/community harassment*: After consultations with students as well as social activists, the Commission is of the opinion that a full-fledged policy of zero tolerance towards gender, caste and community harassment will have to be instituted across all higher education campuses of Kerala. This would involve the strengthening of the Internal Complaint Committees, SC/ST Grievance Cells, and the establishment of a smooth and transparent grievance process. But it would also necessitate other pro-active steps such as continuous, ongoing campaigns to prevent harassment, sensitisation workshops to raise awareness of gender and caste harassment, and workshops on law, support systems and related procedures. The Commission proposes the formulation of a **comprehensive anti-harassment policy to be introduced in the higher education sector**.

4. *Support for differently abled students*: It is the view of the Commission that Kerala's higher education campuses should become fully friendly to the differently abled and establish systems for their proper support. To this end, a comprehensive **Policy for the Differently Abled** should be formulated by the KSHEC, in consultation with institutions and voluntary organisations specialised in the matter, that shall include measures to ensure the necessary physical infrastructure, availability of appropriate study materials and resources, systems for special attention, and other support systems.

5. *Focus on mental health of students*: The student community is under stress due to diverse reasons. A significant number of students are facing mental health issues that vary in intensity from the mild to the severe. Barring a handful, most institutions have no system in place to address the issue and students are most often left to their own resources. Given that this is a sensitive issue, a comprehensive **Mental Health Programme** must be established under the initiative of the Government. This must include **wellness centres** that offer counselling and professional help in bigger institutions, telephone and **online help lines**, workshops and awareness campaigns.

6. *A permanent solution to the problem of equivalence*: Yet another issue we encountered was that of equivalence i.e., the "mutual recognition, approval or equalisation of academic

programmes or areas of studies". Across the world, seamless movement of students from one university to another is an accepted practice. In Kerala, however, there is much distress in the way equivalence is practiced. Students with one degree from one university are not always accepted for a higher degree in a related programme in other universities. This is particularly true for students who earn their basic degrees from universities outside Kerala. Even when the courses are similar, a minor difference in nomenclature can block the grant of equivalence. Credit transfers for students from one institution to another are also denied or delayed.

In an era of multi-disciplinarity and inter-disciplinarity, such strictures and rigidities are irrational. A rational and simple solution should be found to this problem of equivalence through the maintenance by the KSHEC of **a dynamic list of courses** that can be considered as **alternatives to the traditional subjects** and their **regular communication to the Government and the Public Service Commission (PSC).**

7. *Enterprise Resource Planning (ERP)*: We also recommend the incorporation of ERP in the administrative system to ensure efficiency and responsiveness to students' needs.

A dignified teacher life

For any higher education system to work properly, it is essential to have a motivated teacher community. The creation of such a community is possible only through a culture of trust where the autonomy and responsibility of the teacher is fully recognised as the cornerstones of the whole edifice of higher education. At present, however, most university and college teachers in Kerala feel excluded from the primary decision-making processes of higher education. Many teachers told us that even the smallest attempts at research and innovation, or creativity in teaching and curriculum, are faced with a lack of institutional understanding and support.

Though there are no clear stipulations in the Acts or Statutes of universities about the overall applicability of the Kerala Service Rules (KSR), faculty are practically governed by the provisions of the KSR with respect to their everyday work, seniority, leave, travelling allowance, pension and so on. Many of the contents of the KSR are not applicable or amenable to the rigours of teaching and research in a higher education institution. Mechanical adherence to the KSR, especially by the Kerala State Audit, leads to many situations where the smooth functioning and collegiality of the academic atmosphere is disrupted.

Faculty are also governed by the provisions of the Kerala Financial Code (KFC) with respect to spending for conferences, seminars, research projects and other academic activities. In our interactions, we felt that the faculty members are treated as "potentially corrupt persons" by the

university system in financial matters even when the faculty had accessed external funding. The auditing system of research projects and other activities in the higher education institutions, as it is practiced today by the Kerala State Audit, disincentivises and even penalises faculty members who come forward to access external funding. Consequently, many teachers literally avoid undertaking research projects or take up national/international fellowships for fear of administrative/audit retribution in the form of loss of service, salary or pension benefits.

Equivalence is a problem in faculty appointments also. Currently, faculty appointments through the Public Service Commission (PSC) are guided by the Special Rules (SR), where a list of specific degrees are listed for eligibility to apply with the rider: "or their equivalent". As equivalency certificates are not provided easily by institutions, many eligible candidates are prevented from applying for faculty positions in Kerala. This denies the faculty body of much-needed talent and external exposure. While a part of the responsibility lies with the government and the PSC, another part lies with the universities.

Unlike in several other states, the service conditions of college and university teachers in Kerala differ from each other in significant ways. The retirement age and salary structure differ. Lateral movement from a college to a university is rendered difficult because of prevailing service rules that disallows protection of salary and seniority and portability of benefits.

In the above context, the Commission feels that a paradigm shift in the entire approach to the teacher and her/his work is necessary. She/he must be enabled to take up a role of inspired leadership in formulating the directions not only of her/his research but also of programmes that she/he teaches. To create such a sense of autonomy and responsibility among teachers, the Commission proposes the following initiatives:

1. *Fill all faculty vacancies*. It has come to the notice of the commission that in several colleges and university departments, several younger faculty members are on hourly/monthly/yearly contracts with such service not being counted in any manner for future employment. The Commission felt that this **ad-hoc system of appointing guest lecturers is exploitative**; it dilutes quality of teaching and must be discontinued forthwith**.** Steps should be adopted to **fill all substantive teacher vacancies** and any hiring of guest faculty above the sanctioned strength prohibited.

2. *Ensure stability of contracts*. If at all guest faculty are to be hired, the Commission strongly recommends that **all unrecognised contracts be abolished**; a proper system of **annual contract** with proper UGC stipulated pay be instituted in all institutions; and the selection process be **transparent and quality based** following all the norms of UGC or equivalent regulations, including

properly constituted selection committees, so that the contract service will be counted as experience for future employment.

3. *Appointments in project mode*. New programmes/courses should be introduced in a **project mode for a period of five years**, extendable subject to review. **Teaching positions** within such programmes/courses should also be on a **five-year term** at the same level of compensation as that for regular teachers with annual increments. Service in these contractual positions should be counted as **valid experience for future employment** and the number of increments and other **benefits should be portable** when the incumbent applies for other teaching positions anywhere in Kerala.

4. *Ending corruption in appointments*. There are unverified reports of malpractices, such as huge donations, hiring of only certain communities and avoidance of reservation rules, in the recruitment of regular faculty in certain categories of colleges. This undercuts the dignity and integrity of the teaching profession as also the stature of higher education institutions. In this context, we recommend:

(a) The enactment of a comprehensive **law on "Prevention of Corrupt Practices in Higher Education"**, which shall include clear provisions for the identification and punishment of all forms of malpractices in higher education.

(b) The handing over of all **faculty appointments** in the government-aided stream **to a Higher Education Faculty Recruitment Board (HEFRB)**, which shall evolve transparent and quality-based systems for faculty recruitment. The HEFRB will keep all constitutional provisions and state legislations regarding reservations intact, while at the same time include provisions for the protection of the rights of minority institutions.

(c) The proposed HEFRB may also periodically conduct an **eligibility test** and publish a **list of eligible candidates** in each discipline. The self-financing stream of colleges (under the government or under private managements) shall hire only from the list published by the HEFRB.

5. *Enhancement of retirement age and uniformity in service conditions*. One of the major factors that inhibits the movement of teachers from one institution to another in Kerala is the disparity in retirement age and service conditions between universities and colleges. Further, national level recruitment of faculty to higher education institutions in Kerala is adversely affected by the early age of retirement. Even people highly desirous of serving in Kerala are dissuaded from doing

so because they stand to lose five to eight years of eligible service years. In this context, we recommend:

- **Parity in salary scales, service rules and retirement age** among teachers of government and government-aided colleges and universities and automatic transfer of service and service benefits. This will enable easy mobility of teachers from one institution to another, and greater possibility for the formation of research and innovation groups.
- **Parity in salary scales, service rules and retirement age** of university and college teachers of Kerala with that in central universities and full transfer of service and service benefits. This will enable us to attract distinguished teachers and researchers from universities outside Kerala.

6. Some of the best talents in teaching and research bloom with age. While there is much to say about the energy and freshness of perspective that young people bring into the profession, the wisdom that comes with experience is also of considerable value. Some good teachers from the colleges and universities of Kerala, after their retirement, get absorbed into teaching and administrative positions in the private sector of higher education. Such absorption is heartening, since such expertise is still harnessed within the system and put to good use.

The public funded system of higher education in Kerala should also find ways of retaining the expertise of such scholars beyond the age of retirement for a period of up to five years. There may be fears that this would restrict opportunities of younger people aspiring for faculty positions. These fears can be allayed through the creation of a separate superannuation cadre supernumerary to the existing number of faculty positions. This cadre of superannuated teachers should have specific designations like **Professor of Eminence or Distinguished Professor**. About 50 positions should be created within this cadre in the next five years, with a fixed compensation equivalent to the salary of a regular Professor or Associate Professor as the case may be. Appointments to these positions can be managed centrally through the KSHEC or by the universities, each of which are apportioned a specific number of positions under the cadre of superannuated teachers. The process could be funded and managed under a special scheme by the KHEF.

7. As a corollary to the above, the Commission also recommends the **repeal of the present stipulated age limit** for appointment as Assistant Professor, to ensure that quality personnel from industry and research can move to teaching even at later stages of their career.

8. *New manuals and codes*. The need of the hour is the formulation of a set of manuals, codes and rules – **Manual of Academic Administration, Academic Financial Code and Service Rules for**

Higher Education – that account for the unique mandate, needs and modes of functioning of higher education institutions, that account for the specific and distinct requirements of teaching, research, laboratory work, purchase, procurement, field work, fellowships, academic travel, study/sabbatical leaves, extra-curricular activities and all such practices related to higher education. The University Law Reforms Commission may be entrusted with this important task.

9. *New system of auditing*. Higher education institutions work according to a rationale that is distinct and different from Government departments, offices, or local bodies. Their specificities of finance and expenditure require an altogether different approach and system. To address this long-standing problem, the Commission recommends the setting up of a separate system of auditing – **Kerala State Higher Education Audit** – for higher education institutions. An alternative will be to permit universities and higher education institutions to be **audited by chartered accountants**, from among a pool of chartered accountants appointed by the Government.

10. *Introduction of ERP*. The interface functions of the university with teachers and students should be modernised and made paper-less. Solutions based on **ERP** should be uniformly implemented across universities for academic data management; the KSHEC must take the leadership in designing and formulating it and distributing customised versions to all higher education institutions.

11. *Fund for research financing*. With fresh avenues and areas of research opening literally each day, there is the urgent need to enhance project financing both in number and quantum to enable more faculty to take up research projects. To this end, **a higher education fund for project financing** for university/college teachers should be set up with special emphasis on multi-disciplinary/interdisciplinary/collaborative research.

12. *Conference travel fund*. A major grievance of faculty is the absence of adequate funding for conference travel, especially to destinations abroad. Since conference participation is a necessity for the improvement of research capacities, **a conference travel fund** for faculty should be introduced to be administered by the KSHEC.

13. *Sabbaticals*. Kerala must Introduce the system of fully paid **sabbaticals**, at a par with the UGC system where a teacher can take a break of one year after seven years of service, to a maximum of three such terms in a career.

14. *Protection of service*. Faculty who receives research fellowships during service should be accorded **full benefits of service** when it comes to promotion, probation declaration and pension

as stipulated by the UGC. Clear rules must be formulated to enable teachers to take up such research opportunities.

15. *Ease of travel*. The present system in which teachers require governmental approval for travel abroad has effectively prevented many from attending conferences and workshops in India and abroad, despite having confirmed invitations and even funding. To facilitate greater participation of Kerala teachers in international and national academic deliberations, a **complete removal of the system of governmental sanction** for travel abroad for academic purposes is recommended.

16. *Research cells*. To facilitate greater research participation from faculty, **research cells** composed of senior teachers/researchers should be set up in all institutions to guide faculty in the preparation of research projects and research publications. In addition, these cells should also conduct regular workshops on research project preparation in specific disciplines/areas, with the help of the Higher Education Council or other such academic bodies.

17. *Awards*. Research is most often a lonely avenue, with little recognition or appreciation coming the researcher's way except from the small community that constitutes her/his peers. To overcome this and to inform the university community and the wider civil society of the achievements of the faculty, the Commission proposes that the Government set up a wide array of **awards for distinguished research achievements**. To be adjudicated by renowned experts in each field, these awards should become touchstones of quality to be aspired for by teacher researchers as marks of academic eminence. We will elaborate on this point in Chapter V.

18. *Autonomy to design courses*. The Commission is of the firm opinion that the most important aspect of enabling teachers in higher education is to provide them with the freedom and responsibility to design and teach courses that reflect their research/academic interest and specialisation. Today, such freedom is curtailed because of centralized curricula and syllabi. As part of the process of decentralisation, teachers should be given greater **freedom to design new courses** in their areas of interest and specialisation, refashion existing ones, and bring in new and innovative methods of teaching and evaluation. This will also ensure greater diversity in teaching programmes.

19. *Faculty development*. At present, the mandatory orientation and refresher courses for teachers do not serve any purpose. An institutional structure under the KSHEC should be set up for the meaningful **professional development** of teachers and other academic personnel. It can offer specialized workshops in emerging areas or short individual research ventures with proper monitoring by senior mentors. As an immediate first step, we recommend a one-week **capacity building programme** for college and university teachers by the Department of Collegiate

Education (DCE), Department of Higher Education and the universities, based on a module developed by KSHEC. There should be an alignment of the above initiative with the extant guidelines of the UGC.

20. *Legal reforms*. Some aspects of the present Acts, Statutes and Regulations of universities and colleges may need to be amended to empower the universities to undertake the above-listed reforms. Such **amendments** can be carried out in a uniform manner under the initiative of the KSHEC. At the same time, we also found that many changes required to ensure "Ease of Doing Education" do not require interventions or approvals from the Government of Kerala. Yet, university leaderships are hesitant to undertake bold reforms at the systemic level in academic administration. We feel that university leaderships must be motivated and directed towards such reforms through a system of incentives for the institution. A ranking of universities in the implementation of these reforms may be useful; these rankings can also guide the extent of release of public funds to the universities.

21. *Policies for the elimination of gender disparities in science, technology, engineering, and mathematics (STEM)*. The commission notes that while there is widespread and frequent acknowledgement of the existence of gender disparity in the STEM fields, the reason of this inequity is usually sourced only to patriarchy in society, and not to the existence of an (implicit or explicit) gender bias in the institutional structure and in the practices adopted by the field. The Commission is of the opinion that higher education institutions need to critically examine the institutional practices and processes, particularly in connection with the criteria for selection, work-life balance, mobility, provision of childcare facilities, penalties for sexual harassment and sexual misconduct.

In short, institutions must formulate policies that promote substantive gender equity in the workplace by identifying and sincerely addressing the institutional hurdles that women in science are confronted with. It also recommends the implementation of a basket of schemes exclusively for women – modelled on those offered by the Department of Science and Technology (DST) and the Department of Biotechnology (DBT). The schemes should address the various hurdles faced by women scientists at various stages in their careers.

Figure 5 provides a summary of our recommendations for students and teachers.

The role of non-teaching staff

Even as teachers and students comprise the primary constituents of the higher education system, it is an undeniable fact that the non-teaching staff – including the administrative and technical

categories – of the universities and colleges are a necessary component of that system, making possible the very existence and maintenance of institutions. At the same time, their function is qualitatively different from the office and administrative staff of other domains. Their role is a specialised role, specifically aligned to the objectives and purposes of higher education. For the system to work smoothly, it is necessary that the non-teaching staff be professionally enabled and acknowledged as vital participants of the higher education eco-system.

A dignified student life	A dignified teacher life
A charter of student rights	Transparent, quality based appointments
Uniform academic calendar	A Higher Education Faculty Recruitment Board
Equivalence and credit transfers	Fixed and stable tenures for adhoc faculty
Universal non-NET fellowships	Chairs, awards and rewards for teachers
Kerala State Research Fellowships	A fund for research and professional development
Awards, laptops and travel funds	Separate service rules for universities
Smart labs, libraries, and classrooms	Separate financial codes for universities
Student evaluation of courses	Enterprise Resource Planning (ERP)
Modern hostel facilities	More faculty autonomy in course development
Guidance and placement centres	Enhancement of the retirement age
Wellness centres	Sabbaticals and travel funds

Figure 5 *Ensuring Ease of Doing Education: A summary*

The Commission recommends that the non-teaching staff be provided with:

- Regular capacity building workshops that address the knowledge set and specific skills – especially IT- and management-related proficiency – required for the smooth functioning of the higher education institutions;
- Possibility of enrolling in the academic programmes offered by the respective institutions in a part-time or flexible durational pattern;
- Promotions and upgradations based on qualifications and performance;
- Establishing awards for distinguished service at various levels every year;
- Strengthening the existing mechanism of recognition, including ways to learn from the best institutions globally; and
- Representation in administrative committees.

IV
CURRICULUM REFORM

Learning is the core function of education, and teaching is to nurture and facilitate it. In that sense, teaching should be seen as a composite activity that also includes construction of curriculum, syllabi and learning materials as well as assessment and evaluation. The teacher who teaches should also be the one who designs the courses and develops syllabi based on curricula developed collectively. The teacher who teaches must also be the person who assesses and evaluates. Furthermore, there should be enough flexibility to facilitate courses that address the current advancement of knowledge in different areas.

Decentralisation to the colleges

To achieve all of this, course design, syllabus development and evaluation must be decentralised to the colleges. However, we must think of a stage-wise progression towards this. The Commission recommends the following.

1. **Implement the semester system in its true spirit** with:
   - prominence for **credits**, rather than fixed duration, so that there can be variable lengths/durations for programmes;
   - possibility for students to **return** to a programme after a break, within a stipulated time;
   - courses and programmes made **contemporary** with focus on critical thinking and innovation.

2. **Decentralisation of the higher education system** with curriculum broadly set by the university, and syllabi determined by teachers in colleges with provisions for:
   - **regular revisions and updating of the syllabi** in colleges, and reported to the Board of Studies of the university;
   - **more elective courses** that reflect the specialisations and interest of the teachers and students, factoring in the employment/professional potential in each discipline;
   - a system of **course clusters** and a minimum requirement of courses from each cluster so that students are encouraged to elect courses from other disciplines;
   - a **cross-listing of courses** so that students are encouraged to take courses of their interest from other departments or programmes;
   - **flexible timings** of classes to accommodate more class hours to enable more elective courses across departments or programmes; and
   - **evaluations done primarily by the teacher** who teaches the course, with adequate checks and balances, and grievance redressal facilities to ensure fairness.

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- a **change** in the current system of mechanically calculating a department's **workload** in terms of the present fixed quota of 16 hours of work per teacher;
- the introduction of a system of **"workload cushion"**, which leaves 10-20 per cent of each teacher's workload free to take up elective courses; and
- the **appointment of more teachers** to create a critical mass of faculty and specialisations.

Workload Cushion

The workload of teachers must be rationalised and not treated mechanically; instead of the present system of counting just the teaching hours, hours spent for research guidance and independent research must be factored in. In addition, the possibility of teaching elective courses can be factored in by each department being provided with an extra "workload cushion" of 10-20 per cent of the total workload (depending on size of the department) as a buffer. For instance, in a department that must teach 160 hours weekly, the total number of teachers required is calculated now as: 160/16 = 10. However, with the "workload cushion" of 10-20 per cent being factored in, the total workload will come to be in the range of 176-192, with 16-32 hours (time for four to eight 4-credit elective courses) being earmarked for elective courses to be offered by individual faculty. Effectively, this will mean that the same department will need 176-192/16 i.e., 11/12 teachers, with nearly 4-8 additional elective courses being offered to students.

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3. Provisions for credit transfer and credit sharing that shall:
- enable the possibility of **choosing courses** from other universities/institutions in the online mode; and
- initiate a **common/shared bank of credits** for UG/PG courses through the KSHEC.

To facilitate all the above (see Figure 6), the Commission recommends instituting **capacity building programs** for curriculum development, course design, syllabus construction and evaluation to be organised under the aegis of the KSHEC to enable teachers to deepen and widen their competence in these areas critically significant to their practice as teachers.
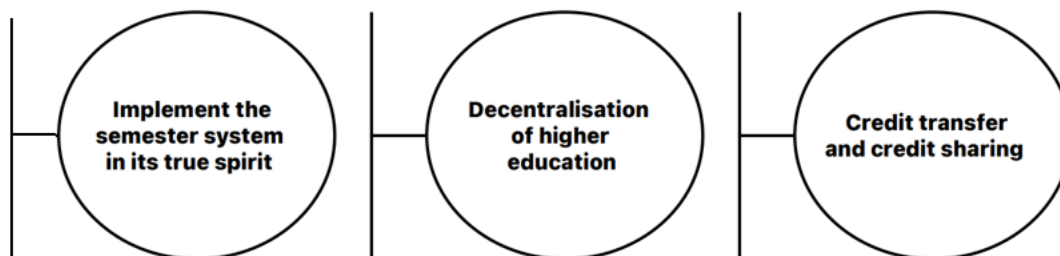
Figure 6 *The pillars of curriculum reform in the report: A summary*

The Commission recommends that in the initial phase, provision should be set aside for developing and initiating **ten innovative programmes/courses** across sciences, social sciences, humanities, and transdisciplinary areas **in about fifty colleges and university departments**. These should be proposed on **a five-year project mode** with in-built provision for appointment of teachers at the same level of compensation as regular teachers. An expert team should review the programmes/courses after two successive batches of students have graduated and decide on the continuance of these programmes/courses.

The curriculum reforms that the Commission recommends envisages lateral exits and movements from one programme to another. While the number of such exits are limited keeping in mind the feasibility in implementation, it is recommended that students should be given semester-wise transcripts giving credits for every course or any other curricular component (such as internship or research project) successfully completed.

Undergraduate curriculum reform

Curriculum revision must be a continuous and dynamic process. The present juncture is good time for a structural reform of undergraduate curricula, since it forms the foundation for any enduring reforms in higher education.

More than two-thirds of the students in the higher education system are enrolled for undergraduate programmes. For most of them, this is a terminal programme. Consequently, a major impact of higher education is primarily hinged on what these young people take away from it. This parameter becomes a criterion in any assessment of quality in higher education. This

makes it necessary that we **strengthen undergraduate programmes** with curricula that can equip students with the **knowledge base, intellectual abilities, a worldview, flexible skill sets and the basic expertise** that will make them effective citizens in a knowledge society as well as offer them multiple employment options.

Undergraduate studies should ideally lay the foundation for the development of broad intellectual skills and other competences that enable transfer and application in a wide range of practice. The disciplinary training at the undergraduate level is (as the word 'discipline' connotes) is more to develop structures of thought, inquiry, exploration, expression, attitudes, sensibilities, habits, and abilities associated with teamwork, than to commit to memory a large array of information, often in a disconnected manner.

We recommend a **comprehensive reform in undergraduate curriculum from 2023-24**, the design and development of which must begin in 2022-23. We present below a broad structure for the undergraduate programme and a timetable associated with its launch in 2023. Adopting the 4-year undergraduate programme will also bring Indian education at par with the offerings of universities abroad. There must be a separate financial allocation to facilitate this transformation.

We recommend a curriculum structure that enables a smooth transition from what is currently in practice to what the nation-wide higher education grid is in the process of adopting. On the one hand, this is meant to avoid any disruption or discontinuity during the transition phase in terms of sudden and jerky structural changes. On the other hand, it is designed to enable mobility of students seeking further education to other parts of India and abroad and for those who would like to enrol in higher education in Kerala.

We recommend a **four-year structure** for the undergraduate programme with **a single lateral exit option** at the end of the third year (see Figure 7).[5] It implies that the present institutional structure of 3+2 does not have to be transformed drastically and suddenly. Transition to a new structure could be done in stages. There is always an advantage to trying the efficacy of a model in a limited context as a pilot. Based on the evidence that emerges from the pilot, mid-course corrections may be incorporated before launching the curriculum comprehensively.

