GOVERNMENT OF KERALA
KERALA STATE PLANNING BOARD

FOURTEENTH FIVE-YEAR PLAN
(2022-2027)

WORKING GROUP ON
KNOWLEDGE ECONOMY EMPLOYMENT & SKILLS

REPORT

PERSPECTIVE PLANNING DIVISION
March 2022

FOREWORD

Kerala is the only State in India to formulate and implement Five-Year Plans. The Government of Kerala believes that the planning process is important for promoting economic growth and ensuring social justice in the State. A significant feature of the process of formulation of Plans in the State is its participatory and inclusive nature.

In September 2021, the State Planning Board initiated a programme of consultation and discussion for the formulation of the 14th Five-Year Plan. The State Planning Board constituted 44 Working Groups, with more than 1200 members in order to gain expert opinion on a range of socio-economic issues pertinent to this Plan. The members of the Working Groups represented a wide spectrum of society and include scholars, administrators, social and political activists and other experts. Members of the Working Groups contributed their specialised knowledge in different sectors, best practices in the field, issues of concern, and future strategies required in these sectors. The Report of each Working Group reflects the collective views of the members of the Group and the content of each Report will contribute to the formulation of the 14th Five-Year Plan. The Report has been finalised after several rounds of discussions and consultations held between September to December 2021.

This document is the Report of the Working Group on "Knowledge Economy Employment and Skills". The Co-Chairpersons of Working Group were Dr Santosh Mehrotra and Smt. Mini Antony IAS. Dr. K. Raviraman, Member of the State Planning Board co-ordinated the activities of the Working Group. Dr. V. Santhosh, Chief, Perspective Planning Division was the Convenor of the Working Group and Smt. K. B. Sreeletha, Joint Director, Perspective Planning Division was Co-Convenor. The terms of reference of the Working Group and its members are in Appendix 1 of the Report.

Member Secretary

PREFACE

This report brought out by the Working Group on "Knowledge Economy, Employment & Skills" constituted by the State Planning Board as part of formulating the Fourteenth Five Year Plan includes a general narration of the employment and skill development programmes Framework in the State. It also attempts an evaluation of the schemes undertaken during the Thirteenth Plan Period.

We would like to place on record the invaluable inputs made by the members of the Working Group in developing this report and the services rendered by the concerned Member of State Planning Board, Dr. K. Ravi Raman, concerned division Chief Dr. V. Santhosh and Staff of the Perspective Planning Division, State Planning Board in compiling this report, which we are sure would serve as a blueprint for the comprehensive and effective management of employment and skills in the State through the next five years and beyond

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF BOXES

SUMMARY

Kerala has always been famous for its global outlook. Today's diaspora of working Keralites sends back huge remittances, which play a significant part in sustaining Kerala's economy. But tomorrow's global labour market may see shifting needs, trends, and locations, and there is a need to forecast these opportunities and plan for these emerging skills requirements. In view of the global shifting of skill needs and locations, a similar broad shift in focus may currently become necessary. The 14th Five Year Plan period focuses to provide skilling to potential youth in the emerging areas to prepare and meet the recent shifts.

Employment and Skills Development Scenario in Kerala

Skill development is critical for achieving faster, sustainable and inclusive growth and for providing decent employment opportunities to Kerala's young population. Given its high social and human indicators, Kerala can contribute to the requirements of technically trained manpower not only for the country's growing economy but also for rest of the World. Much has been done in the recent few years to upgrade Kerala's skills development regime. There is often a prerequisite for up-skilling and re-skilling skilled persons entering the labour force. Even though the enrolment in technical higher education has grown, there is still a shortage of the requisite skilled persons. One of India's and Kerala's advantages is its 'demographic dividend' with many more young people entering the workforce in India than in most other countries. Kerala's population is aging faster than the rest of India. The 13th Plan Schemes on employment and skills development however provide an initial springboard for the state to move forward in respect of skills development and employment. The Expert Committee on Knowledge Economy, Employment and Skills conducted by State Planning Board feels need to be taken to maximize employment and enhance skills development in the state for in the 14th Plan.

In order to address the educated unemployment, the government give much focus on skilling and up-skilling of youth with a focus on knowledge economy and service sector. By combining science, technology, modern skills, and the skills available to a knowledge economy, the 14th Five-Year Plan will have to enhance modern industry, infrastructure services, and income-generating activities. Kerala's youth will have to be assured of adequate access to the best skills available in the modern knowledge economy as part of the economic policy and will have the vocational education and University system modernized, diversified and enhanced. The Working Group Committee suggested the following recommendations with an idea of generating a combination of skills including cognitive, transversal or transferable, and vocational skills.

Recommendations Emerging from the Working Group

1. The governance of Technical and Vocational Education and Training (TVET) in the state needs to be strengthened.
2. Need of new skills in technology: Worldwide data indicate that there is a decline in demand for medium-skilled workers. This is particularly important because most young people entering the labour force are actually at the middle skill level, so it requires a

rethinking of skill needs. There is a growth in the adoption of robots in manufacturing. This has implications in the long run for new kinds of skills which are more in tune with the new technology.