One essential feature of the new curriculum structure is the **foundation** component and **flexible alternative pathways** that provide for basic training in a combination of disciplines. It also implies an option for the subset of students who want to get into the world of work or to branch out into other areas of knowledge and practice, for which an **exit after three years** of undergraduate

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[5] We emphasise that this recommendation of the Commission is not the same as in the NEP 2020, where exits are envisaged at the end of *every* academic year. In contrast, we are suggesting a scheme with a *single lateral exit* option.

studies with a **capstone** component is proposed. This single exit option makes it possible for the existing structure of the three-year undergraduate programme to be subsumed under the proposed four-year structure.
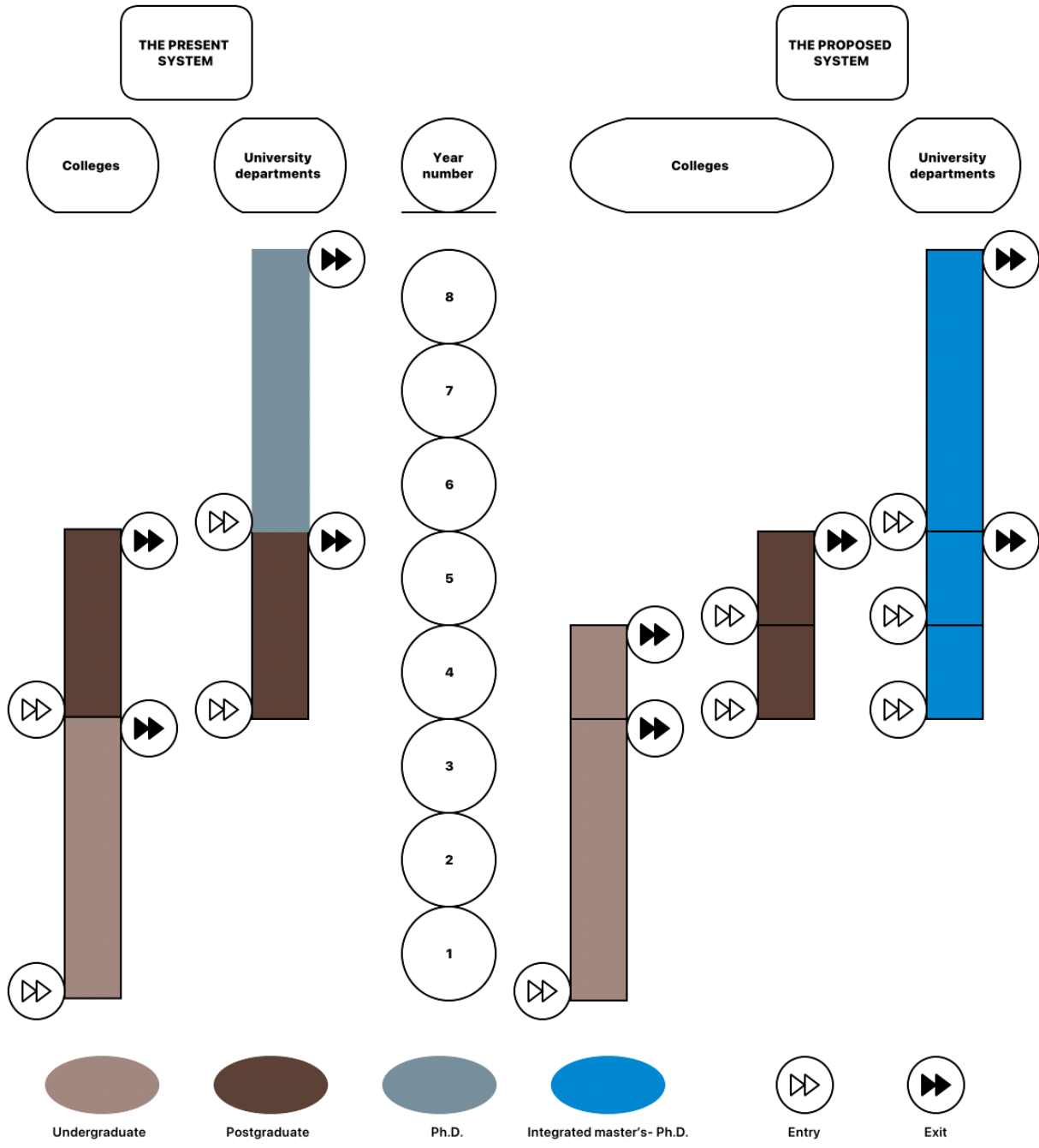

Figure 7 *The present and proposed curriculum structures for colleges and universities*
Note: This depiction is not applicable for professional programmes, where four-year programmes are already functional. These programmes, however, may adopt ideas based on the above model within the parameters of the regulations of their respective statutory bodies.

For the other subset of students who may want to go into further education at the postgraduate and research levels building on the discipline(s) they have been trained in, a **fourth year of the undergraduate studies integrated with the first year of the postgraduate studies** is what we propose. For some, the fourth year could be vertically integrated with a postgraduate programme, in which case it should focus on advanced conceptual and experiential learning in their discipline(s) and on developing research skills. For those who may want to go for interdisciplinary and transdisciplinary training beyond their undergraduate studies, the fourth year could be an opportunity for field immersion, internship, training in entrepreneurship and/or doing a research project.

The **foundation** component of the undergraduate curriculum should be common for all students with baskets of courses, some compulsory, and some elective. The foundation component should have courses with a credit equivalent of about one semester staggered over the first two years with baskets of courses on basic competences (logic and reasoning, academic writing, engaging with texts, design thinking), personality development ("self and identity", theatre, music) and perspective building (Indian Constitution, Indian Society and Economy, Environment and Climate Change, Gender and Social Equity, History of Thought). The foundation module is also meant to give time for the fresh-out-of-school students to develop a clearer sense of their own aptitudes and interests, get a general overview of the various streams of specialisation available in the programme, and make up their minds about what combinations of courses they want to pursue.

The **pathways** could be in terms of **major-minor options** with complementary disciplines like Literature and Psychology, Law and Politics, Economics and Business, Physics and Economics, Life Sciences and Physics, Economics and Data Sciences and so on for a three-year model. The above combinations can also be offered as **dual major** programmes for those students who choose to stay the course for all four years of the programme.

Alternatively, **tripos options** within the four-year model can offer combinations of disciplines such as Economics, Statistics and Physics, Life Sciences, Physics and Mathematics, Law, Economics and Business, Literature, Psychology and Theatre, Life Sciences, Physics and Data Sciences and so on.

As is suggested above, the students must have an option to pursue interesting and unconventional combinations of courses drawn from different disciplinary areas, like the sciences and the social sciences/humanities. The undergraduate programme structure must have the built-in flexibility to allow students to exercise these options as they progress through the programme, say by the end of the third or the fourth semester.

The above listing is merely suggestive. There is a need to decide at the institutional level (university and college) on the offer of combinations of courses based on the strengths of individual institutions and the specific contextual needs.

The **capstone** should ideally be in the fifth and/or sixth semester and should have a basket of experiential learning credits equivalent to at least half of one semester. This curricular component is essentially to ensure that the graduating standards are fully met at the time of lateral exit after three years. This will bring a closure for those who are opting not to go on in the programme into their fourth year. Apart from tying the loose ends in the disciplinary training, the capstone must contain experiential learning opportunities associated with employability and entrepreneurship including some field exposure and, if possible, a short internship.

Among the various aspects of the curriculum reforms that are proposed by this Commission, there are some that are in alignment with, and some that deviate from, the recommendations of the National Education Policy (NEP) 2020. The sense of the Commission is that Kerala's higher education apparatus should be pragmatic in making use of suitable opportunities available within an enabling policy environment that emerges in the country from time to time. This includes the case of the implementation of NEP 2020. Our focus in this report, particularly, is the realisation of the goal of a people-centred knowledge society as conceptualised by this Commission.

Towards an implementation strategy

As was said earlier, one option is for the new curriculum structure to be piloted in a limited number of colleges in the first year and only based on modifications after that need the programme be offered state-wide.

If in principle the government accepts the above broad curriculum framework, our recommendation then will be to take the implementation process through the following steps:

Step 1: The Government through a due process has the proposed curricular framework examined under the auspices of the KSHEC. Based on the outcome of these deliberations in the KSHEC, it may promulgate the broad curricular structure.

Step 2a: Based on the broad curricular structure promulgated by the Government, the universities then take it through due process involving their Academic Council and adopt the broad structure with modifications, if any.

Step 2b: Based on the broad curricular structure promulgated by the Government, the universities then take it through due process involving Boards of Studies and the Academic Council. The output may be a detailed curriculum framework specifying long lists of courses with course structures to be included under the various baskets in the foundation component.

Step 2c: The universities again through due process as in step 2a formulate alternative pathways in terms of combinations of subjects to be offered along with long lists of courses for each pathway.

Step 2d: The universities through due process as in step 2a come up with long lists of courses/activities for the capstone that goes with the exit option at the end of the third year.

Step 2e: The universities through due process as in step 2a decide on long lists of courses and activities for the fourth-year component keeping in mind the nature of each pathway.

Step 2f: Parallel to 2d and in close coordination with it, the university departments through due process formulate curricula and course structures for a master's-Ph.D. integrated programme into which those graduating after four years of undergraduate programme can have lateral entry into the second year.

Step 3: The colleges through their own due process at the departmental and the institutional levels select courses from the long lists prescribed by the university and add some of their own as provided for in the curricular structure and work out the syllabi for individual courses.

The immediate task will be to have the broad curriculum structure to be promulgated by the Government and the adoption of the same with modification by the universities.

Subsequently, the priority will be to complete all preparations at the university and college levels for the first year and to begin the preparations for the second year i.e., on the foundation baskets of courses and the initial courses for the various pathways.

Capacity building

Parallel to this, there should be an entire package of capacity building programmes on design and development of curriculum, course structures, teaching-learning material and assessment and evaluation. We recommend that this should be at the state level under the auspices of the KSHEC. A critical mass of teachers in the system should go through the first set of capacity building

modules within a limited time frame of about a year. Having said that, these modules will have to be constantly updated and should constitute the continuing professional development programme. Considering the limited timeframe and the large numbers involved, it will be appropriate to go for a multi-mode and multi-media approach, bringing in, if needed, the Open and Distance Learning System. While face-to-face workshops could be organised for experiential aspects of capacity building, online options could be explored for theoretical expositions and for ongoing and continuing support. It will be ideal if these programmes are suitably credited and be counted against certification.

Strategically, the development and conduct of these capacity building programmes will follow a cascade model of training with a limited number of Key Resource Persons (KRP) and larger numbers of Master Trainers (MT). The KRPs will need to be drawn from all over the country and abroad, and their engagement will be largely towards the initial phase of the programme. However, it will be ideal if the MTs are drawn from the system, either from those in service or those who have retired. The pool of MTs will have to be maintained and replenished so that they will serve as resources for the continuing professional development programme.

The development of the training modules, training of MTs and the conduct of the first cycle of capacity building workshops will need to be pursued along the following steps:

Step A: Creation of structures and provision of resources to KSHEC for this purpose.
Step B: Identification of Key Resource Persons (KRP)
Step C: Conducting a series of Workshops involving KRPs to prepare training modules.
Step D: Identifying Master Trainers (MT) from various disciplinary areas.
Step E: Conducting a series of Training of Trainers Workshops.
Step F: Conducting capacity building courses, workshops, and programmes in a multi-mode format.

Timeline

The entire operation to oversee the implementation of the curriculum reform initiative needs to be vested in the KSHEC. Similarly, the development and the conduct of the Capacity Building programme also will be under the aegis of the KSHEC. A monitoring cell will need to be created at the KSHEC with an in-built coordination system with counterpart structures in universities.

If the new curriculum is to be implemented with effect from 2023-24, the timetable depicted in Table 7 needs to be followed.

Table 7 *A proposed timetable to undertake curriculum reform in higher education in Kerala*

Time Scale	Aug-Sept 2022	Sept-Oct 2022	Oct-Dec 2022	Jan-Mar 2023	Apr-Jun 2023	Jul-Sept 2023	Oct-Dec 2023	Jan-Mar 2024	Apr-Jun 2024
Launch					✓				
Step 1	✓								
Step 2a		✓							
Step 2b		✓	✓						
Step 2c			✓	✓	✓	✓			
Step 2d						✓			
Step 2e						✓	✓		
Step 2f							✓	✓	
Step 3			✓	✓	✓	✓	✓	✓	✓
Step A	✓								
Step B	✓								
Step C		✓							
Step D		✓							
Step E			✓	✓					
Step F				✓	✓	✓	✓	✓	✓

Postgraduate curriculum reform

Simultaneous to reforms in undergraduate curriculum, the postgraduate and research programmes must be strengthened. We recommend the exploration of more **flexible and innovative course structures**, such as research-oriented post graduate programmes in university departments; integrated five-year bachelor's-master's programmes; integrated master's-doctoral programmes, joint degree programmes among universities; dual-degree programmes; skill-enhancing degree programmes that can ensure employment; internships; value-added courses through collaboration with industry; media and publishers; introduction of courses in entrepreneurship; and possibility of spending a semester abroad or in another Indian university.

Double degree and **joint degree** programme involve intensive collaboration between different universities, and can afford students more access to resources, professors, and opportunities than they would have in a single programme. A joint degree is a single degree programme where the same curriculum is pursued in two different universities (with only one university awarding the degree), whereas a double degree programme involves coordination between two different higher education institutions, in which the students enrol in two distinct programmes, one at each institution.

As the colleges move into the three/four-year model of undergraduate studies, there could be two corollaries. One, colleges offering **two-year master's programme will continue** to offer these, in a manner that will have cross listing of courses between the fourth-year undergraduate programme and the first-year master's programme. Two, university departments may simultaneously move into an **integrated master's-Ph.D. programme model**, which will largely admit those who have completed the four-year undergraduate degree*.*

This will enable students exiting after three years of undergraduate programme to access a two-year master's programme in colleges, while those who complete the four-year programme may be encouraged to access the master's-Ph.D. integrated programmes offered by the university departments. In the updated framework that we have devised, the master's degree can either be offered as

- a stand-alone two-year degree (primarily in colleges); or
- a part of an integrated degree with Ph.D. (primarily in universities).

At the same time, there are different implications for colleges and for university departments in these reforms.

For colleges

The structure of the master's programmes at colleges, that is, as stand-alone two-year programmes, will remain unchanged from now. However, the curriculum will need to be reconceptualised with special focus on applications and employability. For those students who exit after three years of the bachelor's programme and would want to pursue a master's programme, they can do so by seeking admission in the stand-alone two-year master's programme in their college or any other college.

For universities

University departments will move to the model of an integrated master's-Ph.D. programme of a minimum of five years with dissertation.

- Those who exit after three years of bachelor's programme can get admitted to the first year of the master's programme.
- Those who have completed four years of under-graduation, can get entry into the second year of the master's programme.
- The curriculum needs drastic reconceptualisation to ensure vertical integration and alignment both with the fourth year of the undergraduate programme to the second year of the master's programme and the third year of undergraduate programme with the first year of the master's programme.
- The course contents of the fourth year of a bachelor's programme and other curricular experiences should be comparable and aligned with that of the first year of a master's programme. We visualise the possibility of common/combined classes for some of the courses involving the fourth year of bachelor's programme and the first year of master's programme, wherever both the bachelor's and master's programmes are offered by the same college.
- The second year of coursework in a master's programme will have a research orientation in the integrated master's-Ph.D. programme, with vertical integration and alignment with the pre-Ph.D. course work, the latter having provisions for specialisation in the areas of interest, as well as in research methodology, fieldwork, and internship.
- Students may choose to exit the programme at the end of the 2nd year of this integrated programme with a master's degree.

A subset of colleges with requisite facilities and faculty resources may also be encouraged to offer a five-year integrated bachelor's-master's programme.

The Commission recommends that measures such as the adoption of master's dissertations, research internship arrangements, and the offering of as many kinds of elective courses be paid special attention to both in the two-year master's programme at colleges as well as the four-integrated master's-Ph.D. programme at university departments.

Doctoral programmes

Ph.D. students constitute a very important focus group for the promotion of a research culture in our universities, as this formative period in an academic's life is not only a period in which

students acquire crucial research skills to express original thoughts and pursue independent explorations, but also one in which they must be trained as teachers who can communicate and share knowledge with other students. It is incumbent upon universities to ensure that this crucial period is both one which fosters independence and confidence in Ph.D. students, as well as imparts rigorous training in research as well as other aspects of academic life. Accordingly, the Commission suggests that the following measures be adopted in all higher education institutions where Ph.D. research is pursued.

1. *Kerala State Research Fellowships.* The Commission recommends the institution of **a non-NET fellowship for all research scholars** in universities and colleges at a minimum level of Rs 15,000 per month, plus a contingency fund. The maximum tenure that this fellowship can be held is six years, provided that the tenure is uninterrupted.

2. *Chief Minister's Research Fellowships*. **One hundred fellowships** should be introduced similar to and in parity with the UGC's JRF/SRF and of five years' duration, to be awarded on the basis of merit assessed through an examination.

3. *Conference travel fund*. The Commission recommends the creation of a special Conference Travel Fund for research scholars, to be managed by the KSHEC, to encourage the mobility of Ph.D. students while enrolled in the Ph.D. programmes. These shall take the form of travel and registration fee grants for participation in summer/winter schools, workshops, and conferences.

4. *Research exchange*. Universities must be encouraged to enter into agreements with other institutions in both India and abroad to fund mutual **exchange visits** of Ph.D. students between their institutions for short research stays, to foster academic collaboration.

5. *Easing of research rules and regulations*. It has become apparent from our meetings with Ph.D. scholars that there are many archaic regulations and stipulations still retained by universities that are completely inimical to research. Conditions such as the requirement of giving the full tile of the thesis at the very beginning (what is the purpose in research if the final title is already decided at the very start, the Commission cannot help but wonder) and that it can be changed only once during the period of research and that too on payment of a fee; disciplinary/departmental restrictions on areas of research and the availing of supervisors; restrictions and lack of support for field work; these are only some of the issues that indicate a clerical logic at work in academic regulations. Even further, the stipulation of confidentiality of examiners, a sorry vestige of the colonial education system, and the outdated systems of communicating with examiners create inordinate delays in the evaluation of dissertations.

Considering all this, the Commission recommends a **rationalisation of the research regulations** in all universities, to bring in flexibility, mobility, speedy action, and ease of doing research. The Commission suggests that the KSHEC formulate a set of common research regulations, in consultation with institutions, research supervisors and especially research students.

6. *Graduate workshops and conferences*. Higher education institutions should also earmark a section of their research funding for the organisation of **graduate student workshops** to equip research scholars with essential skills of writing, research methodology and software, as well as for researchers' conferences, on an annual basis.

7. *Centres for Academic Writing*. For research students, acquisition of the skills of academic expression is of paramount importance. This important component of a student's training requires far more than basic competence in written expression and involves such skills as understanding how to read intensively, summarise, plan, and create texts in the academic register, all of which require sustained training during a student's term. The Commission therefore proposes that two or three well-staffed **Centres for Academic Writing** be established under the aegis of the KSHEC, which will conceptualise and develop a menu of courses that can be opted for by different ranks of students in higher education institutions. Initially, these Centres can be operational in a project mode, i.e., for five years and will proffer services such as the following.

- Web resources and workshops/courses directed at training students in different programmes (undergraduate, postgraduate, and Ph.D.) in academic expression.
- Specific training modules in **thesis writing, conference abstract writing, journal article writing,** in addition to **remedial language courses**.

8. *Teaching Assistant Programme*. Since Ph.D. scholars have evidently opted for an academic career, it is imperative that they are provided with valuable teaching and academic experience during their research time. The Commission strongly recommends that universities should take initiative in involving Ph.D. scholars in pedagogical practice through a **Teaching Assistant (TA) Programme** at the departmental level, so that all scholars in receipt of a fellowship (either non-NET or JRF/SRF) get an opportunity to serve as a TA for a course taught by a faculty member of the university for a minimum of two semesters (and a maximum of 4 semesters). The duties of a teaching assistant shall include the following:

- Lectures, tutorials, leading classroom discussions, pre-lecture preparation, and review sessions, under the guidance of a teacher in charge of the course;

- Evaluation of student seminars, assignments, examinations, and tests under the supervision of the teacher in charge of the course;
- Assistance to postgraduate students in their final dissertation and draft correction;
- Remedial teaching, if required;
- Assistance to the department in the organisation and conduct of seminars, workshops, lectures, and other academic activities.

It should be noted that TA work assigned to a Ph.D. scholar shall not exceed five hours per week and must not be assigned to students doing coursework and in the final stages of their doctoral work. Further, all TAs should be issued official experience certificates. Care must be taken to ensure that the TA system is run strictly professionally and ethically.

9. *Accountability and self-evaluation*. An important aspect of training students in research is to build a culture of accountability and (self-)evaluation of progress. The Commission recommends that all higher education institutions enrolling students for supervision maintain the following **standards of evaluating** student progress:

a) **Research Advisory Committees** should record full details of student progress during the Ph.D. work from the end of the 3rd year onwards, rather than merely recording students' progress as satisfactory/unsatisfactory. Higher education institutions should develop a proforma in this connection, to maintain records of fieldwork/experimental work completed, research presentations made, and draft papers/chapters presented.

b) **The duration of a Ph.D.** shall be a maximum of six years from the date of registration. Registration for the 5th and 6th year of the programme will require rigorous evaluation by the RAC, which must provide a proper assessment of the work done so far (experiments/fieldwork/chapters completed) and what remains as incomplete/pending. The RAC must also provide an assessment of the duration needed for the completion of the Ph.D. work.

c) **Deregistration**: If a student fails to meet the RAC's benchmark of the Ph.D. at the end of the 4th year or chooses/needs to take a long leave of absence (to avail of research exchange fellowship or to take up short-term/long-term employment), (s)he should be allowed the option of deregistering from the programme for a period of up to two years. Deregistration shall only be granted to students who have completed the minimum residency period specified for Ph.D. students (currently three years), and whose applications for deregistration are recommended by the RAC. Maternity leave, which is separately provided for by the UGC regulations, shall not require deregistration.

Applications for re-registration must be similarly endorsed by the RAC, which must clearly assess the pending work that remains to be completed, including pending field work, experimental work and writing of chapters of the dissertation, and certify the duration needed for the completion of the Ph.D. work.

Common entrance tests

The Commission has been presented with opinions that favour a system of common entrance tests for university admissions at all levels. It is argued that this will facilitate bright students from outside Kerala to pursue higher education in the State and would bring about uniformity in the criteria for admitting students. However, the Commission has also been presented with serious reservations about this proposal. Thus, it is argued that such a system of common entrance tests will present a logistical nightmare for the administration; will restrict opportunities for students from Kerala since public universities in other States are unlikely to reciprocate the gesture; and will unfavourably affect chances for students from underprivileged backgrounds in Kerala. Further, common entrance tests in many subjects, particularly based on objective questions, may not be robust enough to assess analytical skills, critical thinking, and ability to express.

On balance, the Commission perceives that while more uniformity in the selection procedures may be useful, thrusting a uniform system of entrance tests on all universities at all levels is tantamount to violating the autonomy of universities to decide their own selection processes. The Commission, after due deliberation, also concludes that the matter of a common entrance test is best left to the universities and colleges to decide in exercise of their autonomy. Hence, we shall make three broad suggestions for the consideration of the Government: (a) the KSHEC may work with the universities to ensure a broad uniformity of selection procedures for students at all levels; (b) two or more universities may be encouraged to voluntarily cluster themselves and conduct common tests for selected courses; and (c) any common examination shall strictly exclude undergraduate programmes and may be confined to postgraduate programmes and above. This issue may be periodically revisited and discussed.

V

SCIENTIFIC RESEARCH, INNOVATION, AND INCUBATION

New institutions

While proposing new institutions for scientific research, we are acutely aware of the short shelf-life of institutions in this part of the world. Therefore, we recommend that the constitution of the new institutions be so designed as to ensure a new institutional culture that weaves together the following cardinal values:

- academic freedom from the junior-most levels;
- collegiality;
- nurturing of creativity;
- quality and excellence; and
- institutional autonomy coupled with democratic governance.

With these principles being held paramount, we recommend establishing new institutions as below. These institutions should encourage enrolment and recruitment practices that ensure the participation of students and faculty from across the country and abroad. In selected cases, the new institutions can also be set up by a substantial upgrade of existing institutions.

Kerala Institute for Science, Technology, and Innovation (KISTI)

KISTI must be an internationally competitive and autonomous centre for advanced research and innovation, to be established with public-private partnership. Kerala needs to create a critical mass of people in emerging areas such as nanotechnology, advanced materials, systems biology, big data analytics, robotics, energy engineering, electric mobility, net zero, artificial intelligence, sustainability, climate modelling, computational physics, structural biology, etc., with which universities and colleges can establish linkages for growth. The goal in establishing such an institution is to ensure that our universities and colleges are staffed with quality human resource in these cutting-edge areas. Such a state-of-the-art and future-focused institute needs to be established for the principal objectives of creating new knowledge and highly skilled manpower and appropriate translation of some of the finding in specific areas of relevance leading to a future Kerala.

Our vision for the structure of such a centre is drawn from the models and experiences of similar institutions in different parts of the world, such as the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru, Institute for Advanced Study, Princeton, and National

Institute for Materials Science, Tsukuba and others. Recruitment at KISTI will be directed at attracting the best early career talents globally and retaining them, utilising both the existing schemes as well as innovative ones. Besides promoting cutting edge research by the employed faculty, KISTI must also run integrated master's, master's and Ph.D. programs in interdisciplinary areas outlined above. The institution should aim to establish national and international linkages with the best institutions, and may be, in the initial period, be mentored by an institution of repute, such as Indian Institute of Technology, Madras or JNCASR.

We envision that a centre of this kind will cost around Rs 2000 crores to be incurred over a period of 5 years.

Kerala Knowledge Consortium (KKC) Centres

We recommend the establishment of several autonomous forward-looking institutions under **KKC centres** in existing institutions to address Kerala's challenges through research and innovation. Each of these institutions will be called the KKC Centre for XXX, where XXX refers to the subject area, and will have innovation as their primary goal. These institutions should pay focused attention to specific themes over a long period, initially for a period of ten years. Areas of intervention could include renewable energy and net zero, nanotechnology, electric mobility, biomedical engineering, genomic studies, artificial intelligence and machine learning, big data sciences, space application studies, climate change and disaster management, educational planning and development, and value-added agricultural products.

KKC Centres should be formed only if a critical mass of quality academics/innovators are available. They must assume the form of separate centres only over a period of five years. At the end of a ten-year period, each centre must be appraised for ability to sustain itself. Some of the existing centres of knowledge along such themes could be upgraded to KKC centres.

Transdisciplinary Centres (TDC)

We also recommend the establishment of **TDC** in our universities/institutions. Like the KKC Centres, the TDC should undertake research on specific challenges of relevance to Kerala, such as climate change, remittance economy, traditional technology, biodiversity, social harmony, social geography and inclusion, and others, but the focus of this research will not be innovation, but rather capacity building in the higher education institutions. The TDSs could also perform the function of think tanks in certain spheres.

Each TDS will have freedom to run independent programmes, like the Centre for Development Studies (CDS), and should be built around knowledge groups in the higher education institutions that have established their visibility around such themes. TDSs will be set up based on an open call. Successful proposals will receive support up to Rs. 5 crores per year for a period of ten years, with an interim review after five years. TDCs will be expected to apply for competitive grants and approach funding agencies for research support. At the end of ten years, a comprehensive review of the TDC will be initiated to see whether it may be funded as an autonomous institution.

Kerala Centre for Academic Computing (KCAC)

High-end computing is central to the growth of many scientific disciplines. The Commission proposes the establishment of a **KCAC** to make high-end computational resources available to the higher education system of Kerala (it may also be made available to anyone outside the system in India based on a revenue model.) A state-wide licence for the use of such facilities may be provided through KSHEC or the Digital University. KCAC may be established at a place where physical infrastructure, with excellent network, reliable power, and air-conditioning, is available.

Kerala Centre for Analytical Service (KCAS)

Two advanced centres for analytical services to be named as **KCAS** must be set up to house state-of-the-art analytical facilities of most essential instrumental facilities. These KCASs will be run 24x7 for master's students, research students, postdoctoral researchers, and faculty members. The centres may cater to other states, industries and public depending on the time availability. The centres must generate their running cost and maintenance from the services delivered. These centres may create more analytical facilities on a need basis. The two centres may be in North Kerala and South Kerala, near a location with a high user population. A user community of not less than 100 active researchers must endorse the need of such a facility for it to get established. Calls for the establishment of such facilities will be available at the website of KSHEC or jointly with Kerala State Council for Science, Technology and Environment (KSCSTE). The KCACs will be housed in higher education institutions, including in KISTI, where infrastructure such as liquid nitrogen, liquid helium, high purity gases and so on will be available at short notice.

The Commission also conceptualises the creation of a **Kerala State Network of Research Facilities (KSNRF),** which will be a central electronic network of research facilities specifying the instrumental facilities available at each HEI, accessible for common use. This will make it possible for the facilities to be used by the community at large, and income from these services can help the institution to maintain the facilities. In addition, KSHEC will maintain a special fund for

immediate assistance for those instruments which are in intense demand, which need spares, urgent repair, and annual maintenance contracts.

Kerala State Science and Technology Academy (KSSTA)

Kerala has several institutes of higher education and research, functioning under the KSCSTE, which must rely on the various universities to which they are affiliated to award their Ph.D. degrees. The Commission proposes that one way to enhance efficiency is to offer Ph.D. degrees under a common umbrella. This will ensure timely intake of students and their timely completion, along with better branding. Accordingly, it proposes the institution of a **Kerala State Science and Technology Academy,** which will be funded by KSCSTE and could be housed at one of the KSCSTE institutes.

The KSSTA should also be responsible for the planned development of the institutes functioning under the umbrella of KSCSTE and similar institutions outside it. These include Centre for Water Resources Development and Management (CWRDM), Kozhikode; National Transportation Planning & Research Centre (NATPAC), Thiruvananthapuram; Kerala Forest Research Institute (KFRI), Peechi; Kerala School of Mathematics (KSOM), Kozhikode; Sreenivasa Ramanujam Institute of Basic Sciences (SRIBS), Kottayam; Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI), Thiruvananthapuram; Malabar Botanical Garden and Institute for Plant Sciences (KSCSTE-MBGIPS), Kozhikode; Institute for Climate Change Studies (ICCS), Thiruvananthapuram and Institute of Advanced Virology (IAV), Thonnakkal (which is currently not under the KSCSTE). It should invite specific plans for development from these institutions and fund competitive proposals from among them. The objective of this measure is to make these institutions competitive in respective areas along the lines of other institutions, such as TDSs and KKC Centres.

Schemes for promoting and rewarding excellence in research

Pockets of excellence in research, particularly in the rural areas, should be identified by higher education institutions and funded. Productive faculty members should be given incentives/awards/recognitions based on the research fundings generated, high impact publications, patents industrial consultancy, and technology transfer. Hence, we recommend the institution of the following specific schemes.

Distinguished Professors: Scientists working in institutions, such as those under the Council of Scientific and Industrial Research (CSIR), DST, DBT, Department of Atomic Energy (DAE), Indian Council for Agricultural Research (ICAR) and Indian Council for Medical Research (ICMR), retire at

a relatively young age of 60 years. But many of them have several potentially active years of work ahead of them. The Distinguished Professor scheme is intended to attract such eminent academics to work in Kerala after retirement. We propose a maximum of 50 such positions at any point in time for a maximum period of 5 years from the date of appointment. Scientists employed under this scheme are expected to conduct research, guide master's and research students, obtain research grants, participate in teaching, and mentor younger faculty. Their performance will be evaluated at the end of the third year. Remuneration should be equivalent to that of a professor (adjusting for pension received, if any).

Janaki Ammal Chairs in Science: We propose the establishing of ten Chairs exclusively for women in universities for pursuing research in basic or applied sciences in frontier areas of science and engineering. Eligible candidates must be not more than the age of 55 and of the rank of a professor. Awardees will receive a contingency grant of Rs 10 lakhs and an additional honorarium of at least Rs 50,000 per month.

Kerala Research Professorship (KRP): Outstanding superannuated/retired researchers from academia, research organisations and industry may be re-employed in universities by awarding them Kerala Research Professorship for a specified term. This should be in tune with the National Research Professorships or the CSIR's Bhatnagar Fellows. The remuneration could be the pay package of a senior Professor in the university. There may be at least 10 such Professorships in operation at any given point of time.

Kerala Research Chairs (KRCs): We propose the establishment of 20 Kerala Research Chairs for the cream of high calibre faculty in diverse areas, not limited by disciplinary boundaries. Awardees should be given a fellowship in terms of an honorarium of Rs. 50,000 per month, in addition to their salaries, till they superannuate. These awards should be given to professors with more than 10 years of service, who have received national/international recognitions or fellowships of academies, and should have an excellent record in teaching, research, and innovation. Nominations for this award shall be made by Vice-Chancellors, Directors, Principals, or Bhatnagar Fellows and selection must be made by an eminent committee.

Kerala State Government Research Award for Excellence: We propose the establishment of college, university, and state-level recognitions at three stages: (a) Early career, under 40 years; (b) Mid-career, under 45 years; and (c) Lifetime, over 50 years. The state-level recognition should be established in Natural Sciences, Engineering and Technology, Social Sciences, Earth Sciences, Medicine, and Humanities. Each of the three age groups may include up to 5 awards and will be open to universities and colleges. These awards should include research grants of Rs. 25 lakhs, Rs 30 lakhs and Rs 40 lakhs each.

Selection for these recognitions at the State-level must be made by an eminent committee. College and university-level recognitions may be awarded by committees set up by them.

A holistic approach to nurturing research and innovation

For Kerala to become a prominent centre of knowledge production, the state must intensively invest in research and innovation in a way that the some of the results of such intellectual creativity translate into social transformation and economic well-being. Wherever feasible, policy must nurture the integration of Higher education institutions into an entrepreneurial ecosystem. The overall thrust of the state's policy must be one that creates mechanisms to support and sustain knowledge creation, facilitates the protection of intellectual property, enables the translation of such knowledge to products, and incubates innovator-founded and -led companies in a model that shares financial benefits between innovators and higher education institutions.

Below, we recommend what we consider to be the key features of this holistic approach.

Systematic and sustained funding for research

A mechanism must be created that supports faculty with funds for research at the state level. We recommend the creation of a fund of Rs 1000 crores for five years to support knowledge creation in the state, especially in colleges, to be won through competitive projects. The Commission also recommends the institution of a scheme, which provides **seed money** of Rs. 20 lakhs for newly appointed science and engineering faculty members and Rs. 10 lakhs for social science faculty members to begin their research careers. In addition, the Higher Education Fund must ensure that there is an opportunity available for performing students to undertake **academic travel**. This may also be used for conducting advanced measurements at suitable facilities or for collaborative research. The fund must be available at short notice to support travel when needed. To operationalise this grant, travel grants may be awarded thrice a year, after a due process of online application and the funds may be distributed within one month.

Further, all higher education institutions should set apart mobility funds for master's/Ph.D. students and faculty members to carry out research projects and experiments in other labs in India and abroad, possibly following the European model of Erasmus funding. All higher education institutions should formulate sub-heads in their plan budgets for the same.

Creation and maintenance of research instrumentation

Although the state has created many facilities, the rapidly extending frontiers of knowledge necessitate both constant maintenance of existing instrumentation as well as periodic upgradation. Concomitantly, a key problem in existing facilities is the maintenance of infrastructure, which is dependent on the availability of adequate and skilled personnel and a suitable physical environment. To ensure this maintenance of scientific infrastructure, we recommend the creation of an instrumentation wing in each higher education institution that will be entrusted with maintenance.

We also recommend the formulation of a scheme for the annual funding for several major research facilities, through a scheme like the Intensification of Research in High Priority Areas (IRHPA) scheme of the Science and Engineering Research Board (SERB), which may be won through competitive grant proposals. These new facilities should be established in frontier areas of knowledge and need not be experimental alone; they may include computational resources, high-end software, data visualisation and digital education.

Research parks

Every university and autonomous college must have independent research parks**,** established as Section 8 companies, which will also serve the colleges and other institutions falling under the jurisdiction of each university. We envision the establishment of about 20 such parks in a phased manner. A typical research park should be built on a 50:50 partnership model, with investment coming from anchor clients, alumni, and civil society. This would be possible only when universities have the freedom to establish Section 8 companies. These companies may also secure loans from financial institutions. The revenue generated should be used for the growth of the research parks and the universities.

A research park will function as directed by its Governing Board, whose constitution will be as outlined in the incubation policy of the institution. Typically, the Governing Board will be composed of the head of the institution, senior and established members of the faculty, junior faculty with interest in incubation, established alumni with proven track record in industry, established industrialists, established venture capitalists and representatives of society.

The development of a research park must involve the establishment of clear guidelines in several areas. The research parks will (a) create norms for the use of space and resources for university-incubated companies, anchoring of clients, other industries, etc.; (b) devise methods for the interaction of the research parks with the academic community on campus, such that the

professional and financial growth of the research park and its ecosystem assists the enhancement of the higher education institution's capabilities and resources; and (c) establish ways and means to strengthen the incubation ecosystem. Further, as anchor clients are essential for research parks to be established as physical structures, consultations with them may be organised to evolve necessary guidelines.

However, the support of 50 per cent from the Government should be provided only if a critical mass of people exists in the institution along with an appropriate environment.

Inter-institutional networks

A crucial object of policy must be the maximal utilisation of the available resources in the state in terms of human capital and material resources. Accordingly, the Commission recommends the creation of robust inter-institutional networks to facilitate cross-fertilisation of ideas and sharing of resources. We suggest that specific higher education institutions be tasked with the creation of these networks/virtual inter-institutional centres in diverse areas of knowledge. It is expected that these networks will hold periodic meetings to ensure that new opportunities to write research proposals and address innovation challenges are used appropriately, besides discussing emerging areas of knowledge.

Uniform innovation policy

The adoption of a uniform innovation policy, a model of which is presented as Appendix 3, should outline the principles and practices to be followed by higher education institutions to create, protect, and market intellectual property, incorporating specific details of relevance to the institution. Such a policy should be in line with best practices followed in institutions where vibrant innovation ecosystems are functioning, such as IIT Madras. It must outline the principles followed for sharing expenses and distributing returns and setting up institutional bodies relevant to promoting an efficient and innovation-friendly academic culture, such as the Intellectual Property (IP) Cell, fund for IP filing, body for IP marketing, and a State-wide advisory body to monitor IP activities. It should also outline the systems and practices needed for income generation, distribution, and sustenance.

Innovation networks

Networks of innovators, institutions and research parks need to be established for smooth sharing of IPs, knowhow, facilities, and databases to encourage innovation. These networks will create new opportunities for young innovators and will connect individuals within and outside

India for better marketing of products and services, and will run innovation weeks, hackathons, mentoring clinics, and workshops to identify and encourage innovation activities in institutions. A fixed revenue for these services may be mobilised, at not more than five per cent of the technology transfer fee obtained by the higher education institution.

Awareness and training in innovation

To promote innovation, sustained awareness programmes should be conducted in all the higher education institutions on a regular basis to promote an innovation ecosystem. This could be in the form of workshops, hackathons, seminars, and conferences. In addition, a compulsory course on "Fundamentals of Innovation and Entrepreneurship" should be initiated, so that every student is exposed to the basic principles of innovation. This course may be run online as well. Further, wherever human capital is available, specialised academic programmes, such as an MS in Innovation and Entrepreneurship, could be run in collaboration with other reputed higher education institutions.

Centres for Innovation (CfI)

We recommend that each higher education institution sets up a CfI to nurture innovation on the part of students. CfIs shall be run completely by students, headed by a faculty member, who will act only as a link between the administration and the centre for financial and administrative matters. These centres must be free in determining the choice of innovation themes and mobilising funds but must be provided with contacts and advice when asked for.

Flexibility for academics and students

Academics who are actively engaged in start-ups, incubation, entrepreneurship, and science parks should be given time off teaching duties for a semester or two, so that innovation ecosystems could be easily built up in higher education institutions. Similarly, students who are actively engaged in building up start-ups, incubation, and entrepreneurship programmes should be given the academic credit-points based on their working hours in the business enterprise.

Uniform incubation policy

An incubation policy, a sample of which is appended in Appendix 4, outlines the principles and practices to be followed by institutions to incubate companies, to own shares of such companies, to establish linkages between faculty, students, and staff with such companies, to create mechanisms to encourage and nurture the companies, and determine the rights and

responsibilities of incubated companies. Each participating higher education institution must formulate its own individual policy, incorporating specific details of relevance to it and incorporating the following institutional bodies:

- **Incubation Cell:** Run by a professional Chief Executive Officer (CEO) and with supporting staff.
- **Incubation committee:** With not more than 10 members; to select, nurture and evaluate the progress of incubated companies; headed by a permanent faculty member of the institution; and composed of a group of high-profile faculties experienced in such activities, representatives of the entrepreneurial community, finance professionals, representatives of institutions where such activities are flourishing.
- **Mentoring committee:** Headed by a professional experienced in mentoring start-ups with experience in diverse areas of deep technology start-ups. The committee should hand-hold with the incubatees for attracting investment, markets, and technology.
- **Legal cell:** Headed by a person well-versed in company law to establish companies, statutory filing, and avail of incubation benefits to help the incubatees.
- **Financial services:** Headed by a finance professional who can assist the incubatees for all their needs related to financial services.

Administrative reforms to facilitate research and innovation

Financial systems and procedures at higher education institutions must change drastically to encourage research and innovation. We propose the following changes:

- *Two independent accounts must be created*: (a) *internal*, for salaries, fees, estate, etc.; (b) *external*, to take care of all sponsored research and consultancy funded by agencies outside the higher education institution. Each account should be managed by two distinct Deans, each with an appropriate administrative structure. The procedures for functioning of these offices must be such that faculty and staff involved with such activities should be able to approach the Dean directly to get the work completed in a time-bound manner.

- *Management of project funds*: Apart from using the project funds efficiently, higher education institutions must establish independent resources for supporting new faculty in the form of start-up funds, sponsoring new and emerging ideas, supporting faculty during premature closure of projects due to changes in policies/approach of the funding agency, facilitating the travel of students and faculty for identifying projects, nurturing industry-academia linkages, maintenance of research facilities established through projects, and instituting research awards for excellence in research.

Openness for investment

The state must be open to attract private investment for establishing new institutions, supporting existing institutions for creating new infrastructure, supporting research projects, and establishing chairs/endowments. Investors/donors may approach the government or the higher education institution directly for the same. Requests/applications for such investment must be responded in a time-bound manner, as is to be specified in the form of regulations formulated by the higher education institution for this purpose.

- Proposals for the establishment of new institutions (within universities) of value more than Rs 50 crores will be evaluated by an independent committee headed by an eminent active academic with a panel of members with impeccable reputation.
- Support for existing institutions will be routed through a separate office to be created within the higher education institution. This new office will be called the 'Office of Institutional Development' headed by a Dean. This will have the authority to attract, absorb and channelise funds, independent of the university administration and project office, from alumni, and donors from across the world. The higher education institutions will have complete autonomy utilise such funds, establish physical entities, and offer naming rights.

Innovations with a Kerala-focus

Considering the unique geographical/ecological features of the state, which is not suitable for heavy industries but rich in underutilised bio/natural resources, any efforts in initiating innovations should have a focus on the following themes (our list below is only indicative).

- *Exploration of biodiversity*: The development of novel processes and products through the sustainable utilisation of Kerala's rich biodiversity needs to be encouraged in areas such as substitution of synthetic products with biobased products or the 're-invention' of traditional knowledge for product development with international acceptance, such as nutraceuticals, cosmeceuticals, probiotics, and prebiotics. The focus must also be on below-ground biodiversity and the development of eco-friendly agricultural inputs including biopesticides/insecticides.

- *Climate change mitigation and adaptation*: The impact of climate change on Kerala's very sensitive and fragile ecosystem demands development of better mitigation and adaptation practices. Innovations in management of emerging and re-emerging

pathogens and phytopathogens, and strategies for protecting biodiversity, water bodies and coastal areas need special attention. Other areas including saline farming, early warning systems for natural calamities, novel agricultural practices, and methods to reduce water use also deserve special attention.

- *Waste management*: Kerala, a consumer state with a high density of population, faces serious issues of waste accumulation of all types. Innovative practices have to be developed for reducing, reusing, and recycling waste with the management of hazardous waste and e-waste needing special attention. Bio-based packaging materials, new processing methods for such materials and innovative products using such materials need to be encouraged.

- *Post-harvest processing*: Innovative ideas from campuses needs to get translated for post-harvest processing of agricultural/animal/aquaculture products. Processing of low value crops like jack fruit, tuber crops and cashew apple to value-added products will be a support to our agricultural sector. Value addition and processing to meet requirements for export through novel technologies can help revive agriculture and aquaculture in the state.

- *Digital innovation*: Considering the high volume of trained manpower in information technology and allied subjects and the presence of a network of Technoparks/Electronic parks in the state, a greater emphasis should be given to information technology-driven innovations. Establishment of India's first Digital University will further enhance the IT and IT-enabled industrial environment in the state. Investment into artificial intelligence must be encouraged. Sectors of growth, such as digital education, must be encouraged. Such efforts in areas of Kerala's traditional knowledge, traditional technologies, and visual arts are to be encouraged.

- *Traditional industrial products*: Traditional industries were once the backbone of Kerala's economy. Revival of this sector with innovative methods of production/processing, marketing and diversification of products are important. However, in specific areas of intervention, such as toddy, change in policies in other areas, such as the Abkari Act, are also important to ensure that innovations reach the appropriate result.

We propose encouraging innovation activities in these areas by creating a specific fund of Rs 20 crores per year for five years to aid start-ups, and the absorption of their products in government-owned companies, by conducting field trials and similar efforts.

Continuous innovation

The higher education institutions should encourage innovation as a continuous activity. As members of the Kerala diaspora and non-resident Keralites are returning to Kerala for diverse reasons, their skills and talents may be used to enhance the innovation ecosystem of Kerala. Our higher education institutions should be forward looking in utilising their skills, knowledge, and contacts in enhancing the innovation ecosystem. For this, we propose that any or all the following measures may be adopted:

- Appoint **Professors of Practice** in every higher education institution, jointly with incubation centres and research parks to impart practical knowledge in specific areas.
- All higher education institutions should appoint brilliant scholars as **adjunct faculty** from industry and academia. They should take part in teaching and research.
- Higher education institutions must provide **entrepreneurship-oriented courses** for people on career breaks in areas like energy engineering, data science and computational biology, among others.
- Higher education institutions must attract those without formal education but with **experience in entrepreneurship** to incubate companies in research parks and with freedom to earn degrees.
- Higher education institutions must establish **entrepreneur collectives** in universities to co-learn from the experiences of all. They could act as centres of collective engagement.
- We just expose the university system to **working professionals** for innovation with flexibility to earn degrees.

Mentoring

For innovation and incubation to become a central aspect of our institutions, a critical mass of human resources is needed. Incubated companies must be mentored well on various aspects of funding, human resource development, manufacturing, and marketing. For this, in the first five years of the incubation activity, we propose mentoring services to be provided by established institutions in this regard such as IIT Madras, IIT Bombay, IIT Delhi and the Indian Institute of Science. We propose to begin this mentoring with IIT Madras with an annual funding of Rs. 4 crores, which will be used for mentoring five incubation centres and 10 start-ups at any given time, over a period of five years.

Dedicated support mechanism for start-ups in higher education institutions

For each one of the start-ups incubated at higher education institutions, we recommend a per unit support of at least Rs 50 lakhs in stages, possibly as graded support with varying funding options and after a due process of evaluation. The start-up mechanism envisioned above must have a suitable facilitation office at the state-level for evaluating start-ups, addressing their concerns in a speedy manner, and connecting with appropriate offices. This needs a **Start-up Facilitation Office** at the Kerala Start-up Mission, which will coordinate with all the incubation centres of the higher education institutions.

International collaboration

All higher education institutions should attract international faculty members and students to the university and college campuses in Kerala from different parts of the world. International faculty will bring new insights to research, innovation and perhaps to the ethos of university and international students will create a new ecosystem in the campus in terms of diversity and accessibility, besides constituting a vital source of income for the institution. All higher education institutions should make use of Erudite Professorship and Brain Gain Fellowships of the KSHEC to attract brilliant scholars from abroad. Wherever feasible, vacant faculty positions and courses offered by the higher education institutions should be advertised internationally.

Industrial collaboration

We recommend that all the higher education institutions should interact closely with industries for research and innovation. Industrial funding should be tapped from small, medium, and mega industrial units, including MNCs within the State, country and abroad. CSR funding should also be tapped. Universities should be given funding by the Government to hold frequent university/industry interface meetings. Further, industrial leaders should be involved in Boards of Studies, wherever desirable.

RESEARCH AND INNOVATION IN SOCIAL SCIENCES, HUMANITIES, LANGUAGES AND ARTS

Given the uniqueness of Kerala's social, cultural, and intellectual development, the Commission feels that research and creative interventions in social sciences, humanities, languages, and arts have an important role to play in the creation of a "knowledge society". This is made even more acute by the awareness that scholars and academicians in Kerala also have the unenviable, and possibly a central, task of addressing questions and issues around secularism, social and gender equity, constitutional values, and tolerance. In this sense, it is a task that Kerala needs to undertake not just for itself or its people, but for the country and for the world at large.

New institutions

On the one hand, this requires the strengthening of existing study and research programmes in social sciences, humanities, languages and arts in all universities and higher education institutions as well as the setting up of new institutions that can provide innovative interventions and solutions. To this end, the Commission recommends the following initiatives. As in the case of new institutions mentioned in the previous chapter, these institutions also should encourage enrolment and recruitment practices that ensure the participation of students and faculty from across the country and abroad. In certain instances, the new institutions can also be established by significantly upgrading existing ones.

Kerala Institute of Advanced Studies (KIAS)

With the aim of forging new directions to scholarship in social sciences, humanities, languages and arts, the Committee proposes the setting up by the Government of an independent **Kerala Institute of Advanced Studies (KIAS)**, which would be dedicated to advanced studies and research in Kerala's history, society, economy, and cultural practices. To be set up in Idukki or Wayanad or in any other similar scenic location, the KIAS is conceived as a fully residential institute, a place of intellectual retreat and a meeting ground for established and budding scholars to work on areas of their choice and aimed at the publication of works that would make important contributions to the scholarship on Kerala and allied/related subjects.

Modelled on the Indian Institute of Advanced Study (IIAS) in Shimla, and the Institute of Advanced Study in Nantes, the KIAS shall bring in scholars in social sciences, humanities, languages, arts, and culture, by application and invitation, to work on priority/innovative areas of their choice. While most of these subject areas may preferably be Kerala-related, it is best that there is no exclusion of larger social, philosophical, and cultural concerns. The scholars, again, shall not be

limited to ones of Kerala origin but should be drawn nationally and internationally. The community of KIAS must be a microcosm of the international social sciences and humanities academia.

KIAS can offer 20-30 residential fellowships each year of the duration of 10-12 months. Among these, at least three fellowships must be designated as **Fellowships of Eminence** to be offered by invitation to eminent scholars or practitioners with substantial contribution in their fields; their presence at the Institute must be akin to that of mentors, even as they engage in their own work. Four to five fellowships – **Young Scholars Fellowships** – must be reserved for promising younger scholars below the age of 35 years. The rest must be **Senior Fellowships** for university/college faculty and independent researchers with a proven track record of work and publications.

Serving academics can come to the institute on deputation/extra-ordinary leave/sabbatical leave with their salaries and benefits protected and independent/younger scholars can be paid fellowships commensurate with their age and experience. Scholars in residence may also be afforded use of the KIAS's facilities for organising workshops and seminars with additional financial support. In addition, the institute may also conceive of a small number of short-term collaboration fellowships, open to small teams of not more than five people, to undertake collaborative work on an academic or artistic project.

The institute must be incorporated as an independent charitable trust with a Governing Body comprising of scholars, academics, thought leaders and writers, and with a chairperson who must be a scholar of international repute.

Kerala Institute for Policy Studies (KIPS)

In our interaction with researchers and faculty, it became painfully evident that there is little communication between policy makers, government departments, State Planning Board, local governments, and implementation agencies on the one hand, and academic research being carried out in universities and higher education institutions on the other. Both seem to follow separate trajectories with little bilateral inputs or interfaces between them. This amounts to a colossal waste of resources, human effort, and data, even as it results in the lack of use of very valuable research insights.

To correct this anomaly and create a culture of research-based policy making, the Commission proposes the establishment of a **Kerala Institute for Policy Studies (KIPS)**. The institute should promote advanced and in-depth research on a wide range of policy-relevant issues and

policymaking engagements. It can build evidence on key policy challenges in India and aim to nurture a policy ecosystem through collaborative platforms. The key initiatives of the institute can be as under:

- **Interfaces between policy makers and researchers:** The institute should create a viable, functional platform for dialogues on policy between policy makers/government departments and academic researchers. This can be a regular platform, where periodic interfaces are conducted in pre-defined and ongoing areas such as local development, public health, tribal welfare, gender policy, disaster management and culture. In addition, it can also be a need-based platform, where interfaces are held as and when the requirement arises to address matters of topical concern.

- **Research Fund for projects with social applicability:** An amount can be earmarked, administered by the KSHEC through the institute, to be awarded both for doctoral and postdoctoral research for research projects with social and policy implications. Such projects should be conducted in active collaboration with Government departments and agencies in the respective fields, and with recourse to their data and information. The results should be made available to the Government for assistance in policy making and formulation of social programmes. This will help in inverting the current reactive system of policy-based research to a pro-active system of research-based policy. Again, these fellowships can be offered in pre-defined areas or in a need-based manner.

Institute for Gender Equity

With the aim of promoting scholarship as a way of transforming society to make it more gender equitable, the Commission proposes the setting up of an **Institute for Gender Equity.** The main objective of the centre is to foster interdisciplinary and transdisciplinary research and publications into all aspects of gender studies and networking with the existing departments and other centres of gender studies. The Gender Park at Kozhikode, under the Department of Women and Child Development, Government of Kerala, has an International Institute for Gender and Development (IIGD) that engages in solution-based knowledge management. This can be integrated with the proposed Institute of Gender Equity so as not to duplicate efforts and resources and to ensure proper networking and co-ordination of academic/research efforts and policy initiatives.