3. Skilling in Care Sector: The Covid-19 crisis has shown that there will be a need for more jobs in the care sector. Kerala is already aware of this fact and has a number of schemes in place. The ILO estimates that there could be 269 million new jobs in the care economy. We must ensure that these provide decent employment. Issues related to skilling and gender issues in this sector are to be addressed.
4. New opportunities and lifelong learning: In accordance with the changing world of work, outlined by the ILO Global Commission, people need to be equipped with skills for the job opportunities emerging from new sectors, including the (a) digital economy; (b) green economy; (c) care economy; and (d) rural economy. The rural economy will continue to play an important role in job creation. The new skill eco system sees lifelong learning (LLL) as a guiding principle, supporting people.
5. Focus on service sector: The skill eco-system in Kerala has to be focused on the service sector within which about nine modern segments have been generating most of the jobs in the last decade and a half. These include the sale, maintenance, and promotion of vehicles, ecommerce, water transport, air transport, financial intermediation, insurance and pension funds, IT, education, and health.
6. For providing livelihood security to the weaker sections, different types of skill development training programmes including human resource development training and job oriented training programmes needs to be implemented for Scheduled Castes and Scheduled Tribes.
7. For creation of employment opportunities, District Skill Park to be established in all districts and 50% of the total land area of the skill park will be reserved for established firms.
8. Government needs to encourage Arts and Science Colleges, Professional Colleges, Polytechnic colleges, ITIs, to undertake skill courses as part of the extension of skill eco-system in our state and it would be helpful to develop production centres along with educational institutions.
9. In order to address lack of trained people in industries, the state should provide internship training programme for educated candidates in IT and other industrial institutions. The interns will be provided a monthly stipend of an amount up to 5000 as Government contribution and appointing institution should also bear at least the same amount.
10. Skilling in clusters: Formal industry in Kerala could be engaged in skill development in agro-processing, bamboo, coir, cashew, ship building and MSME clusters that are doing well. Support could also be sought from the National Skill Development Corporation to start skilling centres near the clusters.
11. Formal policy framework to encourage R & D of multinationals. Kerala could put in place a formal policy framework that encourages multinationals to locate their research and development centres in Kerala. Such R&D centres will have multiplier effects in

terms of skill generation.

12. Incentivise educational institutions and enterprises to maintain diversity not only in terms of gender, and social and economic status but also in terms of subjects of learning.
13. Kerala must provide students with a strong education in science, technology, engineering and mathematics (STEM), and prepare them to succeed in the global economy and ensure the culture of knowledge creation. The state government must initiate STEM education programmes across selected institutions, with high quality delivery, impact and visibility.
14. Strengthening partnerships among government agencies, research and academic institutions, private companies, and nongovernmental organizations (NGOs) to ramp up the ICT infrastructure and achieve faster penetration of ICTs.
15. There is need to regularly update the academic curriculum with Industry participation to equip students with tools that are relevant in the industry today.
16. Credits must be offered by Universities for technology-based skill modules as provided by the National Education Policy 2020.
17. The revolutionary changes in the industry call for exposure and development of skills by the youth and students in cutting edge areas such as AIML, Big Data Analysis, electric vehicles, AR/VR, genomics, nano technologies. This calls for setting up of labs in these areas to be set up in Community Skill Parks with industry participation.
18. Curriculum teaching methodology and evaluation system in higher education institution need a through revamping in order to enhance the employability of the students. The placement cells need to be structured giving importance to industry, academic and LSG interface. The cells can undertake and promote entrepreneurship programmers drawing support from industry/government.
19. Separate skill development courses need be started in higher educational institute with the support of KASE to ensure gainful employment to dropouts.
20. School level curriculum should focus on developing communication skill (reading, writing, listening and speaking skill).
21. High Touch High Tech (HTHT) Education With the Assistance of Artificial Intelligence (AI): A new learning system combining high technology with classroom teaching (human touch) changed the way of teaching and learning in South Korea, especially after Covid-19, from one of mass standardisation to one of mass personalization and lessons from such experiments should be incorporated into the educational system in the state.

Working Group Committee on Knowledge Economy, Employment and Skills feels that its recommendations can have a very positive effect on the employment and skills scenario in the State when they are implemented. Kerala's higher education resources and global growth opportunities can be utilized to alleviate the supply-side constraint through the effective implementation of the recommended schemes and the add-on suggestions.

CHAPTER 1
EMPLOYMENT AND SKILLS SCENARIO IN KERALA

Kerala has traditionally catered to the global skill needs, with the diaspora of Malayalis across the world and its particular demographic dividend stimulating not only its own economy, but contributing to fuelling the economies of many countries. To further stimulate employment and skills development in the state, the Government of Kerala has recently been taking a series of initiatives to upscale the state's skills development regime and enhance the employability of its young population. The Kerala Academy of Skills Excellence, the district wise Employability Centres etc. are but some examples of such recent proactive initiatives of the Government.