Institute for Climate Change Studies

The entire issue of climate change throws up immense challenges, not just on the scientific front, but also on the societal front in terms of questions of migration, spaces/areas of habitation, apportioning and sharing of resources, the potential for conflict among communities, demands on the public health system, and so on. For Kerala, with its fragile human eco-system, these challenges can be extremely perilous and need to be pro-actively anticipated and addressed through the concerted and inter-disciplinary efforts of social scientists. The Commission is of the opinion that an institute that works in collaboration with the climate change initiative mooted in the chapter on Scientific Research Innovation should be set up. The institute can initiate and co-ordinate anticipatory research on the part of scientists, sociologists, economists, geographers, social workers, anthropologists, and historians who are currently in universities and colleges or are independent researchers, through specifically commissioned, target-oriented projects that can be turned into policy initiatives.

Centre for Indigenous People's Education

Several problems came to light in our interactions with students of indigenous communities, institutional administrators, and social activists regarding the participation of indigenous students in higher education. Most often, seats for Scheduled Tribe students in higher education programmes are left unfilled, there is a substantial drop-out rate, and indigenous students confront severe difficulties in pedagogic transactions, access to facilities and cultural adjustment. To address this situation, the Commission proposes that the Government set up a **Centre for Indigenous People's Education**, with the active presence in both governance and activities of indigenous people, which shall undertake the following functions:

- **Studies and research on indigenous people's education**, which shall be directed at identifying core problems in the participation of indigenous students in higher education and suggesting solutions;
- **Creation of a team of counsellors,** especially graduates and postgraduates, from among the indigenous people to aid and support to prospective and existing indigenous students by way of information and guidance;
- **Creation of an information network** for guidance on prospective courses and employment, which can be accessed by indigenous students both online and offline;
- **Workshops on higher education** for indigenous students to provide them with information and skill sets for participation in higher education;

- **Co-ordination of efforts of governmental agencies, NGOs, and social workers** so as to create a coherent and targeted set of programmes for the increase of access to higher education to indigenous students.

Initiatives in language studies

The Commission recognises that Malayalam and the other languages spoken in Kerala have a critical role to play in fostering the development of a knowledge society. They must be strengthened as languages in which knowledge is produced and disseminated, and vehicles through which access to the knowledge produced in English and other languages of wider communication is ensured. Simultaneously, the State's languages must also be promoted as objects of study themselves; such study will increase our understanding of the history of the Dravidian language family, the history, pre-history, culture, regional development of the entire Dravidian region, the ecology of languages in the Malayalam speaking region and the incidence of bilingualism, multilingualism, and regional variation. Such intensive investigation is of significance to develop Malayalam and other languages to become usable in technology and on digital platforms.

In the Commission's understanding, the higher education system has a crucial role to play on several fronts in fostering the development of Malayalam and other spoken languages. Higher education institutions must contribute to the creation and translation of knowledge texts into and from Malayalam and other spoken languages, linguistic research on Malayalam and its regional varieties and languages of minority groups (many of which remain genealogically unclassified, unassessed for their linguistic vitality, linguistically undocumented, and highly underdeveloped even today). This latter task needs to be approached with urgency, as language endangerment and loss (i.e., speakers shifting away from speaking their languages) is an inevitable outcome of such situations. Finally, higher education institutions must also contribute to efforts to engineer a technological fit for Malayalam and other languages in the digital age.

The commission notes that Kerala has already undertaken several steps in each of these areas. It is therefore of the opinion that the need of the hour is to pool the existing measures with new initiatives we propose within a result-oriented framework. We propose the establishment of a **Kerala Language Network (KLN)** that shall undertake various initiatives for the development of Malayalam as a language of knowledge. To this end, we propose the following initial measures.

1. **A Translation Mission** for the creation and translation of knowledge texts in Malayalam, comprising of scholars in translation, social science, humanities, and science. It will be the responsibility of KLN to:

- Lay down guidelines for the creation and translation of original knowledge texts, such as monolingual and bilingual textbooks, multilingual dictionaries, subject specific lexica, and thesauri;
- Evaluate and select for funding proposals for translation projects received from university/college departments and individuals;
- Publish and disseminate the texts so produced; and
- Use Kerala Sahitya Academy, Thunchath Ezhuthachan Malayalam University, the Kerala Bhasha Institute, the Malayalam Mission, the Encyclopaedia Institute, and departments of Malayalam in universities as primary institutional constituents of the network.

2. **A Language Technology Mission** for the establishment of a structured and planned research and innovation initiative in developing natural language processing/artificial intelligence/speech synthesis and machine translation tools for Malayalam at several levels. To this end, we recommend the following.

- The introduction of postgraduate programmes in higher education institutions that combine foundational instruction in basic and applied linguistics, with programming, corpora studies, and natural language processing;
- Funded research projects, consortia of individual centres dedicated to the creation of quality corpora and other assets for language technology for Malayalam; and
- Create conditions for such developments at the postgraduate level, undergraduate and postgraduate syllabi and curricula in both Malayalam language programmes and the provision of computer science and technology degrees.

3. **Study of the Indigenous Languages of Kerala (SILK)**, through the institution of a special funding scheme which will run coterminous with the UNESCO's *International Decade of Indigenous Languages* (2022-2032). The scheme should fund research initiatives aimed at the linguistic and ethnolinguistic documentation, language vitality assessment/revitalisation, script and educational materials development of the minority languages spoken in Kerala, with special emphasis on the languages spoken by the Scheduled Tribe communities in the state. Using extant models of successful language documentation and (re)vitalisation efforts available both nationally and internationally, funding under this scheme should lay down clear guidelines governing how outputs of this research may benefit the researched community and should be open to researchers at all levels including Ph.D. scholars as well, both within and outside Kerala.

The Commission also recommends that the activities under these schemes be guided, co-ordinated and monitored by the **Kerala Language Network,** under the auspices of the Kerala Sahitya Academy, which shall provide the necessary space and organisational assistance and

whose Chairperson shall be designated its Patron. A 12–15-member Governing Body of the KLN may include the Secretary, Sahitya Academy, Director, Bhasha Institute, Director, Malayalam Mission, Vice-Chancellor, Malayalam University, Director, Encyclopaedia Institute, representatives of the directorates governing the SILK and Language Technology schemes, language scholars, eminent academics in the fields of science, social science and humanities, writers, and artists. Besides it's monitoring and evaluation functions, the KLN shall provide thematic guidance to the implementation of the three schemes outlined above, from time to time, and organise activities such as workshops, seminars, training sessions and publishing monographs and a regular journal.

THE HIGHER EDUCATION ECOSYSTEM

The higher education ecosystem in Kerala is a complex and diverse one. If one keeps aside the central government supported institutions like IIT, IIM and the Central University of Kerala, there are 15 state universities and 1526 colleges and other institutions, out of which 1477 are colleges affiliated to eight affiliating universities. There is also one deemed to be university. There are large universities like the Calicut University with 421 affiliated colleges. There are also smaller universities like the Thunchath Ezhuthachan Malayalam University. Most universities are associated with the Department of Higher Education, Government of Kerala while there are others belonging to specific government departments like Arts and Culture, Agriculture, Health, Fisheries, Animal Husbandry, and Information Technology.

Decluttering the ecosystem

Universities become a congenial place for intellectual explorations, teaching, and research only when they are multi-disciplinary in nature. Research and higher learning in frontier areas of knowledge are necessarily transdisciplinary and multidisciplinary. They must be pursued in a collaborative manner in a larger intellectual space of seamless movement from one discipline to another. Our sense is that mono-discipline universities with a relatively small faculty and expertise in a single discipline are not feasible or desirable. Both teaching and research must increasingly focus on areas in the interstices between disciplines and in the transdisciplinary domains. Mono-disciplinary institutions are least suited for such endeavours.

We recommend that smaller universities with similar or contiguous domains of teaching and research should be clustered into a federal structure to begin with and eventually unified into large and viable entities. For instance, one cluster could be the Thunchath Ezhuthachan Malayalam University, the Kerala Kalamandalam of Arts and Culture and the Sri Sankaracharya University of Sanskrit. A second such cluster could be the Kerala University of Fisheries and Ocean Sciences, the Kerala Veterinary and Animal Science University and the Kerala Agricultural University. *As a first step, each of these clusters of institutions could be confederated into a functional collaborative network. Eventually, they could be brought under the organisational structure of a unified single university.* This may have to be a gradual process. But our sense is that this must be done. As a first step, we recommend that there should be a moratorium on sporadic and unplanned establishment of such mono-disciplinary universities.

We are given to understand that when new universities with specialised knowledge domain get established, the existing universities are by regulation required not to have academic

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programmes in those specialised knowledge domains. We recommend that this practice be revoked. We also recommend that when new universities are established, it must be ensured that they are provided with adequate infrastructure and resources for higher learning and research. Universities cannot merely be structures for administration and the conduct of examinations.

There is hardly any purpose served by allocating universities to different government departments. All universities have a similar need for support at the systemic level. All universities must derive benefit from inter-university facilities for research, teaching, extension, and capacity building. Moreover, regulations regarding faculty salaries and terms of employment vary from one department to another; this will add to the unevenness across universities and be a deterrent for faculty mobility, and even student mobility, from one university to another. The Commission, therefore, recommends that all universities in Kerala be brought under a single department of the Government of Kerala viz., the Department of Higher Education.

Changes in the affiliation system

There are four major multi-disciplinary affiliating universities, and most colleges are located within their domains. For example, the Mahatma Gandhi University (MGU) has 291 colleges affiliated to it. While the university campus has 1899 students and 93 permanent teachers in position, the affiliated colleges have a combined strength of 142,794 students and approximately 27,800 teachers. Conducting examinations in the colleges is one of the main tasks of the university. About 798 non-teaching staff (out of a total of 1394 staff) are deployed in its examination office (*pareeksha bhavan*) whose job is to conduct about 12,000 examinations and evaluate about 2,400,000 answer scripts every year. The mammoth nature of this enterprise weighs down heavily on the efficiency of the university and its sensitivity and responsiveness to students' needs.

We are recommending, as stated in the chapter on "Curriculum Reforms", a major decentralisation of the functions of course design, syllabus construction and evaluation to the colleges. The affiliation system, as is in practice today, will need to be dismantled in phases over the next ten years.

Our thinking is in alignment with the thinking of the Commission on examination reforms. They have suggested some immediate steps to increase the proportion of formative or mid-course evaluations managed internally in the colleges. They have also suggested keeping the assessment/evaluation during the initial semesters of any programme entirely within the domain of the colleges. We support these changes. Further, we recommend a gradual progression during

the next ten years towards **complete internal assessment**, formative, or **mid-course evaluation** as well as summative or **semester-end evaluation**.

As a corollary, a unitary university structure is most congenial to maintaining the quantum and the cutting-edge nature of research and enhancing the relevance and quality of postgraduate teaching. Keeping the unitary structure as a template, towards which most university campuses should move in phases, affiliating universities should be encouraged to progressively disengage from managing the operations of course design, syllabus development and conducting examinations for the affiliated colleges.

The affiliated colleges, in turn, will need to be strengthened and empowered to raise the level of their functioning. Towards this, we recommend an important change in the way the relationship between the university and colleges are structured, and by recommending a policy for creating an institution development trajectory for colleges.

Constituent colleges

We will recommend a policy that facilitates a path of institutional development for colleges. The affiliated colleges, in their present form, typically deal in "retail distribution" of knowledge in the creation of which they have had little or no role. Teachers in the affiliated colleges teach based on syllabi – that most of them have had no role in developing – and prepare students for examinations – the structure and content of which they have had no say on. They also find very little resources and opportunities to participate in research.

We think that it is critical that this situation changes. It is important to lift the affiliated colleges from their present status along a trajectory of institutional development towards greater control and ownership of the key components of the core academic process – viz., curriculum (particularly syllabus) and evaluation – and gradually move towards academic freedom and greater opportunities for research.

In the first phase, a selected subset of government colleges should be elevated to the status of constituent colleges (see Figure 8). We recommend the **identification of about 20 government colleges** in the State under different universities, from among those with postgraduate teaching and research centres, to be selected based on their profile, accomplishments and standing, for **elevation as constituent colleges** of the respective universities. One Government college, Maharaja's College, has already been elevated as an autonomous college. While selecting colleges for conferment of the status of a constituent college, it needs to be ensured that there

is a fair distribution of these institutions across the State, and those districts that are relatively less developed are not left out.
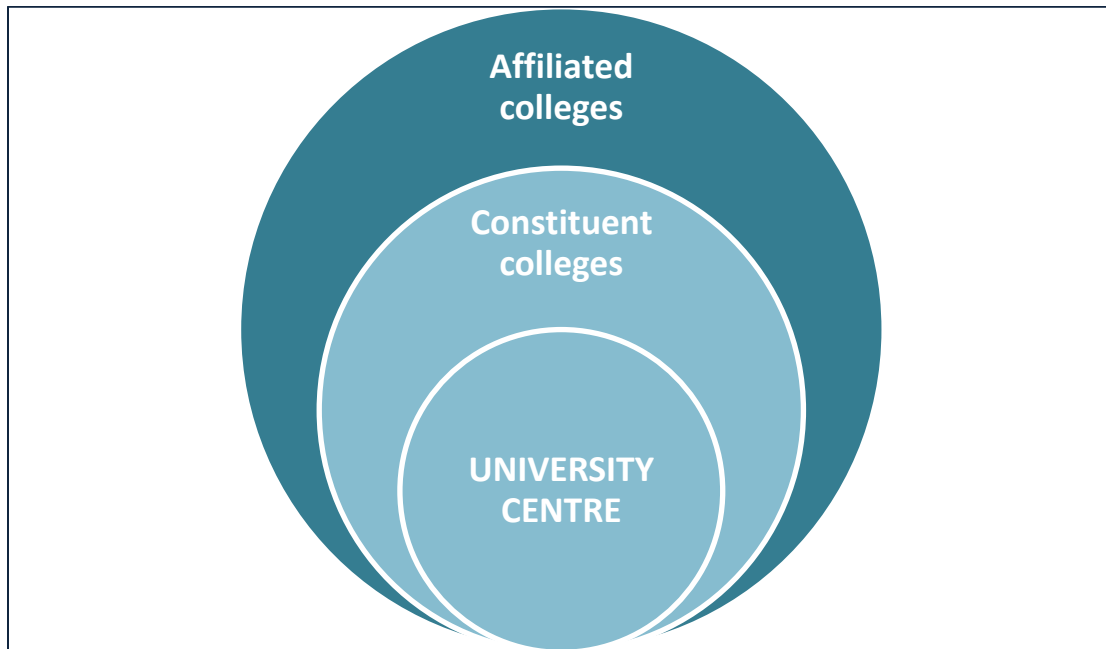

Figure 8 *The concept of constituent colleges within the university system: A summary*

The Commission commends the concerted initiative towards the institutional development of the Government Brennan College, Thalasseri. The Commission recommends that similar initiatives be made in the case of the other heritage colleges of the Government, viz., Government Victoria College, Palakkad; Maharaja's College, Ernakulam; and the University College, Thiruvananthapuram. These heritage Government colleges are, on their own merit, part of the 20 colleges recommended above for being upgraded as Constituent Colleges. Their institutional development paths should eventually take them towards full autonomy (as Maharaja's College already is).

In the second phase, this scheme should be open voluntarily to government-aided colleges also, based on identical criteria of selection, conditions related to institutional structures and organisational arrangements associated with constituent colleges and the nature and quantum of grant/assistance. It is creditable that some of these private-aided colleges are already on a trajectory of institutional development towards autonomy.

1. *Selection of constituent colleges*

As a first step, we recommend introducing this scheme among about 20 government colleges with postgraduate teaching and research centres.

The constituent colleges, being research centres already, will have greater research-capacity with better linkages and integration with university centres; will receive additional investment incentives; and will have a dedicated quality faculty pool. In that sense, this proposal is different from the cluster system that was attempted earlier, but which had found little success.

The constituent colleges will be selected based on their position on the NIRF ranking and/or the NAAC grading. Eligibility will be for those government colleges with postgraduate teaching and research centres that are within 200 ranks on the NIRF ranking system and/or with at least A grade under the NAAC framework.

2. *Special assistance to constituent colleges*

Each constituent college will receive a special development grant of Rs 2 crore annually for five years to develop infrastructure, facilities, resources, and research.

3. *Collaboration between Constituent Colleges and University Departments*

The Commission envisages a fraternal and collegial relationship between the Constituent Colleges under the domain of a university and its campus-based postgraduate departments in collaborative teaching and supervision in master's and doctoral programmes and the sharing of research and library facilities. Cross-listing of courses, seamless movement of students and credit transfers should be facilitated.

4. *Institutional structure and organisational arrangements*

There will be a Governing Body for every constituent college constituted through a due statutory process. The main function of the governing body will be the oversight of the institution's trajectory of development, mobilising resource support for its development, and oversight of the faculty recruitment process. The composition of the Governing Body will be statutorily determined to draw from the senior faculty of the university concerned and the college itself, civil society, professions, industry, and the management (if a private college). The Chair of the Governing Body will be a distinguished public personality drawn from academia, the professions, industry, etc. The Principal of the college will be the Member Secretary of the Governing Body.

5. Curricular profile

The same programmes and courses as are being currently taught at the colleges can be continued with, with the possibility of adding more innovative courses in disciplinary areas in which the college has sufficient staff and academic strength. In addition to existing research programmes, the colleges may introduce more Ph.D. programmes in areas and disciplines in which they have adequate research guidance strength and infrastructural facilities. The four-year bachelor's programme and the integrated master's-Ph.D. programme, mooted in our chapter on Curriculum Reforms, can be adopted in a phased, selective manner by constituent colleges in areas and disciplines in which they have adequate research guidance strength and infrastructure.

6. *The regrouping of existing faculty*

When a constituent college is formed, the Principal and the faculty in it will be selected through a transparent process. We recommend that an open call be put out for *existing* faculty members in colleges to apply for a position in the constituent colleges. A duly constituted committee of highly qualified academic experts will select the teachers to be recruited into the constituent colleges in different disciplines. This method of selection will be transparent and based on objective criteria. Those faculty members selected will be inducted as permanent faculty of the constituent college, who will then not be transferred out. We must emphasise that there will be no other difference in the service conditions or salary of the faculty across the constituent colleges and the affiliated colleges.

7. *Future recruitment of faculty*

In the *future*, each constituent college (government or private college) will recruit its own faculty through a selection process conducted in a quality based and transparent manner by the Public Service Commission (PSC) or a similar body like the HEFRB. The recruitment may also be based on a global call. This will be instituted in a phased manner. We advise that the PSC or the HEFRB may devise separate procedures for the recruitment of faculty in each constituent college.

A developmental trajectory for other colleges

The Commission envisages the eventual dissolution of the affiliation system as we understand today. Therefore, all colleges must be placed on an institutional development trajectory. The non-transferable nature in service conditions of teachers and the institution-focused appointment of teachers from among a panel selected through PSC or KSHEC should eventually

be effective in all colleges. This must be implemented in a planned manner through the next 10-15 years.

<p style="text-align:center">Organic linkages within the ecosystem</p>

In our view, each higher education institution in Kerala must be a self-aware and self-governing entity. The Commission expects that every institution must chart their own institutional development plan (IDP) based on which they may seek resource support from all sources including the central and State governments. Towards this goal, we recommend the following also.

1. *Attract diaspora to work in the universities in Kerala*

Highly qualified members of the Kerala diaspora, who are willing to contribute to higher education and research, should be invited for active engagement with the faculty and students of colleges and universities, paving the way for cross-fertilisation of ideas and joint publications. To this end, we will propose the following:

- A scheme to support the travel and stay of such visiting faculty, in addition to a limited quantum of funds for the research they shall undertake in our institutions.
- A limited number of awards for faculty in Kerala to work with accomplished scholars outside Kerala and India on research projects in areas of significance to the State.

2. *Alumni support*

The alumni of institutions are an important source of support. Linkages with alumni must be strengthened through alumni networks. In addition to periodic activities that shall foster a sense of belonging in them, representatives of the alumni must also be included in the decision-making bodies of institutions.

The present juncture that promises a new dawn in higher education in Kerala is too rare and special to be forfeited as an opportunity for mobilising Malayalee expatriates, most of whom are alumni of the state's higher education system. We recommend that a dynamic alumni database be created and maintained at the institutional level as well as at the systemic level. A communication strategy (that incorporates, among other components, a professionally managed web-portal that serves the function of a hub and a clearinghouse) providing an active platform for interaction between the State's leadership on all fronts – government, professions, industry,

academia, research, art, literature, culture and so on, must be put in place to constantly address alumni from Kerala located all over the world.

3. *Community support*

Institutions must foster linkages with the local community through programmes and activities that make them participants in the life of the institution. A body of community elders may be initiated to form a system of support for institutions. The governing body and the alumni network must partner with local community for mobilising resources as well as to create a system of feedback regarding the community expectation from the institution.

Support network at the systemic level

We have recommended a wide range of reforms in the entire higher education ecosystem. For this, we also need a comprehensive array of facilities, structures, networks, resources, collaborative fora, and an overarching governance platform to facilitate and support institutions and bring in greater coherence in the developmental trajectory of higher education in alignment with the state's vision and philosophy. We do not envisage institutions to be inward-looking and working in silos. We emphasis the necessity to develop greater synergy among universities, colleges, and other institutions.

In the various chapters of this report, a lot of such superordinate functions at the systemic level have been attributed to and placed at the doorstep of the KSHEC. Such functions range across a wide spectrum: curriculum development, the development and maintenance of a repository of teaching-learning material, the development and management of digital infrastructure and library networks, procurement of licenses for online databases for all institutions of higher learning, capacity-building of teachers and other functionaries, organisation of teacher recruitment, hosting of a structure to manage the KHEF, hosting a central resource platform for guidance and counselling; and maintaining platforms, fora, clearinghouses, and networks for research.

The existing Act that governs the structure of KSHEC is a well-formulated one, perhaps considered as a model for the whole country. The structure and functions of the Council go beyond what is envisaged under RUSA and at the same time stops short of encroaching into the space of university autonomy. Having said that, it is important to **review the existing Act of the KSHEC** in the light the entire range of new functions that are being brought under its already heavy portfolio and, bring about the necessary changes in its structure and functions through a process of consultation and deliberation. The governing structure should have provisions for more

Standing Committees incorporating inputs from the various universities through invoking participation of academics holding functional roles. The Vice-Chancellors should be deployed sparingly in such committees. Representation from universities can be from among the Pro Vice-Chancellors, Deans, heads of departments, professoriate, and college principals.

There is a need to create a new **faculty structure** comprising about 30 positions of teachers, researchers, and other professionals at the headquarters of the KSHEC. These positions should be filled through a 3-5 year deputation or through contractual hiring from a mix of experienced and young teachers and other professionals. Further, there is a need to hire specialised professionals for certain specific functions like conducting faculty recruitment operations, instructional design, creating teaching-learning modules, and managing the KHEF.

The KSHEC must also have a robust system of collecting data and maintaining a dynamic database, which should be accessible for analysis even in disaggregated forms to universities and other institutions in the system or to those in policy and planning agencies. The essence of this database should be in the public domain. The existing data management system needs to be beefed up with more resources and a larger professional staff structure. This matter must be addressed urgently in consultation with the Kerala Statistical Commission.

UNIVERSITY GOVERNANCE

Universities are self-governing communities of scholars, and as such it is the faculty collective who should essentially determine the academic content of a university's functioning. The structures of governance envisaged in the Acts and Statutes are meant essentially to embody this basic character of a university. However, our study of the Acts and Statutes, visits to various universities and interactions with various constituencies brought us to the following conclusions.

1. There is vast variation among the Acts and Statutes of different universities of Kerala because they generally reflect the larger thinking of the different times in which they were formulated and the notions of academic and university governance that enjoyed primacy in each of these instances.
2. There is a general tendency in the Acts of most universities to build in systems of social accountability and social participation in the decision-making process of the universities, through the representation of various section/professions/walks of life in the governing structures of universities. However, it is also apparent that over the years, in practice, these governing structures have turned out to be academically counterproductive by being avenues of uninformed, over-politicised, partisan, and external interference in the day-to-day functioning of the universities.
3. The large size (in terms of the number of members) of these different governance bodies such as Senate, Syndicate and Academic Council make them cumbersome and unsuited for deeper deliberations as well as for quick and efficient decision-making.
4. The strands of academic and administrative decision-making are too intertwined. Often, academic governance bodies are rendered subservient to administrative bodies like the Syndicate.
5. The academic community – especially faculty – feel disempowered and excluded from the decision-making process, and in many instances the decision-making process is said to be governed by considerations and concerns that have little to do with academics, research, or pedagogy.

Five principles

To address the above major issues, it is our considered recommendation that the entire governing structure of the universities, both its academic and its administrative side, should be defined by five major principles.

1. **Academic freedom** at the very root of the institutional architecture, **at the cellular level** so to speak, wherein each rung of the academic/administrative structure, viz., the course teams, departments, the Boards of Studies, the Academic Council, and the Syndicate, has the freedom to make decisions that determine the nature and quality of work in their respective jurisdictions. This is, of course, circumscribed within a framework of accountability directed to students, teachers and the institutional leadership and the society at large. The job of the institutional leadership is not to control and micromanage, but to ensure continuing fidelity to the vision, mission, and core values of university.

2. An essential pre-requisite of effective institutional autonomy is moving steadily towards **financial autonomy**, which means increasingly weaning off from over-dependence on grants from the government. It is in the interest of the institutional health that, as we have stated elsewhere in this report, the contribution of Government grants should in due course be restricted to below 50-60% of the total operational expenditure of public funded institutions. We also recommend that the **government's financial support to universities should be in the form of block grants** and the university should be able to exercise its autonomy in determining how to deploy the grant money as per its budget. Further, we suggest that these block grants be paid in full to the universities in **three instalments**, the last of which must be in the month of December of the financial year. Of course, this must be subject to oversight by a Finance Committee in which there should be representation of government officials.

3. **Governance from within**, through structures that are built up from below, where each higher body is a subset of the lower ones, and where the different academic and administrative bodies are composed of people primarily from within the university.

4. The bodies of the university should be populated through a combination of **seniority** principle, **nomination** by the Vice-Chancellor based on professional standing and **election** from among specific constituencies. Maintaining transparency through constant peer review is integral to self-governance. Therefore, there should be a system of nomination of a limited number of external experts to Boards of Studies and the Academic Council by the Vice-Chancellor, based on recommendations of the Professoriate and/or the Academic Council.

5. The **separation of the academic and administrative strands of governance** and establishment of the primacy and paramountcy of the academic governance structures in a university.

In keeping with the above principles, we recommend the following changes to the structures of governance.

Academic governance and decision-making stream

The Academic Council, along with the School/Faculty Board and the Boards of Studies, should constitute the primary bodies of academic governance, with the Academic Council as the paramount academic authority of the university.

The Boards of Studies, School/Faculty Board, the Standing Committees of the Academic Council, and the Academic Council itself, in that ascending order, shall constitute the axis of academic governance for the university, and its focus will be deliberations and approval of proposals on all aspects of academic policies, programmes and courses.

The Board of Studies (BoS)

The BoS of the university shall be responsible for the drafting of academic policies, the definition of standards and the formulation of curriculum and syllabi of all programmes of study, both undergraduate and postgraduate, that come under their disciplinary purview. Each BoS shall be composed of:

1. Head of the department of the university department, who shall be the Chairperson of the BoS;
2. One Professor of the University Department by seniority;
3. Three members of faculty with more than 15 years or more of experience, nominated on the basis of seniority rotation, and three members of faculty with more than five years of experience but less than 15, nominated on the basis of seniority rotation, both from a consolidated seniority list of all teachers of the university and colleges. Of the six members so nominated, at least two shall be from among university faculty and two from among faculty of colleges; and
4. An external expert in the discipline nominated by the University Department

This will be a composite BoS of the entire university for both the undergraduate and postgraduate programmes. Such a composite BoS is envisaged considering the seamless continuity and coherence that we shall be proposing for the different levels of study from the undergraduate to the Ph.D. stage.

Each college as it acquires autonomy will have its own college-level BoS constituted along the above lines. In such cases, the university-level BoS will only have a supervisory capacity, to which the college-level BoS shall report periodically as well as on occasions where changes in the curricula are proposed.

The School/Faculty Board

The School/Faculty Board shall be the body that ensures continuity and consistency among the policies and curricula of the different BoS that come under it and shall comprise of:

a) The Dean of School/Faculty who shall be the Chairperson;
b) The Chairpersons of the all the BoS;
c) Three external experts in the disciplines that come under its purview, nominated by the Vice-Chancellor and preferably from among a list offered by the BoS; and
d) Two members of faculty in the subject areas that fall under the purview of the School/Faculty Board, one from the university and one from colleges, elected by the respective faculty members.

The Academic Council

We are convinced that the academic and administrative strands of governance need to be disentangled from each other. There is a need to establish the primacy and paramountcy of the academic governance structures in a university. The Academic Council, along with the School/Faculty Boards and the Boards of Studies, should constitute the principal axis of academic governance. The Academic Council should be the principal and paramount academic authority of the university. Its functions are spread under three major domains – curriculum, research, and innovation. It shall be composed of:

a) The Vice-Chancellor, who shall be its Chairperson;
b) The Pro Vice-Chancellor;
c) All Deans of Schools/Faculty;
d) The Chairpersons of the all the Boards of Studies;
e) Two members of faculty, one from the university and one from colleges, elected by the respective faculty members;
f) Three student members, one undergraduate, one postgraduate, one Ph.D. scholar - to be elected from within their constituencies (the method may be evolved by universities);
g) Three external experts, one each from the sciences, the social sciences, and languages/arts nominated by the Vice-Chancellor preferably from among a long list of at least 10 persons proposed offered by the Professoriate.
h) Two eminent thought leaders representing industry, science, arts, literature, law, and public policy to be nominated by the Chancellor from a long list of at least ten persons recommended by the Academic Council.

Given the size and infrequency of its meetings, the deliberative aspects of the Academic Council's functioning should be through its **Standing Committees**. There should ordinarily be three or four Standing Committees for the Academic Council to which specific portfolios of responsibilities – such as Curriculum and Syllabi, Research, Academic Standards and External Collaborations – should be delegated through the Statutes. The Standing Committees should meet more frequently, perhaps once every month if needed, so that all proposals put up by the Boards of Studies can be duly deliberated upon. The Standing Committees should be presided over by the Pro Vice-Chancellor, or a Senior Dean so designated.

All routine academic decision-making should, through the Statutes, be vested in the Vice-Chancellor in her/his/their capacity as the Chief Academic Officer of the University. A subset of these functions of routine academic decision-making should be formally delegated to the Pro Vice-Chancellor, Deans, Heads of Departments and Directors of Centres. Only in such specific cases where the decision sought to be made goes beyond the limits set by the laid-out policies should the matter be taken for the consideration of the Academic Council.

The Syndicate along with the Finance Committee, oversees the administrative and financial dimensions of governance, which are essentially to facilitate the core processes of the university, viz., academics. The Board of Regents oversees both these strands of governance. Yet, they must stay at arm's length from the day-to-day functioning of the university.

Resolutions of the Academic Council should merely be a matter for information for the Syndicate; they do not have to be approved or ratified by the latter. Academic Council is not subservient to the Syndicate. There is no reason why members of the Syndicate, who are not otherwise members of the Academic Council, should be part of the latter's composition; this is in fact an unhealthy practice. We understand that the Kerala State University Law Reforms Commission has taken some steps forward in this direction. Our sense is that this will have to be a sustained continuous process not only of law making but also in setting appropriate conventions.

Governance and decision-making in the domains of administration and finance

Our extensive interactions with various important actors of the higher education community gave us the impression that there is a prevalent perception that the university's governance structures are isomorphous to those of the State Government. While Senate is the university's equivalent of legislative assembly, Syndicate is equivalent to the council of ministers. We think that this is an incorrect conceptualisation. As we have mentioned earlier, universities are self-governing communities of scholars and professionals, and their governance structure is basically

to facilitate this fundamental principle. Senate (or its equivalent) is a body that has an oversight responsibility about the extent of fidelity of the broad directions that the university takes from time to time to the overall mission that has been vested on it through its Act.

The Syndicate

The Syndicate is the paramount policy-making authority in the university's administrative governance architecture. **Syndicate is not a cabinet. Its members, other than the designated officers of the university, have no administrative responsibilities.** The Syndicate's domain is clear – its responsibility is the consideration of proposals regarding all administrative policies, and more critically the annual audited accounts and budget once these are examined and recommended by the Finance Committee. All academic policy matters must be brought only to the consideration of the Academic Council unless they have major financial implications; in such cases, these will pass through the Finance Committee and the Syndicate before final adoption.

The composition of the Syndicate is recommended as follows with its membership limited to 15.

a) The Vice-Chancellor, who shall be the Chairperson;
b) The Pro Vice-Chancellor;
c) Three Heads of Departments by rotation in the order of seniority and rotational representation of disciplines – one each from the different faculties such as arts, humanities, sciences, social sciences;
d) Three members of the Academic Council, elected from within;
e) Three external experts representing the different discipline groups of the university, nominated by the Vice-Chancellor from a long list of at least 10 persons recommended by the Academic Council;
f) Two eminent thought leaders representing industry, science, arts, literature, law, public policy, economics, etc to be nominated by the Chancellor from a long list of at least 10 persons recommended by the Academic Council and the Syndicate;
g) One elected student representative

The Finance Committee

The Finance Committee is the apex body for financial governance. Its domain is related to laying down policies and ensuring the robustness of in-house mechanisms of good governance and monitoring flow of funds. We recommend that the composition of the Finance Committee be as below:

- The Vice-Chancellor, who shall be the Chairperson;
- The Pro Vice-Chancellor;
- One Dean, who is a member of the Syndicate;
- One Head of the Department nominated by the Vice Chancellor from among members of the Syndicate;
- An official of the rank of at least Joint Secretary, Department of Higher Education, Government of Kerala;
- An official of the rank of at least Joint Secretary, Department of Finance, Government of Kerala;
- Registrar, who shall be the Secretary;
- The Finance Officer

Executive decision-making

The Vice Chancellor, in his/her capacity as the Chief Academic Officer and the Chief Executive Officer of the University, presides over all the three bodies, viz., Academic Council, Syndicate and the Finance Committee, and she/he along with others, who are on all the three bodies, bring about a sense of continuity, cohesiveness and coordination among them. She/he is also the vice-chair of the Board of Regents, and in that capacity works closely with the Chancellor in the overall oversight of the university's functioning.

The Vice-Chancellor in her/his/their capacity of Chief Executive Officer of the University should be vested with the functions of decision-making related to administration and finance within the framework of policies that are already adopted through the Syndicate (and, where applicable, the Finance Committee). However, there needs to be a formal delegation of a large subset of these administrative and financial powers to the Pro-Vice-Chancellor, Registrar, Deans and Heads of Departments. This is so that a large amount of decision-making will be completed at the appropriate levels and every proposal is not referred all the way to the top leading to delay, inefficiency, and injustice. Only in such cases where the decision sought to be made goes beyond the framework of the laid-out policies should the matter be taken for the consideration of the Syndicate.

For this to work properly, there is urgent need to drastically change the rules on limits of expenditure permitted to various officers and considerably enhance these limits. This must be done especially for the Vice-Chancellor, the Registrar, the Deans, and the Heads of Departments to enable them to make timely and efficient decisions without having to go to higher authorities for each routine case.

We recommend that the spirit of participative decision-making should prevail all the way down to every functional unt of a university. It is a healthy convention to have Standing Committees overseeing and guiding day-to-day decision making in every functional unit like academic and research co-ordination, examination, planning and development, student services and welfare, works, purchase, and personnel management. Each of these committees should be presided over by the officer in charge and must ensure participation of teachers, non-teaching staff and, wherever appropriate, a student representative. The executive decision-making, which are to be statutorily exercised by the Vice-Chancellor or the Pro Vice-Chancellor, must be informed by the recommendations of such committees at the functional/operational level.

Board of Regents

There is a need for a rethink regarding the **Senate**, wherever it exists. The Senate was originally meant as a mechanism for the oversight of the university's policies and its broad trajectory of development by the society and community. However, the composition and the functions of the Senate, as is stated in the Act and Statutes presently, have outlived their relevance. It is our view that the Senate should be replaced in the Act and Statutes by a smaller, sleeker, and more functional body. We recommend that this body should be given another name, the **Board of Regents**. The Board of Regents should draw from the critical segments like government, civil society, industry, culture, and academia. The Board of Regents should elect its own chair, from among distinguished public figures who have made a mark in areas like academia, science, culture, and professions. The Chair of the Board of Regents shall be the Chancellor. The Vice-Chancellor shall be its Vice-Chair.

The Board of Regents is the authority to approve the annual report of the university. It has a special role assigned to it in the selection and appointment of Vice-Chancellor. Besides, it approves proposed statutes, ordinances, and amendments thereof. It also acts as an appellate body for redressing grievances after all internal processes are exhausted. However, as has been said earlier, the Board stays clear of the day-to-day governance and administration of the university. Ordinarily, the Board may meet once a year.

The Board of Regents shall have the following composition:

a) The Chancellor, who shall be the Chair of the Board of Regents. The Chancellor shall be one among the six listed under (c) below and shall be elected by the Board of Regents for a period of five years;
b) The Vice-Chancellor, who shall be the Vice-Chairperson of the Board of Regents;

c) Six persons of eminence and distinguished services from academia, government, civil society, industry, and culture, with impeccable reputation, two each of whom shall be nominees of the Visitor, the Syndicate, and the Academic Council;
d) The Pro Vice-Chancellor;
e) One Professor of the university through seniority;
f) One Dean nominated by the Academic Council;
g) One teacher from a college through seniority;
h) The Registrar shall be the Secretary of the Board of Regents.

The duration of membership for those under (c) above shall be five years. The duration of membership for those under (e), (f) and (g) shall be two years.

The principal officers of the university

We observe that the university system in Kerala is frequently mired in controversies arising out of differences in interpretation of the federal character of India's Constitution. We are convinced that universities must be insulated and protected from being venues of such controversies.

The Government of the State is firmly in the driver's seat in extending resource support and creating an enabling legislative, policy and administrative environment in which universities can pursue their mission towards the larger good of society. However, the Government does not run universities. A university, by definition, is a self-governing community of scholars and professionals who are aware and are constantly responsive to the larger social role that is legislatively mandated to them. Based on such a view, we are of the firm opinion that the internal governance of the university should be sequestered from the administrative controls of the Government. However, the government has an important responsibility to ensure that the university's self-governance is keeping them focused on their mission.

Visitor

The governance structure of the university must reflect this delicate balance. For this, we recommend that the Chief Minister of the State shall be the **Visitor** of all public universities. The Visitor nominates two persons of eminence and distinguished services from the academia, government, civil society, industry, and culture as members of the Board of Regents. For the deemed to be universities and private universities (if and when such a category comes into existence), the Minister of Higher Education should be the **Visitor.**

The Chancellor

Each university shall have a separate **Chancellor**. The Chancellor should be elected by the Board of Regents from among themselves. The Chancellor should be a person of eminence with impeccable reputation, who has distinguished herself/himself in public life through a lifetime of excellence and leadership in fields like the academia, science, culture, professions, industry, governance, and public life.

The Chancellor shall have the following responsibilities:

1. To preside over the meeting of the Board of Regents, which shall ordinarily meet once a year;
2. To discharge the responsibilities specially assigned to her/him in the selection and appointment of the Vice-Chancellor;
3. To discharge the responsibilities of nominating persons of specific constituencies as members of the Academic Council and the Syndicate;
4. To discharge the responsibilities related to approval of statutes, ordinances, and amendments thereof on behalf of the Board of Regents, if a need arises;
5. To discharge the responsibilities as an appellate authority; and
6. To preside over the convocation of the university.

Vice-Chancellor

In addition to the powers and duties enjoined by the Acts and Statutes as the principal academic and executive officer of the university, the Vice-Chancellor shall provide leadership to the entire university community in formulating their vision and specifying their goals and objectives. She/he shall head both the academic and administrative wings of university and ensure continuity and co-ordination between the policies and actions of both. In our view, the Vice-Chancellor should be accorded the full freedom to function within the purview of the regulations and that she/he should exercise that freedom for the benefit of the university. Moreover, it is also our considered view that the tenure of the Vice-Chancellor should be enhanced to five years.

The Vice-Chancellor is appointed by the Board of Regents following a due process of selection as elaborated below.

The Vice-Chancellor must be a distinguished academic, with a minimum of 10 years of experience as Professor in a university or a reputed research organisation with a proof of having demonstrated academic leadership. The Vice-Chancellor, at the time of appointment, shall not

be over 65 years of age. Applications/nominations must be invited and considered through public notification, and a world-wide search. The composition of the Search-cum-Selection Committee must be as follows.

a) One nominee of the Visitor from among persons of eminence in academia through a lifetime of excellence and leadership;
b) One nominee of the Board of Regents from among persons of eminence in academia through a lifetime of excellence and leadership; and
c) One nominee of the Chairman, University Grants Commission.

The panel of names recommended by the Committee should include three names. **Each name should be included in the panel through a unanimous or a consensus decision of the Search-cum-Selection Committee, failing which it shall be decided through a majority vote**. In either case, the names should be placed in the order of preference as decided by the Search-cum-Selection Committee. The panel should be submitted to the Chancellor. The Chancellor shall convene a special meeting of the Board of Regents and based on deliberations in the Board of Regents, appoint one name on the panel as Vice-Chancellor, preferably adhering to the order of preference of the Search-cum-Selection Committee.

The period of Appointment of Vice-Chancellor shall be five years. He/she can be considered for a second term. However, such a second term shall end when he/she attains 70 years of age.

An interregnum in the office of the Vice-Chancellor should be avoided at all costs. Steps should be taken to search for and select a new Vice-Chancellor well in advance of the completion of the term of an incumbent Vice-Chancellor. Despite that, should there be an interregnum, the Pro Vice-Chancellor (or in the absence of a Pro Vice-Chancellor, a senior-most Professor) shall hold office of the Vice-Chancellor till the appointment of a new incumbent through due process. The method of giving charge to the Vice-Chancellor of another university should be positively avoided, since it will adversely affect the governance of both universities and the performance of the Vice-Chancellor.

Pro Vice-Chancellor

The Pro Vice-Chancellor shall be selected by the Board of Regents from among the Professors of the university based on the recommendation of the Vice-Chancellor. The term of the Pro Vice-Chancellor shall be coterminous with the Vice-Chancellor, except that during a possible interregnum the Pro Vice-Chancellor shall hold office of the Vice-Chancellor.

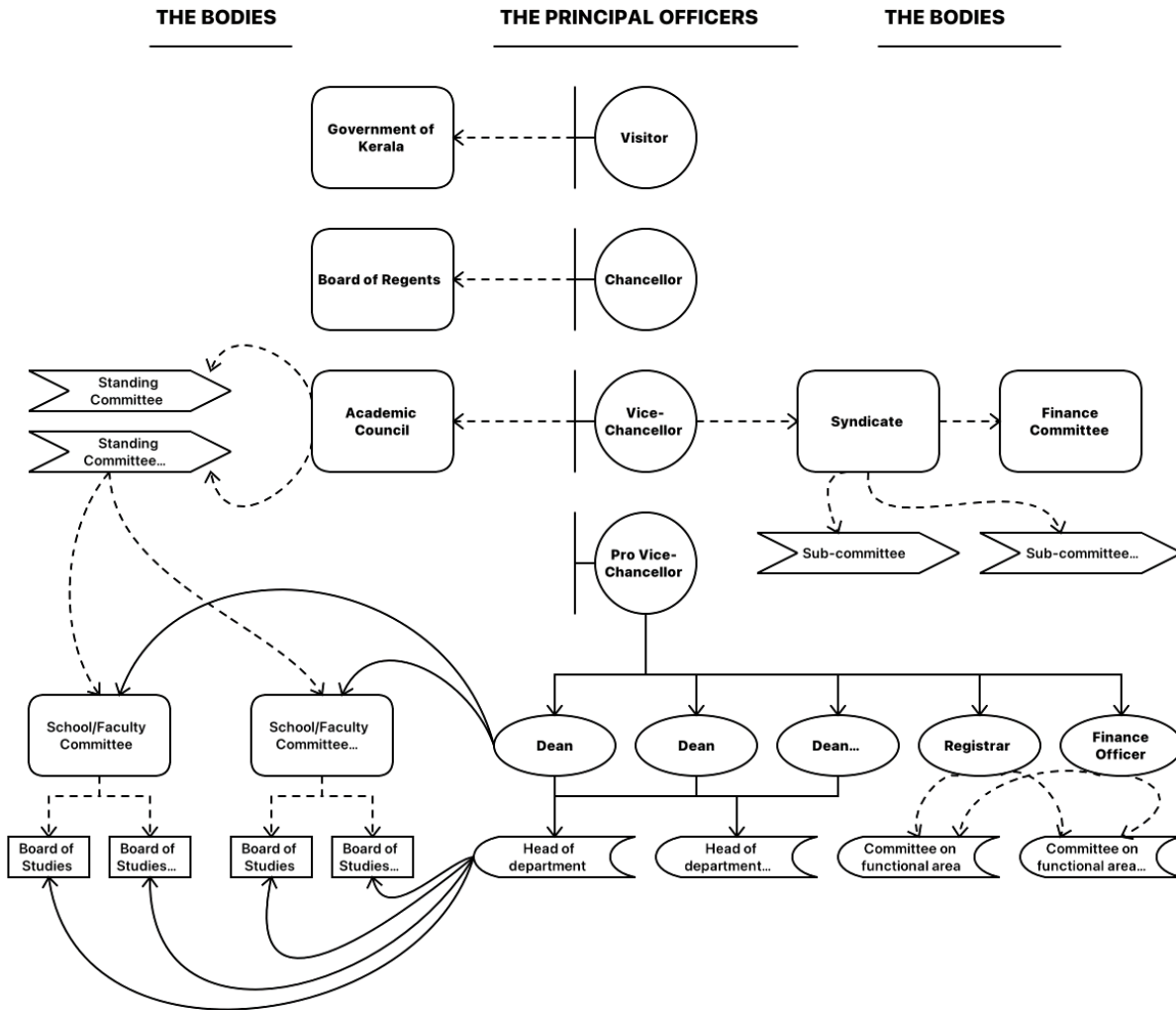A summary of our recommendations on the university structure is provided in Figure 9.

Figure 9 *Proposed structure of the university system in the report: A summary*

IX

LIBRARY AND DIGITAL INFRASTRUCTURE

Library System

One of the critical aspects of reform in higher education in Kerala is about creating an effective, efficient, and integrated library system in alignment with the needs of the various constituents of the State's higher education ecosystem. Since we are not starting on a blank slate and are building on what we already have as legacy, it is important to keep that in perspective. For instance, the traditional wisdom was to make each institution self-sufficient in library resources. Such an approach to institution building over many decades has resulted in duplication and suboptimal utilisation of resources. Looking systemically at resources available and their distribution is therefore critical. Reforms related to library should address initiatives at two levels: one, at the institutional level and the second at the systemic level.

At the institutional level, reform should be about locating the library as a central component of the teaching-learning process – as a primary academic resource centre. With reforms related to curricula and assessment, rote memorisation should steadily get replaced by meaningful exploration using resources in the library and the environment. Classroom dynamics should become less didactic and more engaging, interactive, and exploratory. Dependence on cram books and guidebooks should get replaced by preference for standard books and journals. Flipped classroom approach should mean a more systematic incorporation of library resources into the pedagogic design.

There is, of course, a need to initiate drastic changes in the institutional culture to incorporate the centrality of library in the institutional ecosystem. Library should assume a central position in the mindscape of the student community. It should be considered "cool" for students to hang out in the library as a quiet place for reading and research. Library should be open for longer hours, say 18 to 24 hours, in a day. It also goes along with the concept of a safe campus and a dignified student life, as we have mentioned in Chapters 2 and 3.

Modern libraries in universities also have different types of spaces that attract more faculty and students to spend more time in the library. These include (a) collection space; (b) electronic workstation space; (c) multimedia workstation space; (d) viewing rooms and listening rooms; (e) user seating space; (f) staff workspace; (g) meeting space; (f) auditorium or larger lecture space; (g) special use space and (h) non-assignable space (including mechanical space). These are not just functional in what the new technologies demand, but also aesthetic in their forward-looking design. Increasingly, more students use the library not just to borrow or read books and journals

but also to bring their own materials and gadgets to assist in their work. Our library designs should reflect this change that is taking place globally.

Libraries are also increasingly "open" in terms of educational resources. Knowledge in libraries must be free to access, use and share. The embrace of Open Educational Resources (OER) i.e., "learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation, and redistribution by others", was adopted by the UNESCO's General Conference in November 2019. These include textbooks, curricula, course notes, lecture materials, online course videos, audios, and animations. Our libraries must become a part of this global movement for freeing knowledge from the hands of proprietary institutions.

Of course, financial constraints in higher education have hit libraries the most. There is a need for greater investment for libraries in government colleges and universities. Subscriptions to journals need an unbroken commitment of grant. If there is a hiatus of a few years in procuring resources (particularly journals) for a library, it will be that much more difficult to redeem its original position.

In our view, a substantial amount of close to Rs 300 crore needs to be invested every year over the next 10-15 years to build a state-of-the-art, state-wide, library network system. The KSHEC may be the hub of this library network system in the State. This network system should have the following functions: (a) centralised online subscription of journals; (b) common subscription to databases and obtaining site licenses for online data bases; (c) creation and management of library clusters, interlibrary collaborations for pooling resources, and enabling a system of interlibrary loans; and (d) creating digital repositories of educational resources.

In addition, resources must be allocated to support the conversion of hard copy instructional materials into master accessible digital formats. While this will be beneficial for all students, it is essential that such digitisation should also lead to the production of copies in formats accessible to differently abled students. A shared repository accessible to all institutions may be conceived of in this regard, and a scheme for providing grants to individual institutions entrusted with the task of implementing the accessibility of teaching-learning materials.

Digital infrastructure

In our bid to become a knowledge society, it is imperative that Kerala considers the expanding influence of increasing digitalisation of education across the globe and incorporate futuristic visions into our planning for higher education. The exigencies thrown up by the pandemic not

only necessitated a huge shift into online modes of education but also brought to light the weaknesses in the digital infrastructure of our higher education institutions. The Commission is of the opinion that Kerala needs to place greater emphasis on the creation of a **comprehensive digital infrastructure** that can meet the demands of higher education in the coming years.

Technology is changing the structure of education today, unlike any time in the past. At the current growth of computing power, information of any kind will be available to everyone instantaneously, at an affordable cost. This is already true for the Indian upper middle class and will be the case for everyone, at least in Kerala, in the next few years. Coupled with the growth of hardware and artificial intelligence, that information can be curated to suit the needs of the seeker, in milliseconds. This would mean that traditional forms of instruction and examination will get transformed drastically, some major changes will be visible by 2030.

As we have already stated elsewhere in the report, a didactic and reception-learning oriented information-recall kind of instruction-examination system has now to be replaced by a system of exploratory and experiential learning involving critical analysis, application, empathy, and creativity. Instruction leading to knowledge-transfer in the traditional sense will now onwards be more likely to happen through online means, increasingly assisted by artificial intelligence.

Most of the higher education may become profession-oriented and may involve greater deployment of short-term modules designed to meet specific objectives. Thus, the need for certificate courses with emphasis on independent learning designed for students from diverse areas to acquire specialized skills may become the nature of advanced learning. One may say that a traditional degree with one or more certificate courses will increasingly become a pre-requisite for a student to enter the world of work. Curating and delivering such courses could happen with the assistance of artificial intelligence. This kind of precision education may well become a trend in a few decades.

This would imply that the teachers will increasingly be called upon to play their roles as creators of new knowledge and curators of content. There will be greater opportunities for both teachers and students to transcend institutional boundaries and accessing, as well as contributing to, the global and collective enterprise of content creation and curation. This provides new opportunities for teachers as well as students not any longer being limited by geographical boundaries and institutional identities. However, the teachers will need to be equipped with advanced tools and new skills to transit along the changing times.

Digital education is not to be seen as content delivery through videos, displacing teachers and taking students away from classrooms. On the contrary, the direct human engagement in higher

education will now on be seen as opportunities for deeper critical comprehension and experiential learning. Key to the success of this is adaptation of technology to assist human ingenuity. Digital education will become an immersive experience seamlessly extending into and incorporating within it the space of face-to-face modes of interaction and experiential learning in the field and the lab. This of course is a gradual transformation, but some forerunners of this is already visible -- the use of learning management system platforms for curriculum delivery.

An important concern raised often in the context of digital education is equity. Digital divide that could separate people must be eliminated by increasing infrastructure and opportunities. Any institution of HE must provide free Wi-Fi of acceptable bandwidth to students and staff and there must be digital learning centres in every village at common places such as libraries, primary schools, and health centres, which are available across the state.

Digital education must enhance greater interdisciplinarity. The content of languages and social sciences in curriculum must be enhanced and care should be taken to ensure that every subject is uniformly represented in the digital space. Learning optional subjects would be easier digitally.

For greater utilization of digital education, the statutory framework of education needs restructuring. Every aspect of digital education – teachers, courses and degrees must become equivalent to the regular structure and students and teachers should be permitted to move across the systems. There should be no difference in opportunities for the graduates. Every university must be free to introduce digital courses. To ensure quality, all of these must be evaluated and certified appropriately by universities or by a structure of accreditation at the state-level.

To this end, the Commission recommends the following.

1. An appropriate proportion of budgetary resources for institutional infrastructure should be kept aside for developing digital infrastructure;
2. Every institution must have a digital support mechanism to ensure that all programmes are available in digital format, with the most advanced technology, over a finite period;
3. The latest technologies in teaching and evaluation must be incorporated into all programmes;
4. Teachers must be trained continuously on the use of digital tools so that they can turn into genuine content creators;
5. Students and teachers must be exposed to the best trends globally in their respective areas, through online faculty and student collaborations;
6. An open data research consortium should be established;

7. Digital infrastructure with high-speed connectivity, computational resources, and the required licenses must become established in all higher education institutions;
8. The government should provide digital devices and subsidised data plans for underprivileged students to address the digital divide.

X

FUNDING HIGHER EDUCATION

A key issue in the development of higher education in India has been inadequate public funding. Across the world, successful models in higher education have been based on expanded public funding. In India too, the leading role of public funding should be considered as a non-negotiable policy feature. At the same time, governments must also create a facilitating environment to encourage private sector participation in higher education with social regulation at the centre of the policy design.

There have been many reports in the past on funding education in India. The consensus, from the time of the Kothari Commission in 1966, has been that about 6 per cent of the country's GDP should be invested in education. However, it becomes difficult to use this principle to judge the adequacy of investment in one State, given that the Union government, the State government, and the local governments contribute through plan and non-plan channels. In Kerala, given that there are difficulties in accurately estimating the investment of local governments in education, the task is rendered even more complex.

The Kothari Commission did not provide a sub-target for public expenditure on higher education. In Kerala, however, the U. R. Ananthamurthy Committee, which submitted the report on "Kerala State Policy on Higher Education" in 2011, recommended that the share of public expenditure on higher education must be at least 33 per cent of the total expenditure on education in the State.

The present status of funding

We begin this section with a statement on the nature of government involvement in financing higher education in Kerala.

In this report, we define the expenditure on higher education as constituting expenditures under the following major budget heads in the "Finance Accounts": (a) University and Higher Education; (b) Technical Education; (c) Fine Arts Education; (d) Medical Education; and (e) educational expenditures under "Crop Husbandry", "Animal Husbandry" and "Fisheries".[6] These budget heads cover almost all the public expenditures on higher education in the State.

There may be omissions in the above list of budget heads, but they must be small or insignificant expenditures under a host of other budget heads that are not disaggregated by the levels of

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[6] In (e), these are expenditures incurred on the Kerala Agricultural University (KAU), the Kerala Veterinary and Animal Sciences University (KVASU), and the Kerala University of Fisheries and Ocean Sciences (KUFOS).

education in the "Finance Accounts". An example is the expenditure on education under the head of "Welfare of SC/ST/OBC/minorities". Other possible omissions are the scholarships or fellowships paid by the Government of India directly to the bank accounts of beneficiaries and hence not represented in the "Finance Accounts" of the State government. Hence, our estimates should be considered as underestimates though not by any large margin.

Essentially, public expenditure on higher education can be divided into three types: (a) non-plan expenditures of the State government; (b) plan expenditures of the State government; and (c) plan expenditures of the central government transferred through the State government. Data show that almost three-fourths of the expenditure on higher education in Kerala are of the *non-plan* variety (see Table 8). Over the last decade, this share has remained stubbornly at that level, and even risen marginally.

Table 8 *Shares of public expenditure on higher education by sources, Kerala, 2010-11 to 2020-21*, in per cent

Year	The share (%) in total expenditure of				Total expenditure (%)
	Non-plan expenditure, GoK	Plan expenditure, GoK	Plan expenditure, GoI	Total Plan expenditure, GoK and GoI	
2010-11	75.2	23.5	1.3	24.8	100.0
2011-12	78.2	19.8	2.0	21.8	100.0
2012-13	74.6	21.2	4.2	25.4	100.0
2013-14	75.6	20.9	3.5	24.4	100.0
2014-15	79.9	18.4	1.7	20.1	100.0
2015-16	75.2	24.1	0.7	24.8	100.0
2016-17	77.0	22.1	0.9	23.0	100.0
2017-18	79.6	20.2	0.2	20.4	100.0
2018-19	75.6	21.3	3.1	24.4	100.0
2019-20	84.7	13.2	2.1	15.3	100.0
2020-21	78.1	19.1	2.7	21.9	100.0

Source: Finance Accounts, CAG, various years.
Notes: GoK: Government of Kerala; GoI: Government of India.

The non-plan expenditures in higher education are typically all expenditures towards paying salaries and pensions of teachers and staff. From the 1970s onwards, the salaries of teachers in private but government-aided institutions in higher education are paid by the Government of Kerala, which is the most important reason for the large share of non-plan expenditures. As the Report of the Education Commission (chaired by Ashok Mitra) noted in 1999, it was this rise in non-plan expenditures that also contributed in large measure to a rise in the share of expenditure on higher education within the total education expenditure:

"[Expenditure on] university and higher education had a double-digit share [in the total expenditure on education] in the early 1950s but it came down to a single digit in the mid-1950s, touching the lowest share of just above four per cent in 1965-66, and continuing in single digits till the early 1970s. The return to two digits in 1972-73 with a sharp jump from 7.4 per cent in 1971-72 reflects the assumption by the state of payment of college teachers of all categories (that is, government colleges as well as private colleges) during that year. Since then, the share has tended to increase, crossing 16 per cent in the 1990s."

Only about one-fifth to one-fourth of the expenditures are typically of the *plan* variety. Within plan expenditures, only a miniscule share came from the Government of India; almost all the expenditures were met from the budget of the Government of Kerala. In Kerala, the more recent fiscal crisis has constrained any rise in plan expenditures on higher education. However, as non-plan expenditures are largely immune to fiscal crises, their share has risen to about 80 per cent in some years.[7]

Typically, Kerala spends about Rs 20,000 crore to Rs 23,000 crore on *education, sports, arts and culture* in a financial year. In 2020-21, of the total expenditure of Rs 20,249 crore, Rs 16,901 was non-plan expenditure (83.5 per cent) and Rs 3349 crore was plan expenditure (16.5 per cent). In the same year, the total expenditure on *higher education* was Rs 5794 crore, of which Rs 4527 crore was non-plan expenditure (78.1 per cent) and Rs 1267 crore was plan expenditure (21.9 per cent). As a share of the total expenditure on education, sports, arts and culture, the total expenditure on higher education constituted 28.6 per cent. As a share of GSDP, the Kerala's spending on higher education was 0.7 per cent.

A plot of the nominal and real public expenditures on higher education over the past decade shows that the steady rise in non-plan expenditures has acted as a constraint on any potential rise in plan expenditures (see Figures 10 and 11 for trends in nominal and real expenditures). As a result, much of the infrastructural and other physical requirements of higher education have not been met to a satisfactory extent.

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[7] The Ashok Mitra Commission in 1999 had noted the perverse outcomes of these shifts in financing thus: "in universities,…the amount spent on library and laboratory, which used to be about 20 per cent of the total expenditure in the early 1980s, declined to about 6 per cent at the end of that decade, and further to around 3 per cent in 1993-94 in the case of University of Kerala and to about 1.3 per cent in 1992-93 in the case of Calicut University. In the case of MG University, the library and laboratory expenditure was 3.79 per cent of the total expenditure in 1993-94."

Figure 10 *Trends in the public expenditures on higher education, Kerala, 2010-11 to 2020-21*, in nominal Rs crore
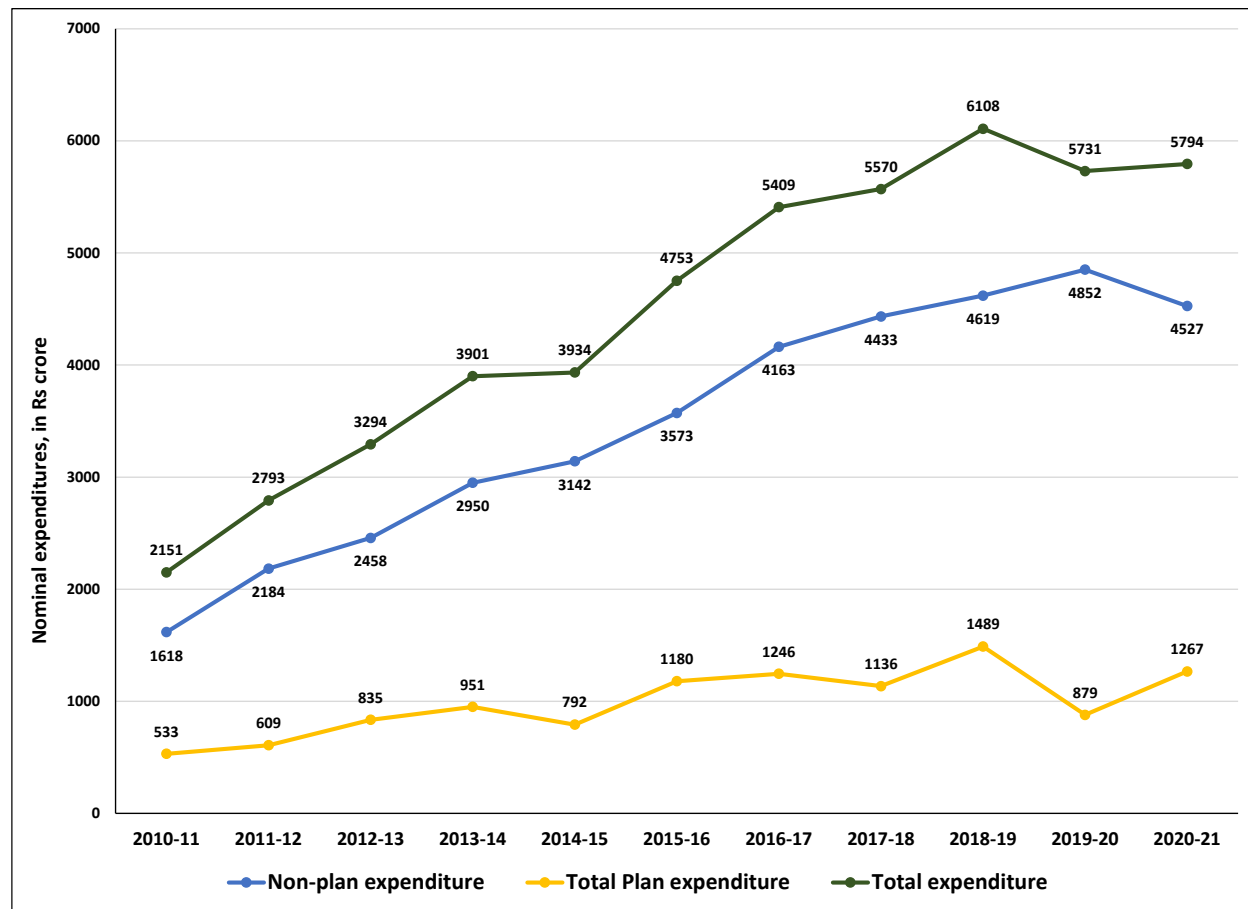
The need to raise funding

As we have already discussed, if Kerala must raise its GER_{HE} to 75 per cent by 2036, the additional enrolment required would be of 9.53 lakh persons. If the GER_{HE} must rise to 60 per cent by 2031, the additional enrolment required would be of 6.17 lakh persons. AISHE data show that Kerala had a total enrolment in higher education – in government colleges, private-aided colleges, university teaching departments and government's deemed universities – of 442,847 in 2019-20.[8] Total public expenditure on higher education was Rs 5731 crore in 2019-20. From here, we deduce that the per student expenditure was about Rs 89,806 per year in 2019-20.

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[8] This figure excludes enrolment in the Central University, Central Open Universities, and Institutes of National Importance, as these institutions are directly funded by the Government of India, and do not enter the expenditures listed in the "Finance Accounts". We were also constrained to exclude the enrolments in stand-alone institutions also (numbering 70,394 students), as it was difficult to disaggregate these figures into government-owned and private institutions.

Figure 11 *Trends in the public expenditures on higher education, Kerala, 2010-11 to 2020-21*, in real Rs crore
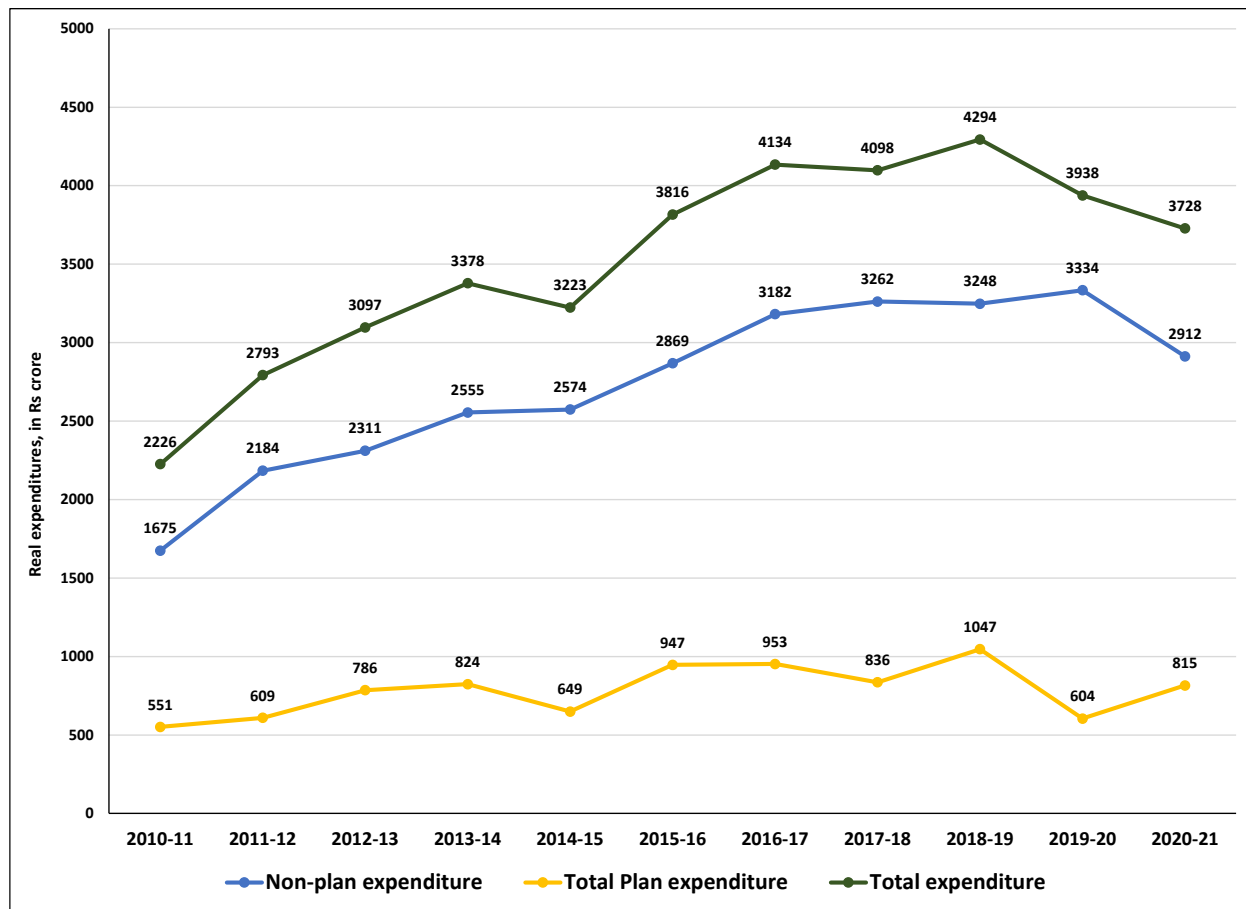
Let us, to begin with, assume that all the new enrolment in the future would take place in government institutions.

Assuming a per student expenditure of Rs 89,806 at 2019-20 prices, extrapolated to Rs 205,837 at 2036-37 prices, the total additional spending required to raise GER$_{HE}$ to 75 per cent would be about Rs 19,635 crore by 2036-37. If we add to this the actual incurred expenditure of 2019-20, i.e., Rs 5731 crore in 2019-20 extrapolated to Rs 13,136 crore in 2036-37, the total investment in 2036-37 must stand at Rs 32,771 crore.

To raise GER$_{HE}$ to 60 per cent by 2031-32, with an extrapolated per student expenditure of Rs 161,279 at 2031-32 prices, the total additional spending required would be about Rs 9953 crore in 2031-32. If we add to this the incurred expenditure of 2019-20 (i.e., Rs 5731 crore of 2019-20 extrapolated to Rs 10,292 crore of 2031-32), the total investment in 2031-32 must stand at Rs 20,245 crore.

In other words, from the level of **Rs 5731 crore in 2019-20**, the total investment on higher education in Kerala must rise in nominal terms to **Rs 32,771 crore by 2036-37** (for 75 per cent GER$_{HE}$) or **Rs 20,245 crore by 2031-32** (for 60 per cent GER$_{HE}$).

Let us now relax our initial assumption. All new enrolment in the future need not take place in government institutions. AISHE data show an interesting distribution of students across different types of institutions in the State. If we consider all institutions together – colleges, central universities, central open universities, institutes of national importance, state public universities and deemed universities – 41.5 per cent of all students in Kerala were enrolled in government institutions, 24.9 per cent of all students were enrolled in private-aided institutions and 33.6 per cent of all students were enrolled in private-unaided institutions.

At the same time, government institutions will have to cater to a significant proportion of the new enrolment, as most of the fresh entrants into higher education are likely to be from among those who are first generation seekers of higher education and hence predominantly from economically poorer backgrounds. It will not be ethically defensible for the government to abdicate the responsibility of ensuring access to quality higher education just when those who had earlier no access to higher education come knocking at its door.

Keeping this in mind, we have constructed three scenarios for the future: (a) 50 per cent of the new enrolment will be in government institutions; (b) 75 per cent of the new enrolment will be in government institutions; and (c) 100 per cent of the new enrolment will be in government institutions. Considering that we have two targets for GER$_{HE}$, we now have at least six scenarios for the future, which we would like to submit for the consideration of the Government.

Scenario 1: Achieve 75 per cent GER$_{HE}$ by 2036-37, with 50 per cent of the new enrolment in government institutions

Scenario 2: Achieve 75 per cent GER$_{HE}$ by 2036-37, with 75 per cent of the new enrolment in government institutions

Scenario 3: Achieve 75 per cent GER$_{HE}$ by 2036-37, with 100 per cent of the new enrolment in government institutions

Scenario 4: Achieve 60 per cent GER$_{HE}$ by 2031-32, with 50 per cent of the new enrolment in government institutions

Scenario 5: Achieve 60 per cent GER_{HE} by 2031-32, with 75 per cent of the new enrolment in government institutions

Scenario 6: Achieve 60 per cent GER_{HE} by 2031-32, with 100 per cent of the new enrolment in government institutions

As Table 9 shows, the required expenditure of the Government rises from Scenario 1 to 3 and from Scenario 4 to 6. To achieve 75 per cent GER_{HE}, the required government expenditure in 2036-37 would be between Rs 22,953 crore and Rs 32,771 crore (up from Rs 5731 crore in 2019-20). To achieve 60 per cent GER_{HE}, the required government expenditure in 2031-32 would be between Rs 15,269 crore and Rs 20,245 crore (again, up from Rs 5731 crore in 2019-20).

Table 9 *Requirements of government financing under different scenarios of GER_{HE} achievement, Kerala, 2031-32 and 2036-37*, in number, per cent, Rs and Rs crore

Item\Scenarios	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Target for GER_{HE}	75%	75%	75%	60%	60%	60%
Terminal year of achievement	2036-37	2036-37	2036-37	2031-32	2031-32	2031-32
Share of government in new enrolment	50%	75%	100%	50%	75%	100%
Number of students to be newly enrolled	953,897	953,897	953,897	617,147	617,147	617,147
Inflated per student cost in the terminal year (Rs)	205,837	205,837	205,837	161,279	161,279	161,279
Total new expenditure required in the terminal year, in crores	19,635	19,635	19,635	9,953	9,953	9,953
New government expenditure needed by terminal year (Rs crores)	9,817	14,726	19,635	4,977	7,465	9,953
Inflated value of present government expenditure in the terminal year (Rs crores)	13,136	13,136	13,136	10,292	10,292	10,292
Total expenditure of the government in the terminal year (Rs crores)	**22,953**	**27,862**	**32,771**	**15,269**	**17,757**	**20,245**
New private investment required in the terminal year (Rs crores)	**9,817**	**4,909**	**-**	**4,977**	**2,488**	**-**

Source: Computed by the Committee from different official data sources.

In Scenarios 1, 2, 4 and 5, the deficit after accounting for new government expenditure would have to be met by private investment i.e., the private-aided and private-unaided institutions. In Chapter XI, we have provided a detailed statement on the need to encourage private investment in higher education in Kerala. Essentially, Kerala needs a facilitating policy environment to attract quality private investment in higher education. We also believe that the projected requirement of government expenditure can be realistically achieved by 2031-32 and 2036-37. Given this benchmark, the committee has constructed two scenarios of future growth of government expenditure on higher education:

Scenario A: government expenditure grows by 10 per cent per annum between 2020-21 and 2036-37;
Scenario B: government expenditure grows at 12 per cent per annum between 2020-21 and 2036-37.

The projections of government expenditure under the three scenarios A, B and C are in Figure 12. Figure 12 shows that it would be most appropriate if government expenditure grows at 12 per cent per annum if Kerala aims to achieve 75 per cent GER_{HE} by 2036-37 with all the new students enrolling in government institutions. Government expenditure must grow at 10 per cent per annum to achieve 75 per cent GER_{HE} by 2036-37 with 50-75 per cent of the new students enrolling in government institutions. The same holds true for achieving 60 per cent GER_{HE} by 2031-32 also.

The annual targets for the expected government expenditures under these two scenarios – i.e., A and B – till 2036-37 are provided in Table 10. In our view, with some careful budgetary management, additional resource mobilisation and political will, the total government expenditure on higher education can be consistently raised by 12 per cent per year till 2036-37. We recommend that every budget of the government makes a voluntary statement of achievement in this regard.

Increasing total government expenditure would not be adequate. In our view, this would also require that:

(a) an increasing share of the total expenditure on education is kept aside for higher education, rising from the present 28.6 per cent to at least 33 per cent within five years.

Raising the share of public expenditure on higher education to 33 per cent of the total expenditure on education was a recommendation of the U. R. Ananthamurthy Committee, which submitted the report on "Kerala State Policy on Higher Education" in 2011. We concur with this

suggestion but also would like to build on it. At present, the share of public expenditure on higher education hovers around 26-28 per cent of the total expenditure on education. Given that Kerala has already achieved much progress in general education, we recommend that the share of public expenditure on higher education must rise to 33 per cent by 2031-32, and further to 40 per cent by 2036-37 (see Figure 13).

Figure 12 *Scenarios for the future in the growth of government expenditure in higher education and requirements, Kerala, 2020-21 to 2036-37*, in Rs crore
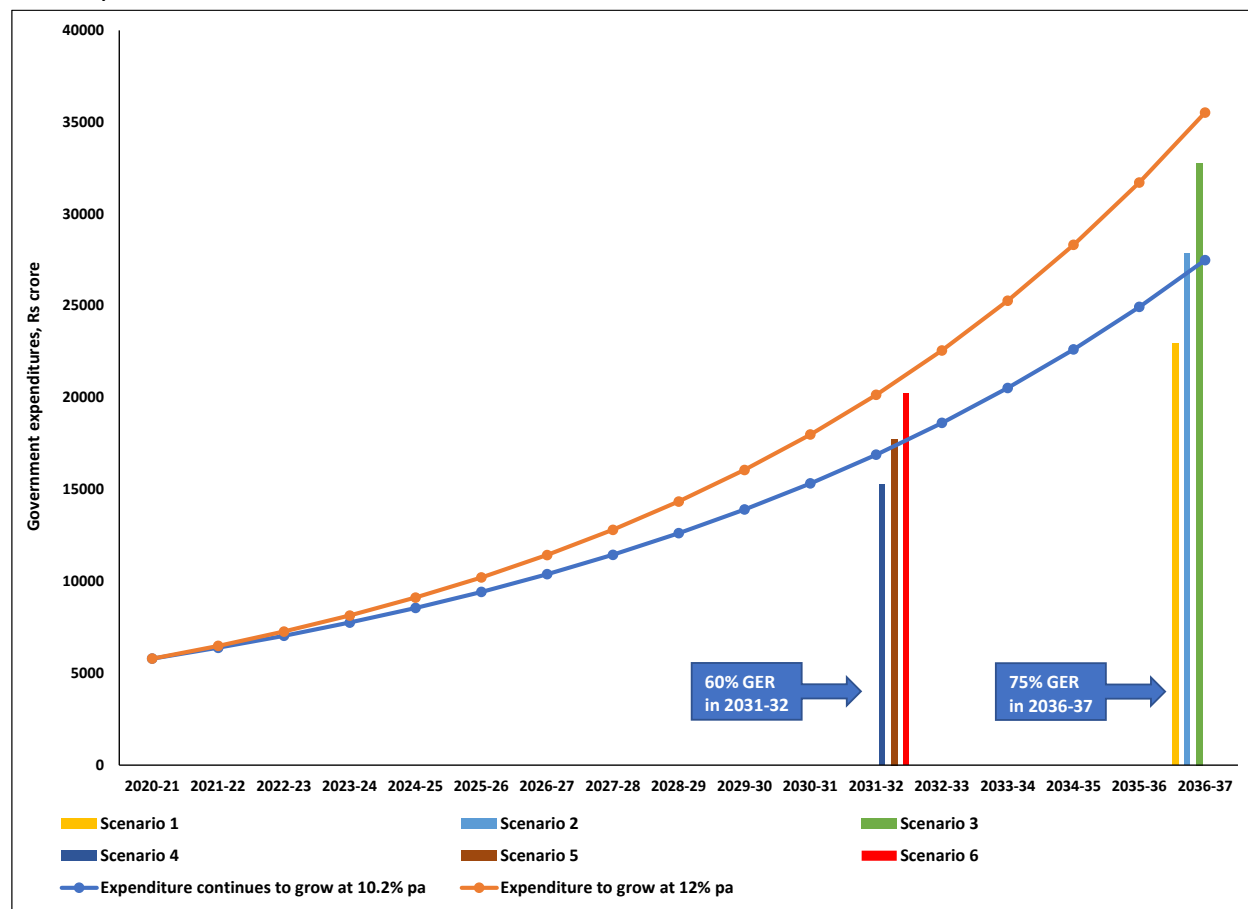
Source: Computed by the committee from official data.

(b) an increasing share of the expenditure on higher education should be funded from the plan.

More plan funding will be necessary because new expenditures required will be in the establishment of new colleges and institutions, increase in the number of seats in colleges, initiation of new courses and programmes, provision of more scholarships and stipends and offer of multiple incentives like interest subventions on loans to draw students into enrolment in higher education. We have also recommended that the State plan must contribute the initial seed money for the establishment of a higher education fund.

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Table 10 *Annual projections for future growth in government expenditures in higher education, Kerala, 2020-21 to 2036-37*, in Rs crore

| Year	Scenario A: Projected government expenditure at an annual growth rate of 10 per cent	Scenario B: Projected government expenditure at an annual growth rate of 12 per cent
2020-21*	5,794	5,794
2021-22	6,386	6,489
2022-23	7,039	7,268
2023-24	7,758	8,140
2024-25	8,551	9,117
2025-26	9,425	10,211
2026-27	10,388	11,437
2027-28	11,450	12,809
2028-29	12,620	14,346
2029-30	13,910	16,068
2030-31	15,332	17,996
2031-32	**16,899**	**20,155**
2032-33	18,626	22,574
2033-34	20,529	25,283
2034-35	22,627	28,317
2035-36	24,940	31,714
2036-37	**27,489**	**35,520**

Source: Computed by the committee from the budget documents.
Note: *: actual figures for 2020-21.

Currently, majority of the public expenditure on higher education is of the non-plan variety (see Figures 10 and 11 above). We have already recommended that the government must put a ceiling on the number of new posts to be financed in private-aided institutions. *No new posts must be approved in private government-aided institutions and all new posts to be created must be financed by the institutions themselves.* Such a constraint on the payment of salaries and pensions in private government-aided institutions, combined with an overall thrust on raising public expenditure on higher education at 12 per cent per annum, must ensure that the non-plan component is progressively brought down and stabilised at an appropriate level over a decade.

We also specifically recommend that plan funding of higher education must double in two years from now, and triple in five years from now.

Figure 13 *Share of public expenditure on higher education in the total expenditure on education, Kerala, actual and recommended, 2010-11 to 2036-37*, in per cent
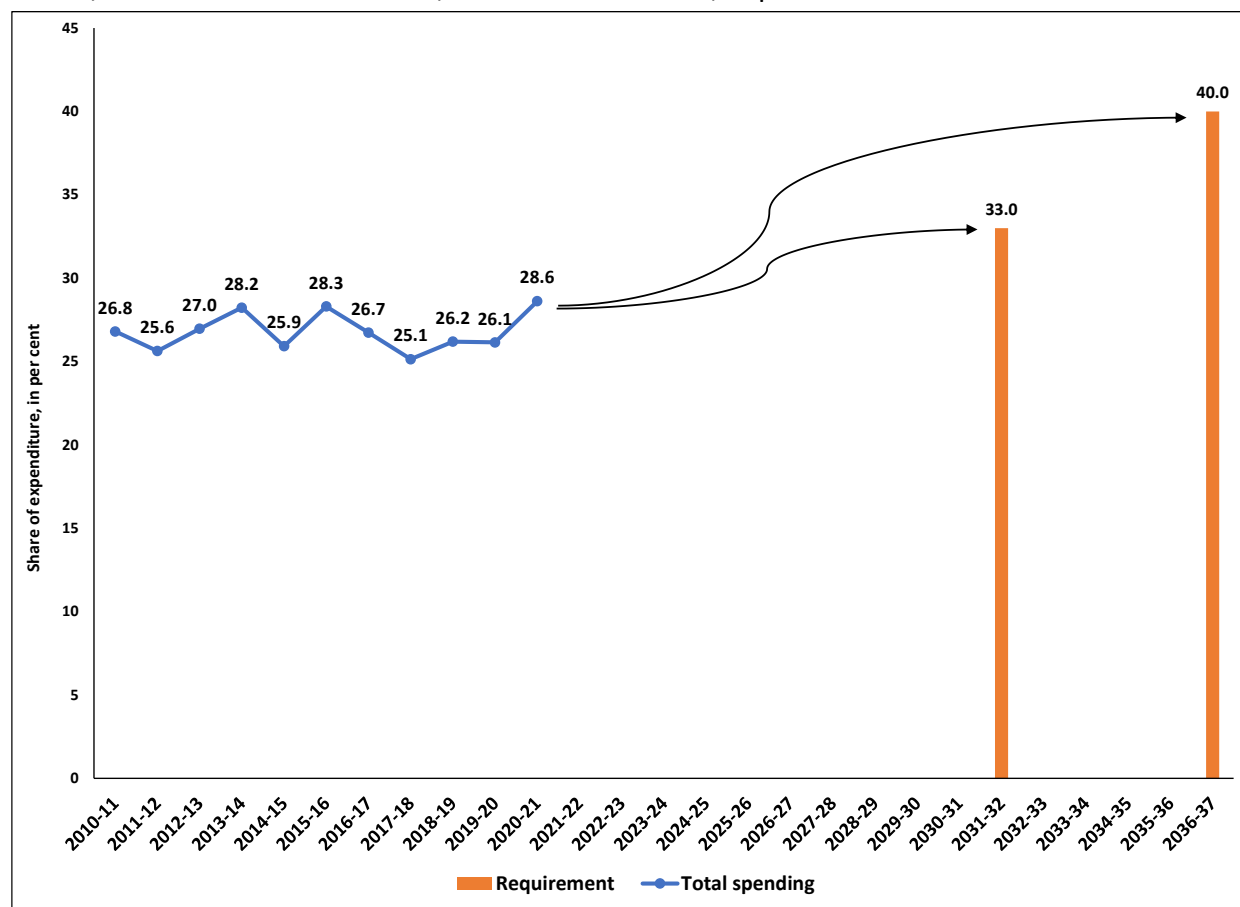
Source: Finance accounts, Government of Kerala.

(c) a larger proportion of the expenditure on higher education should be capital expenditure.

More capital expenditure will be required in the future because the establishment of new colleges and institutions, as well as the improvement of existing infrastructural facilities, would necessitate spending more on asset-creation. Higher education institutions would need more classrooms or classroom blocks, and each classroom must be transformed into *smart classrooms*. We are also recommending the establishment of new laboratory facilities as well as improvements to the existing laboratory facilities.

At present, close to 95 per cent of the total expenditure on higher education is revenue expenditure leaving just 5 per cent for capital expenditure (see Table 11). We are aware that the Kerala Infrastructure Investment Fund Board (KIIFB) is currently used to finance necessary capital expenditures. While this is a welcome step, we do not believe that KIIFB can be relied up on every

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year to undertake this function in the medium- to long-term. A consistent rise of capital expenditures from the State plan is the most sustainable route in this regard.

Table 11 *Relative shares of revenue and capital expenditures in the higher education budget, Kerala, 2010-11 to 2020-21*, in per cent

Year	Share of revenue expenditure (%)	Share of capital expenditure (%)
2010-11	92.7	7.3
2011-12	94.3	5.7
2012-13	94.0	6.0
2013-14	95.2	4.8
2014-15	95.3	4.7
2015-16	94.6	5.4
2016-17	95.0	5.0
2017-18	93.5	6.5
2018-19	94.7	5.3
2019-20	94.8	5.2
2020-21	94.7	5.3

Source: Finance Accounts, Government of Kerala.

We recommend that with the shrinking of the non-plan component in higher education budgets, the share of capital expenditure must increase progressively to at least 20 per cent of the total expenditure on higher education.

We have already recommended the setting up a self-replenishing **Kerala Higher Education Fund (KHEF)** of Rs 5000 crore out of which the Government of Kerala will contribute to the tune of Rs 2000 crore over a reasonable time frame. The rest must be raised from other sources. The KHEF will manage the disbursement of grants against financial proposals from higher education institutions. The Government may consider levying a dedicated Higher Education Cess of 1-2 per cent on the sale of specific goods or services, the proceeds of which will go towards replenishing the **KHEF**.

The KHEF should be managed professionally through an entity like a **Section 8 company or a trust** under the auspices of the KSHEC. It must mobilise contributions from philanthropists, religious centres like temples, churches, mosques, corporate entities, and the public. The KHEF must also mobilise corporate social responsibility (CSR) support for the development of higher education in specific regions or targeting specific populations in the social and economic margins in terms of scholarships, supply of digital devices and other kinds of support.

Funding will specifically be required to expand and enhance access to higher education to:

- Set up new colleges, especially in the under-served regions;
- Increase student intakes in all courses in colleges and universities as per the guidelines to be issued by the KSHEC;
- Improve the quality of self-financing institutions under the government sector;
- Set up a partnership of the Sree Narayana Guru Open University (SNGOU) and the Digital University of Kerala (DUK) with a network of colleges and universities to create digital resources and content for teaching in the hybrid mode, particularly to support under-served areas, marginal communities, women, and people with disabilities.

Funding should also be ensured to support government and government-aided colleges, particularly those colleges promoted to the status of Constituent Colleges. In general, while increasing funding for higher education, care should be taken that they are directed towards the specific recommendations that we have made in our report.

Universities must be, without doubt, encouraged to expand their own resources. But the funding from the Government must constitute their core funding. This core funding must be actively supplemented by exploring other sources of revenues.

Firstly, universities must be encouraged to form mutually beneficial partnerships with the industry. In this report, we have suggested a series of measures towards this goal, including the establishment of research parks, innovation hubs and start-up incubators. The Government of Kerala has already announced the establishment of translational labs in universities. These initiatives will help universities generate financial resources for teaching, research and infrastructural needs as well as improve the employment opportunities of students. Such efforts will also help in creating solutions to the problems in the societies and communities in which universities are located.

Secondly, universities must actively encourage researchers to bid for large research projects at the national and international levels. For this purpose, purposeful engagements must be cultivated with researchers in other universities – for which we have already suggested strengthening of Inter-University Centres (IUC) and networks – so that resources can be pooled, and joint proposals can be floated. Winners of large bids must be incentivised and encouraged within the university system.

Thirdly, alumni, philanthropic groups, CSR funds and high net-worth individuals (HNI) must be tapped to generate a regular flow of resources into the universities. These funds must be used to create infrastructure for libraries, hostels, laboratories, and other such essential needs.

Universities must actively engage with their alumni to create networks of future association. A separate cell must be created inside each university to create plans for such resource generation.

Universities must also be encouraged to cut costs wherever possible. The endeavour should always be to reduce the ratio of general (administrative) expenditure to core (academic) expenditure. Ways must be found to rationalise staff structure by expanding e-governance initiatives and undertaking reforms in the examination system. With the institutionalisation of examination reforms and the ERP, it should be possible to make the administrative and support staff structure trimmer and more efficient.

MOBILISING RESOURCES AND PRIVATE PARTNERSHIPS

The targets that the Government of Kerala has set for expansion in higher education in the next ten to fifteen years are ambitious. As we have detailed in this report, attaining the goal of 75 per cent and 60 per cent GER_{HE} implies additional enrolment of 600,000 to 900,000 students in the higher education system. A part of this additional enrolment can be absorbed by government colleges and public universities. In Chapter X on funding, we have tried to provide cost estimates for multiple scenarios in terms of additional enrolment. At the same time, a significant proportion of the students will have to be absorbed in the government-aided and unaided sphere. Expansion and diversification will not be possible merely through government funding.

It is equally important that while we expand enrolment in higher education, concerns of quality of higher education are also appropriately addressed. It is also important that the new courses and programmes are aligned with the policy visions on employment generation and entrepreneurship promotion.

To meet the target of 60 per cent GER_{HE} over the next ten years, the focus will have to particularly be on the promotion of what we call a self-sustaining sector in higher education. There will have to be a concerted effort to make this a collaborative endeavour between the Government and private promoters of higher education. There will have to be ways of rationalising fees as well as bringing about a more optimal balance between government grants and revenue raised from student fees in meeting the operational costs in public institutions.

In this chapter, we present our analysis under two rubrics: one, making public institutions viable, and two, engaging with the self-sustaining sector.

Towards viable public institutions

Mobilising private support for public funded institutions

After having visited several universities and government and government-aided colleges and having interacted with the university and college leaders and teachers, our sense is that the grants they receive from the Government are hardly enough to continue with the present scale of operations. The salary and pension costs account for the bulk of the operational expenditure met through non-plan government support. Plan allocation is small compared to the physical and other requirements or the needs of maintaining quality. Maintaining infrastructure at the level of minimum acceptable quality is a major challenge in some institutions. The system of using

many underpaid contractual teachers prevails because, among other reasons, it is perceived as a strategy to reduce expenditure. This is totally unacceptable.

It is our sense that the contribution of government grants to the total operational expenditure in public funded institutions should be restricted in a phased manner to below 50 per cent in the case of universities and below 60 per cent in the case of government colleges. Student fees should account for a range of 25-35 per cent of the operational expenditure. Resources mobilised through other sources should account for 10-30 per cent of the total operational costs. At present, the capital expenditure for infrastructure is predominantly through government grants. This should change. There should be a sustained endeavour to meet capital expenditure for infrastructure from contributions from private sources.

Rationalising fee structure

In Kerala, public education is largely free till Class 12. This is a commendable legacy, which has helped to expand mass education and bridge social inequalities. However, education at the collegiate level is qualitatively different from education at the pre-collegiate level. In most universities, tuition fees in traditional courses have remained unchanged for years though higher tuition fees are charged for new courses in the traditional universities and most courses in the new universities. In other words, there are strong tendencies not to raise existing tuition fees. We believe that this is not a sustainable stance, both from the point of view of the financial viability of universities as well as willingness of the society to pay.

Before us, the Ashok Mitra Commission in 1999 had argued for a raise in the tuition fees in higher education in Kerala. It had noted that:

> "…the beneficiaries of [higher] education must share in the cost of education though, even at this level, education must not be allowed to become a commodity to be purchased only by those who can afford to do so. This is because, at all levels, education provides a general, though often imperceptible, social benefit. At present, fees at the collegiate level constitute an extremely low proportion of the costs of education. What is perhaps more striking is that while college fees have moved up in absolute terms during the past 40 years [perhaps doubled], in relation to per capita income, they have fallen steeply; from about 50 per cent of the per capita incomes in 1950-51 to less than 10 per cent currently [i.e., in the 1990s]. We are of the view that there is a strong case for raising the level of collegiate fees. In a phased manner, but at the earliest possible, at the B.A., B.Sc., B.Com. levels, they should be made equal to about 20 per cent of the State's per capita income. At the master's level, the fees could be twice that at the undergraduate level."

These recommendations of the Ashok Mitra Commission have not yet been engaged with. This committee collected information on tuition fees in a range of courses in three major universities in the State: University of Kerala (UoK); Mahatma Gandhi University (MGU); and Calicut University. What was interesting was that there were wide variations in the fee structures (a) across different courses across universities; (b) across different courses in the same university; (c) across the same courses within the same university; and (d) across the same courses across universities. When fresh courses were introduced or offered, fee structures were kept higher than for the existing courses. When the same course was introduced in another institution within the same university, the fee structures were fixed higher than for the existing courses. In most universities, fee structures were different for courses in the government and government-aided colleges; for self-financed courses in aided and self-financing colleges; and for self-financing courses in colleges managed by the Institute of Human Resources Development (IHRD).

We shall summarise the data below. We first consider undergraduate courses.

- In the Calicut University:
  - For a typical undergraduate programme (BA/BSc/BCom) in government and aided colleges, the annual tuition fee was Rs 1050 in 2020-21, while the annual tuition fee for a BSc in Electronics or Computer Sciences was Rs 3150.
  - At the same time, for a typical undergraduate programme in aided and self-financing colleges, the annual tuition fees were in the range of Rs 9000 to Rs 24,000.
  - Finally, for a typical undergraduate programme in self-financing colleges managed by the IHRD, the annual tuition fees ranged from Rs 7000 to Rs 14,900.
- In the Mahatma Gandhi University:
  - The annual tuition fee for a typical undergraduate course in government and aided colleges was Rs 1050 in 2020-21.
  - At the same time, for a typical undergraduate course in self-financing arts and science colleges, the annual tuition fees ranged from Rs 9000 to Rs 19,500.
- In the University of Kerala:
  - For a typical undergraduate programme (BA/BSc/BCom) in government and aided colleges, the annual tuition fee was Rs 1050 in 2020-21, while the annual tuition fee for a BSc in Electronics was Rs 3150.
- In the Kannur University:
  - The annual tuition fee for a typical undergraduate course in government and aided colleges was Rs 1050 in 2020-21.

We now consider the postgraduate courses.

- In the Calicut University:
  - For a typical postgraduate programme (MA/MSc/MCom) in government and aided colleges, the annual tuition fee was Rs 1050 in 2020-21, while the annual tuition fee for a MSc in Electronics or Computer Sciences was Rs 3150.
- In the Mahatma Gandhi University:
  - For a typical MSc programme, the average tuition fee in the School of Chemical Sciences or the School of Biosciences in 2020-21 was Rs 945.
  - At the same time, for an MA/MSc/MCom programme in the self-financing colleges, the annual tuition fee ranged between Rs 18,750 and Rs 42,000.
  - For an MA programme in the School of Social Sciences or Development Studies, the annual tuition fee was Rs 630.
- In the University of Kerala:
  - For a typical programme at the master's level, the annual tuition fee in 2020-21 was Rs 1126 in the university teaching departments in 2020-21.
- In the Kannur University:
  - For a typical master's programme (MA/MSc/MCom), the annual tuition fee was Rs 1890.

There is one broad conclusion from these typical tuition fees levels listed above. If the tuition fees in the 1990s was less than 10 per cent of the State's per capita income (as the Ashok Mitra Commission noted), the corresponding share in 2020-21 was significantly lower. In 2020-21, the average per capita income in Kerala was Rs 205,067 at current prices. The annual tuition fees of Rs 1050 in the undergraduate programmes in Calicut University constituted just 0.5 per cent of the State's per capita income; of Rs 563 for master's programmes in the University of Kerala constituted just 0.2 per cent of the State's per capita income; of Rs 945 for an MSc programme in Mahatma Gandhi University constituted just 0.4 per cent of the State's per capita income; and of Rs 630 for an MA programme in the Mahatma Gandhi University constituted just 0.3 per cent of the State's per capita income.

If, as the Ashok Mitra Commission recommended, the annual tuition fees for undergraduate programmes were to constitute at least 20 per cent of the State's per capita income, it must be fixed at Rs 41,013. Similarly, the annual tuition fees for a postgraduate programme must be fixed at Rs 82,027. We are not recommending these fee levels in our report but intend to only point to an anomaly that survives in the way our fees are decided.

In our view, there is a need to seriously re-formulate the fee structure in government funded institutions and reconceptualise the philosophy underlying it. A sizeable number of students

getting into colleges in Kerala today have done their schooling in private schools paying high fees, while a good number of students must have passed out of government schools. There is a view that a **differential fee structure** should be instituted in higher education. This could be achieved by linking the fee at colleges and universities to that paid at the school by the student concerned. This is a principle that may be considered seriously.

The differential fee structure can be operationalised in the following way as well. The fee structures may differ from programme to programme, e.g., from BA to BSc to BBA, or from MA to MSc to MBA. The fee range for a programme should be determined by two factors, viz., **(a) input costs** and **(b) market demand**. Affordability in terms of the **students' economic background**, which is a third factor, must be addressed through a system of fee waivers. Depending on the factors (a) and (b) above, the full fee structure should be worked out for every programme, in such a manner that the total fee revenue should account for meeting the entire operational costs of the programme concerned. The unit of fees for a programme should be for one credit. The core fee should be formulated and notified on a *per- credit* basis. The fee structure should be dynamic and should be corrected for inflation by linking it with Wholesale Price Index (WPI) and Consumer Price Index (CPI) every year, for successive cohorts. For a particular cohort admitted each year, the fee structure must remain unchanged for the duration of their study in the programme.

A system of fee waivers must be instituted to ensure that the socially and economically marginalised will get a relief from the burden of relatively high fees. Full fee waivers should be extended to those social groups who as a government policy are entitled to free education. This means for students from SC and ST backgrounds, it will be free education, with a 100 per cent tuition fee waiver.

There should also be a system of full/partial fee waiver based on the family income slabs. For the present, we propose a **suggestive framework**, which may be further studied, discussed, and finalised by the Government. For students whose family income is, say, Rs 6 lakh or less per annum, there will be no tuition fee, that is they will receive 100 per cent tuition fee waiver. Those students whose family income per annum is between, say, Rs 6 lakh and Rs 10 lakh, there will be a graded scale of tuition fee waivers, of 80 per cent, 60 per cent, 40 per cent, and 20 per cent. Full fee will be charged (i.e., no tuition fee waiver will be available) for those who have a family income of more than, say, Rs 10 lakh per annum. The subsidy towards tuition fee waivers should be adjusted within the grants from Government. A part of this burden can be borne by the KHEF.

A standing regulatory body on fee structures, comprising of educationists, economists, and policy makers, must be constituted. The committee should meet regularly – ordinarily, once or twice a

year – and determine the broad principles and guidelines governing the fee structures. Individual universities will determine their own fee structures based on these broad guidelines.

Self-sustaining courses

To optimise the use of infrastructure and facilities and to mobilise extra resources, public funded institutions like postgraduate departments of universities, government colleges and government aided colleges should be encouraged to offer stand-alone courses that can be plugged into the degree programmes, as additional credits. They should also be encouraged certificate and diploma courses in specific areas depending on the strengths of the institution and the demand of the community around it. Such courses may be of an outreach and continuing education kind, which may be through hybrid, evening courses, or online modes. These could also be short courses in various areas, e.g., research methods, English and foreign languages, law, investment, editing and publishing, coding and so on. These could also be in the form of capstone courses in entrepreneurship, start-ups, and business studies.

These courses should be permitted in a manner that will not affect the quality of their existing programmes and courses. The faculty positions for such self-sustaining courses shall be created separately (for which the government shall not provide financial support) with levels of compensation comparable to the regular positions. A system to facilitate this is discussed later in this section.

Mobilising private funds

Every institution, viz., college or university, should have a development office with a minimum core staff and larger number of faculty nominees and alumni volunteers to constantly keep their relationship with the community, alumni, and the larger society warm and active. It is these offices and the alumni associations that must spearhead mobilisations of private donations to create endowments, infrastructure, facilities, faculty positions (chairs), scholarships, bursaries, etc.

Fund raising for research

Our interactions with teachers at universities and colleges give us the sense that there is a need felt for more aggressive fund-writing on an ongoing basis. There is fierce competition among institutions to excel in research. We think there is a need for a virtual network of research support (Kerala Network for Research-Support in Higher Education - KNRSHE) to be established under the

aegis of the KSHEC to handhold and assist teachers, particularly in colleges, to keep the momentum of fund-writing.

Efforts should be on to mobilise private sources of funding for creating research infrastructure and to support conduct of research. KNRSHE should assist institutions reach out to private sources for:

a) Attracting corporate and philanthropic entities for core-funding of new or existing research institutions.
b) Creating a mechanism for attracting and channelising large scale corporate funding into research projects.
c) Bringing greater partnership between research institutions (including universities) and industry.

Engaging with the self-sustaining sector

The Commission prefers the term "self-sustaining" institutions in the place of "self-financing" institutions. Here, we are talking about those institutions that are established with a philosophy, a vision and a mission, and whose promoters have a high degree of credibility. They may generate a surplus, but such surplus will be ploughed back into the institution for purposes of expansion, diversification, quality inputs, scholarships, and bursaries. Such institutions must also have a transparent financial and administrative policy and must be subjected to all scrutiny that a society registered under the societies' act, or a charitable trust, is obliged to go through. It will be totally unacceptable for a self-sustaining institution to generate profits for their promoters.

Types of self-sustaining institutions

Data from AISHE show that if we consider colleges, central universities, central open universities, institutes of national importance, state public universities and deemed universities, 41.5 per cent of all students in 2019-20 were enrolled in government institutions, 24.9 per cent of all students were enrolled in private-aided institutions and 33.6 per cent of all students were enrolled in private-unaided institutions. The last category can be reliably called a purely self-sustaining sector though several government and government-aided institutions also offer self-sustaining courses. Essentially, the state has several categories of institutions that fall under this rubric of self-sustaining institutions:

a) Stand-alone private colleges that are fully self-financing
b) Self-financing sections of government aided private colleges
c) Self-financing institutions established and managed by universities

d) Self-financing systems of institutions established and managed by the government

There is considerable variability in the quality of these institutions. The major issue in many institutions under the above categories is that related to the quantity and quality of faculty and issues related to facilities and other inputs. The faculty comprises largely of those on short-term contractual employment who are undercompensated.

Regulation of self-sustaining institutions

We recommend the setting up of a regulatory structure called Board of Self-Sustaining Institutions in Higher Education (BSSIHE) and locating it within the organisational space of KSHEC. BSSIHE is visualised to perform a dual function – (a) assurance of quality in terms of faculty qualifications, transparency and fairness in faculty hiring, faculty compensation, and infrastructure; (b)(i) assurance of fairness and social justice in student selection; and (b)(ii) maintenance of a dynamic fee structure that is calculated based on input costs for sustaining quality with annual increments that is adjusted for inflation.

One of the tasks for the BSSIHE will be to encourage private initiatives for underdeveloped or under-served regions, social groups, or economic strata. This may include a system of cost-sharing by the government in terms of targeted subsidy for subsets of students that is efficiently administered in a timely manner by private self-sustaining institutions.

We envisage a system of hiring teachers for higher education institutions from a panel of eligible people (as per UGC regulations) who have successfully gone through a state-level selection and empanelling process conducted by a Higher Education Faculty Recruitment Board (HEFRB), which we have already referred to in Chapter III. The HEFRB will be within the organisational space of KSHEC. The self-sustaining sector shall also recruit teachers through this process. This process will be monitored by BSSIHE.

Teachers shall be compensated as per norms to be prescribed through the BSSIHE. BSSIHE will institute a mechanism of stipulating faculty compensations along the lines of UGC regulations and enforcing them. BSSIHE may also think of a system for hiring and compensating part time and visiting faculty to be drawn from the community from among entrepreneurs, professionals, retired teachers and so on.

Presently, the self-sustaining institutions that are set up, supported, and managed by the Government of Kerala are operating on a cost-sharing mode with a very modest per capita cost incurred by the Government. These institutions will need to be upgraded with additional

allocation of funds from the government towards infrastructure, recruitment, and compensation of faculty as stipulated and monitored by BSSIHE. The fee-structure for these institutions should be comparable with the private self-sustaining institutions.

Private universities

Some private self-sustaining institutions aspire to be upgraded as deemed-to-be universities and universities. In our view, facilitating establishment of private universities is a better alternative in comparison to giving NOC to establish a deemed-to-be university. In any case, we are given to understand that the UGC is considering converting all deemed-to-be universities into full-fledged universities.

We recommend that a draft of the Kerala State Private Universities Bill be formulated. After due deliberations under the aegis of KSHEC, involving all stakeholders and experts in the area, the Bill may be processed for legislation as a template for establishing private universities. However, there must be an elaborate scrutiny of the philosophy, proposed vision and mission and the credibility of the promoters of such an initiative before any permission is granted to establish a private university. Such scrutiny should be done by expert groups set up from time to time under the aegis of KSHEC.

All universities, whether public or private, must subscribe to broad vision of commitment to scholarship and social justice. All structures and processes that we have recommended elsewhere in this report shall be applicable to private universities as well.

XII
CONCLUSION

In this report, we have tried to address the broad canvas of reforms in higher education in Kerala in as comprehensive a manner as we could. At the same time, we are acutely aware that the lengthier our report will be, the less likely it will be able to retain the attention of the critical actors in the policy space. We are also particular that the report should not resort to sermonising of any kind. Resultantly, it is spread too thin over a wide area, and several of our recommendations do appear a bit pithy and could perhaps have done with a bit more explanation.

We are aware that some of our recommendations are somewhat drastic and quite at variance with the prevalent practice. All systems and arrangements have their own inertia, and they often resist drastic changes, because they question deep entrenchments of interest groups. Policy making is an exercise in negotiations, and we are aware that the Government will have to be the principal driver for some of the major transformations envisaged. However, while recommending these, we remembered the quiet confidence and the political will that the leadership of the Government of Kerala conveyed to us in our interactions. It was conveyed to us clearly that this was the "last bus" for the structural transformation of higher education in the State, which in turn would trigger a larger societal change. If we missed this bus, we would have blown that last opportunity. It is this decisiveness of the leadership of the Government that emboldened us to dream big and think of the best ways to reach there.

We are, however, not starting on a blank slate. Higher education is an operational system and there are too many structures and practices that survive as legacies. Therefore, several intermediate steps will have to be taken starting from the present status towards the imagined reality that we propose. It is quite likely that not every recommendation may be placed on the anvil in the first instance itself. Some ideas may remain in the backburner for a while. However, when the time is ripe, there will be champions from within the system who will vanguard those ideas, and they may find some of our suggestions useful in their struggles.

The Government of Kerala constituted two other Commissions in 2021 along with ours. The three Commissions were tasked with somewhat overlapping terms of reference. While the other two, viz., the one on examination reforms and the second on legal reforms, had more specific foci, our Commission was given a broader canvas to set out our recommendations more comprehensively and over a longer time scale. Our understanding is that while the other two Commissions have looked at immediate steps to be taken towards reforms in two critical areas, our job is to point more at long-term directions keeping in view the future scenarios. There may well be some

contradictions between the recommendations of the three Commissions. It will be the Government's call as to how they may want to find reconciliations between such recommendations, distinguishing between short-term objectives and long-term goals.

We consider that it will be inappropriate for us to second-guess what the priorities for the Government of Kerala will be at present and propose a comprehensive strategy and roadmap for implementing the whole spectrum of reforms that we have recommended. For this, we will need to assume that the Government will accept the whole range of our recommendations. However, the Government may want to take the recommendations of the three Commissions in totality, in a perspective of implementation-related pragmatics, and then decide on which ones to accept and in what timeframe. For this purpose, the Government may constitute a small taskforce to develop a strategy for implementation. On our part, wherever possible, we have suggested strategies for the implementation of some of the specific recommendations we have made.

For those strands of reform for which there is receptivity in the system, we assume that there will be a few recommendations that may be considered for immediate implementation. In some others, where the various components of the system need to be pre-tested for their efficacy, the way forward will be to pilot the change in a limited context and then try it out more widely after making mid-course corrections. That will also give time for the important constituents to be convinced of its utility and appropriateness and to tweak the system according to the contours of the field in which it is implemented. After the pilot, the reform apparatus will be ready to unfold its full armature across the systemic space.

Systems do not work like a well-oiled machine with a predictable trajectory and pace. Involved in the whole process is an element of human agency, which can in certain instances boost the motivation underlying the whole exercise and take it to a higher level of efficiency. In certain other instances, however, it can create a dampening effect. This is where an effective communication strategy finds its utility, which will need to be put in place before the reforms are rolled out for implementation. The various stakeholders are to be socialised into the essentialities of the reform for developing a sense of ownership, without which no reforms can reach a level of sustainability.

Similarly, a comprehensive strategy of capacity building system needs to be designed and built to scaffold the effective implementation of every strand of the reform initiative, particularly those involving substantial changes in core processes like curriculum, pedagogy, assessment and evaluation, student support, participation in governance and so on.

GOVERNMENT ORDER ON THE COMMISSION FOR REFORMS IN HIGHER EDUCATION SYSTEM

Government of Kerala

Abstract

Higher Education Department – Commission for the Reforms in Higher Education systems – Constituted – Orders issued.

HIGHER EDUCATION (B) DEPARTMENT

G.O. (MS.) No. 390/2021/H.EDN   Dated, Thiruvananthapuram, 21/09/2021

ORDER

To examine important aspects of the existing system of higher education in the state, particularly keeping in view the larger objectives of transforming the state into a knowledge society and developing a knowledge economy. The Commission will examine the Terms of Reference annexed to this order and present recommendations for revising and revamping the present system to attain these objectives. The Commission will have the following members.

1. Dr. Shyam. B. Menon (Chairman)
   (Former Vice Chancellor, Ambedkar University)
   Professor, Central Institute of Education, Delhi University
2. Dr. Pradeep. T (Convenor)
   Director, Department of Chemistry, IIT, Chennai
3. Dr. Sabu Thomas
   Vice Chancellor, Mahatma Gandhi University, Kottayam
4. Dr Ayesha Kidwai, Professor
   Centre for Linguistics, Jawaharlal Nehru University, New Delhi
5. Prof R. Ramakumar
   Member, State Planning Board
6. Dr. Sabu Abdul Hameed
   Pro-Vice Chancellor, Kannur University
7. Dr. M.V. Narayanan
   Professor, University of Calicut

The Commission is declared as a Class 1 committee.

The Commission will submit its report within a period of three months.

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(By order of the Governor)
Dr. Venu V IAS
Additional Chief Secretary

</div>

To

    Dr. Shyam. B. Menon, Professor. Central Institute of Education, Delhi University

    Dr. Sabu Thomas, Vice Chancellor. Mahatma Gandhi University, Kottayam

    Dr. Pradeep. T. Director. Department of Chemistry, IIT, Chennai

    Dr. Ayesha Kidwai, Professor, Centre for Linguistics. Jawaharlal Nehru University, New Delhi

    Prof. R. Ramakumar, Member, State Planning Board, Kerala

    Dr. Sabu Abdul Hameed, Pro-Vice Chancellor. Kannur University

    Dr. M. V. Narayanan, Professor, Department of English & Director, School of Languages. University of Calicut

    Vice Chairman, Kerala State Planning Board, Thiruvananthapuram

    Vice Chairman, Kerala State Higher Education Council

    Vice Chancellor, Kannur University

    Director, Collegiate Education Department

    The Director of Technical Education

    The Principal Accountant General (A & E /Audit), Kerala. Thiruvananthapuram

    The Registrars, All Universities

    Director, 1&PRD (Web& New Media)

    www.highereducation.kerala.gov.in

    Office Copy/Stock File (B2/178/2021 HEDN)

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Forwarded/By order

Section Officer

</div>

Copy to:

    Private Secretary to Hon'ble Chief Minister

    Private secretary to Hon'ble Minister for Higher Education and Social justice

    PA to Additional Chief Secretary, Higher Education Department

Annexure

Terms of Reference

1) To formulate proposals for the revamping of content and reconstitution of the structure of higher education system to make it suitable for the transformation of Kerala into a knowledge society with a compatible local socio-economic structure.
2) To put forward concrete proposals for the reconstruction of the system of higher education including technical education and a revamping of the content and variety ensuring constant innovation in a manner that will be suitable for the survival needs and the demands of the emerging job market.
3) To propose changes in the institutional structure, content and evaluation strategies of the universities, colleges, and other Higher education institutions to ensure the establishment of centres of excellence that will promote the creation of knowledge and development of skills suitable for an emerging knowledge society.
4) To propose suitable changes in the objectives, structure and size of the Universities and their relationship with their affiliated institutions colleges so as to facilitate the attainment of our larger higher education goals.
5) To formulate guidelines for linking the existing and proposed inter-university centres and other centres of excellence with universities colleges, research laboratories and libraries.
6) To put forward suggestions for a proper blending of traditional teaching-learning processes with more modern and on-line forms so as to facilitate the promotion of the learners" aim of participating in the creation of knowledge.
7) To put forward a proposal for the training of teachers and non-teaching staff so that they can facilitate the learners' search for knowledge and contribute to the strengthening of curriculum transaction.
8) To propose guidelines for enabling higher education institutions to undertake studies/research to help solve the problems faced by the local society, local self-government institutions and other autonomous institutions in the state.
9) To put forward proposals for the establishment of systems that will ensure exchange among research institutes, Higher Education Institutions and institutions of industrial enterprise.
10) To propose concrete measures for enabling the universities and research institutions to create and apply knowledge to increase production by augmenting the production sector.
11) To propose measures for enabling Kerala State Higher Education Council to act as a facilitator and link between the government and the Higher education institutions
12) To propose measures for linking the universities and research institutions to the goal of the formation and democratization of knowledge society.
13) To propose necessary amendments to the acts, statutes, ordinances and regulations to facilitate these changes.
14) To put forward any other proposal for attaining the goals already detailed or any new suggestion that may arise as part of the deliberations of the commission.

DETAILS OF THE MEETINGS OF THE COMMISSION

List of internal meetings of the Commission

The Commission had 22 internal meetings to deliberate on the recommendations. These meetings were held on the following dates.

- 14-09-2021
- 23-09-2021
- 12-10-2021
- 09-12-2021
- 14-12-2021
- 28-12-2021
- 06-01-2022
- 14-01-2022
- 15-01-2022
- 16-01-2022
- 03-02-2022
- 04-02-2022
- 18-04-2022
- 19-04-2022
- 20-04-2022
- 11-07-2022
- 12-07-2022
- 13-07-2022
- 14-07-2022
- 15-07-2022
- 16-07-2022
- 17-07-2022

List of meetings of the Commission with external experts

The Commission had 28 offline meetings and seven online meetings with external experts to deliberate on the recommendations. These meetings were held on the following dates.

Offline meetings	*Online meetings*
22-11-2021	05-11-2021
22-11-2021	19-11-2021
24-11-2021	20-12-2021
02-12-2021	27-12-2021
02-12-2021	01-01-2022
02-12-2021	02-01-2022
02-12-2021	22-01-2022
02-12-2021	
02-12-2021	
02-12-2021	
04-12-2021	
06-12-2021	
14-12-2021	
15-12-2021	
15-12-2021	
15-12-2021	
17-12-2021	
11-01-2022	
11-01-2022	
12-01-2022	
12-01-2022	
12-01-2022	
15-01-2022	
15-01-2022	
16-01-2022	
17-01-2022	
17-01-2022	
22-01-2022	

List of visits to institutions

The Commission members visited 23 higher education institutions across the State and held detailed discussions with teachers, students, and staff on the problems in the sector and to solicit suggestions. These meetings were held on the following dates.

- Visit to Mahatma Gandhi University, Kottayam, 30-11-2021 and 01-12-2021
- Visit to Centre for Development Studies, Thiruvananthapuram, 03-12-2021
- Visit to Kerala University of Digital Sciences, Innovation and Technology, Thiruvananthapuram, 03-12-2021
- Visit to Sree Narayana Open University, Kollam, 03-12-2021
- Visit to Cochin University of Science and Technology (CUSAT), Kochi, 04-12-2021
- Visit to St. Theresa's College, Ernakulam, 04-12-2021
- Visit to the Kerala Kalamandalam, Cheruthuruthi, 04-12-2021
- Visit to Sri Achutha Menon Government College, Thrissur, 04-12-2021
- Visit to Kannur University, Kannur, 13-12-2021
- Visit to Mahatma Gandhi College, Iritty, Kannur, 13-12-2021
- Visit to Concord Arts and Science College, Kannur, 13-12-2021
- Visit to Farook College, Kozhikode, 14-12-2021
- Visit to Calicut University, Kozhikode, 14-12-21
- Visit to Malabar Christian College, Kozhikode, 14-12-21
- Visit to Thunchath Ezhuthachan Malayalam University, Tirur, 15-12-2021
- Visit to Sree Kerala Varma College, Thrissur, 15-12-2021
- Visit to Sree Sankaracharya University of Sanskrit, Kalady, 16-12-2021
- Visit to Maharaja's College, Ernakulam, 17-12-2021
- Visit to Rajagiri College of Management and Applied Science, Kochi, 17-12-2021
- Visit to IHRD College, Adoor, 17-1-2022
- Visit to K. R. Narayanan National Institute of Visual Science and Arts, Thekkumthala, 17-1-2022
- Visit to Indian Institute of Technology Madras, 01-04-2022
- Visit to Government Victoria College, Palakkad, 22-04-2022
- Visit by Minister, Higher Education to Indian Institute of Technology Madras, 30-05-2022

List of experts, policy makers and stakeholders with whom discussions were held

1. Pinarayi Vijayan, Chief Minister, Government of Kerala
2. R. Bindu, Higher Education Minister, Government of Kerala
3. K. N. Balagopal, Finance Minister, Government of Kerala
4. A. Mathew, National Institute of Educational Planning and Administration, New Delhi
5. Abhilash Malayil, Assistant Professor, Sree Sankaracharya University of Sanskrit, Kalady
6. Amita Chatterjee, Professor, Jadavpur University, Kolkata
7. Anil Ramachandran, Director of Research, Kannur University, Kannur
8. Anil Vallathol, Vice Chancellor, Thunchath Ezhuthachan Malayalam University, Tirur
9. Arathy Ashok, Neethi Gender Collective, Palakkad
10. Arathy P.M., Department of Legal Studies, Mahatma Gandhi University, Kottayam
11. Ashok Jhunjhunwala, Professor, Indian Institute of Technology Madras, Chennai
12. Ashuthosh Sharma, Former Secretary, Department of Science and Technology, Government of India
13. Bhaskar Ramamurti, Former Director, Indian Institute of Technology Madras, Chennai
14. Boby George, Professor, Indian Institute of Technology Madras, Chennai
15. C. Balagopal, Entrepreneur, Author, and former civil servant
16. C. J. George, Founding member, Kerala Society of Linguistic Research, Kozhikode
17. C. M. Muraleedharan, Editor, *Eureka*, Kozhikode
18. C. P. John, Former Member, State Planning Board, Thiruvananthapuram
19. C. P. Narayanan, former Member of Parliament, Thiruvananthapuram
20. D. Damodar Prasad, Director, Educational Multimedia Research Centre, Calicut University, Kozhikode
21. D. P. Godwin Samraj, Principal, Malabar Christian College, Kozhikode
22. Dileep Raj, Professor, Government Brennen College, Kannur
23. E. D. Jemmis, Member, KSHEC and founding Director, Indian Institutes of Science Education and Research (IISER), Thiruvananthapuram
24. Edakkuni Abdurahman, General Secretary, Malabar Development Forum, Kozhikode
25. Fr. Clarence Paliath, Manager, St. Joseph's College, Pilathara
26. Franson Manjali, Professor, Jawaharlal Nehru University, New Delhi
27. G. Madhavan Nair, Former Chairperson, Indian Space Research Organisation (ISRO), Thiruvananthapuram
28. Gopinath Ravindran, Vice-Chancellor, Kannur University, Kannur
29. G. Unnikrishnan, Professor, National Institute of Technology (NIT) Calicut, Kozhikode
30. G. Vijayaraghavan, Director, The Center for Autism and other Disabilities Rehabilitation Research and Education (CADRRE), Thiruvananthapuram

31. Gangan Pratap, Former Vice-Chancellor, Cochin University of Science and Technology, Kochi
32. J. Devika, Professor, Centre of Development Studies, Thiruvananthapuram
33. James Mathew, former MLA, Thaliparamba, Kannur
34. Janaki Abraham, Professor, Delhi University, New Delhi
35. Jiju P. Alex, Member, Kerala State Planning Board, Thiruvananthapuram
36. Joby K. Jose, Registrar, Kannur University, Kannur
37. John S Moolakkattu, Professor, Central University of Kerala, Kasaragod
38. Jose Chathukulam, Director, Centre for Rural Management, Kottayam
39. K. P. Mohanan, Secretary, Kerala Sahitya Akademi, Thrissur
40. K. C. Sunny, Vice-Chancellor, National University of Advanced Legal Studies (NUALS), Kochi
41. K. Gangadharan, President, Confederation of University Teachers Organisations of Kerala
42. K. Gopalankutty, former Professor, Malabar Christian College, Kozhikode
43. K. Kasturirangan, former Chairperson, Indian Space Research Organisation (ISRO) and Chairperson, Drafting Committee, National Education Policy (NEP), 2020
44. K. M. Abraham, Principal Secretary to Chief Minister, Government of Kerala
45. K. M. Sheeba, Professor, Sree Sankaracharya University of Sanskrit, Kalady
46. K. N. Harilal. Professor, Centre of Development Studies, Thiruvananthapuram
47. K. N. Madhusoodhanan, Vice-Chancellor, Cochin University of Science and Technology (CUSAT), Kochi
48. K. Satchidanandan, Poet and President, Kerala Sahitya Akademi, Thrissur
49. V. Karthikeyan Nair, Director, Kerala Bhasha Institute, Thiruvananthapuram
50. Kesavan Veluthat, Historian
51. Kris Gopalakrishnan, Co-founder, Infosys, Bengaluru
52. M. A. Baby, former Minister of Education, Government of Kerala
53. M. K. Jayaraj, Vice-Chancellor, University of Calicut, Kozhikode
54. M. P. Parameswaran, Kerala Sastra Sahitya Parishad (KSSP), Thrissur
55. M. R. Baiju, Member, Kerala Public Service Commission, Thiruvananthapuram
56. M. R. Saseendranath, Vice-chancellor, Kerala Veterinary and Animal Sciences University (KVASU), Pookode
57. M. S. Valiathan, Former President, India National Science Academy, Manipal
58. M. S. Unnikrishnan, Former MD-CEO, Thermax Ltd.
59. Margi Madhu, Assistant Professor, Sree Sankaracharya University of Sanskrit, Kalady
60. Mary E. John, Former Director, Centre for Women's Development Studies (CWDS), New Delhi.

61. Meena T. Pillai, Director, Centre for Cultural Studies, University of Kerala, Thiruvananthapuram
62. Meenakshi Gopinath, Former Director, Lady Shri Ram College, New Delhi
63. Michael Tharakan, Chairperson, Kerala Council for Historical Research (KCHR), Thiruvananthapuram
64. Mini Sukumar, Member, Kerala State Planning Board, Thiruvananthapuram
65. Mohan B. Menon, Former Deputy Vice-Chancellor, Wawasan Open University, Penang, Malaysia
66. Mohannan Kunnummal, Vice-Chancellor, Kerala University of Health Sciences, Thrissur
67. Muralee Thummarukkudy, Operations Manager, Crisis Management Branch, United Nations Environment Programme (UNEP), Geneva
68. N. V. Varghese, Vice Chancellor, National Institute of Educational Planning and Administration (NIEPA), New Delhi
69. Narayan Sathyamurthi, Founding Director, Indian Institutes of Science Education and Research (IISER), Mohali
70. Nivedita Menon, Professor, Jawaharlal Nehru University, New Delhi
71. P. J. Vincent, Controller of Examinations, Kannur University, Kannur
72. P. K. Raveendran, Chairperson, Governing Council, Maharaja's College, Ernakulam.
73. P. Mahadevan Pillai, Vice-Chancellor, University of Kerala, Thiruvananthapuram
74. P. Muhammad Shafi, Retired Professor, Calicut University, Kozhikode
75. P. P. Jayakumar, Principal, Government College, Peringome
76. P. Pavithran, Professor, Sree Sankaracharya University of Sanskrit, Kalady
77. P. Sivalingan, Research scholar, University of Kerala
78. P. V. Muhammed Kutty, Malabar Education Movement, Kozhikode
79. Prabhu Rajagopal, Professor, Indian Institute of Technology Madras, Chennai
80. Prasad Edamana, Professor, Indian Institute of Technology Madras, Chennai
81. Pulapre Balakrishnan, Professor, Ashoka University, New Delhi
82. R. Chandrababu, Vice-Chancellor, Kerala Agriculture University, Thrissur
83. Raghavan Ramankutty, Ayurvedic physician
84. Rajan Gurukkal, Vice-Chairperson, Kerala State Higher Education Council, Thiruvananthapuram
85. Rajan Varughese, Member-Secretary, Kerala State Higher Education Council, Thiruvananthapuram
86. Ram Ramaswami, Professor, Indian Institute of Technology Delhi, New Delhi
87. Ramesh Venkateswaran, Chairperson, Board of Governors, Indian Institute of Technology Palakkad
88. Ramgopal Rao, Former Director, Indian Institute of Technology Delhi, New Delhi

89. Rekha Raj, Assistant Professor, Mahatma Gandhi University, Kottayam
90. Reshma Bharadwaj, Assistant Professor, Sree Sankaracharya University of Sanskrit, Kalady
91. Saji Gopinath, Vice-Chancellor, Kerala University of Digital Sciences, Innovation and Technology, Thiruvananthapuram
92. Sarah Joseph, Novelist
93. Sarit Kumar Das, Former Director, Indian Institute of Technology Ropar, Ropar
94. Satish Deshpande, Professor, Delhi University, New Delhi
95. Satyajit Mayor, Director, National Centre for Biological Sciences, Bengaluru.
96. Sebastian Mathews, Ayurvedic physician
97. Shaji Varghese Kudiya, Homeopathic physician
98. Sudhanshu Bhushan, Professor, National Institute of Educational Planning and Administration (NIEPA), New Delhi
99. Sugata Hazra, Professor, Jadavpur University, Kolkata
100. Suja Susan George, Director, Malayalam Mission, Thiruvananthapuram
101. Sukanta Chaudhari, Professor, Jadavpur University, Kolkata
102. Sunil Mani, Director, Centre of Development Studies, Thiruvananthapuram
103. Sunil P. Elayidom, Professor, Sree Sankaracharya University of Sanskrit, Kalady
104. Supriya Chaudhari, Professor, Jadavpur University, Kolkata
105. T. P. Sreenivasan, former Vice-Chairperson, Kerala State Higher Education Council, Thiruvananthapuram
106. T. M. Joseph, Former Principal, Newman College, Thodupuzha
107. T. M. Thomas Isaac, former Finance Minister, Government of Kerala
108. T. P. Kunhikkannan, Former President, Kerala Sastra Sahithya Parishad, Kozhikode
109. T. K. Narayanan, Vice Chancellor, Kerala Kalamandalam, Cheruthuruthi
110. T. V. Madhu, Professor, University of Calicut, Kozhikode
111. The Indus Entrepreneurs (TiE), Kochi
112. Tiju Thomas, Associate Professor, Indian Institute of Technology Madras, Chennai
113. Udaya Kumar, Professor, Jawaharlal Nehru University, New Delhi
114. Usha Nangiar, Faculty member, Sree Sankaracharya University of Sanskrit, Kalady
115. V. Kamakoti, Director, Indian Institute of Technology Madras, Chennai
116. V. K. Ramachandran, Vice-Chairperson, Kerala State Planning Board, Thiruvananthapuram
117. V. Venu IAS, Additional Chief Secretary, Government of Kerala
118. Z. A. Ahmed Ashraf, Malabar Education Movement, Kozhikode

The Commission met several students, teachers, researchers, and the general public during its meetings. Some names may have been missed out. Any possible exclusion is purely inadvertent.

APPENDIX III

A DRAFT OF THE INNOVATION POLICY FOR HIGHER EDUCATION INSTITUTIONS IN KERALA

A copy of the draft is uploaded on the website of the Commission at https://www.kshec.kerala.gov.in/index.php/commissions/reforms-in-higher-education-system/about-us.

APPENDIX IV

A DRAFT OF THE INCUBATION POLICY FOR HIGHER EDUCATION INSTITUTIONS IN KERALA

A copy of the draft is uploaded on the website of the Commission at https://www.kshec.kerala.gov.in/index.php/commissions/reforms-in-higher-education-system/about-us.