Employment and Skills Development Scenario in Kerala Skill development is critical for achieving faster, sustainable and inclusive growth and for providing decent employment opportunities to Kerala's young population. Given its high social and human indicators, Kerala can contribute to the requirements of technically trained manpower not only for the country's growing economy but also for rest of the World.

Much has been done in the recent few years to upgrade Kerala's skills development regime. But the existing capacity of skills training institutions in Kerala often generates skills that are below international standards. There is often a prerequisite for up-skilling and re-skilling skilled persons entering the labour force. Even though the enrolment in technical higher education has grown, there is still a shortage of the requisite skilled persons.

One of India's and Kerala's advantages is its 'demographic dividend' with many more young people entering the workforce in India than in most other countries. As per the projection by National Commission on Population, GoI, the proportion of population in the working age group of 15-59 years is expected to rise from 60.7 per cent in 2011 to 65.1 per cent in 2036. Out of the total population increase of 30.7 crores between 2011 and 2036, the share of workers in the age group 15-59 years in this total increase is 82.5 per cent, which has implication on availability of labour.

If the demographic dividend is not converted into economic dividends immediately, it is possible that within a generation, the young people of today having aged, India would have not only lost the advantage of a young population, but on the contrary have become a nation where too few young people have to take care of vast numbers of its aged. The same issues trouble Kerala as well, with the added complication that Kerala's population is aging faster than the rest of India.

1.1 Employment Scenario

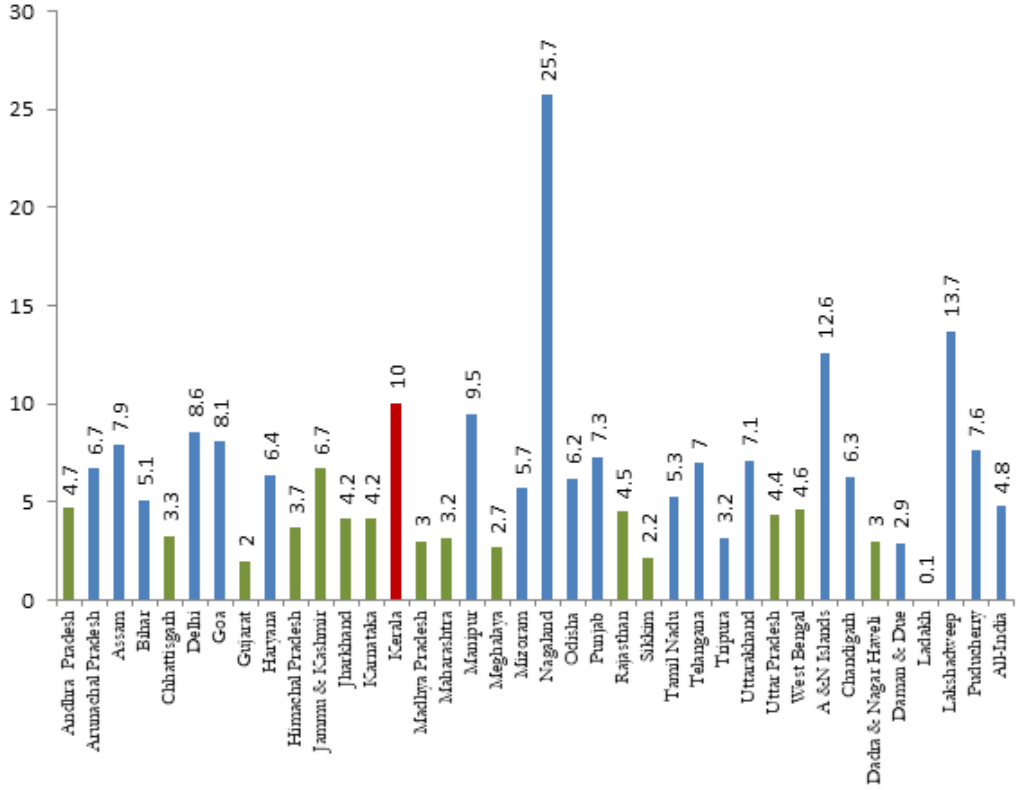
The Government of India released the third Periodic Labour Force Survey (PLFS) 2019-20 Report in July 2021. This Report is based on the survey conducted by NSO from July 2019 to June 2020. The survey was spread over 12,569 First Stage Units (6,913 villages and 5,656 urban blocks) covering 1,00,480 households (55,291 in rural areas and 45,189 in urban areas) and enumerating 4,18,297 persons (2,40,231 in rural areas and 1,78,066 in urban areas). Estimates of the labour force indicators are presented in this Report based on the

usual status (ps+ss) approach and current weekly status approach adopted in the survey for classification of the population by activity statuses.

Unemployment Rate

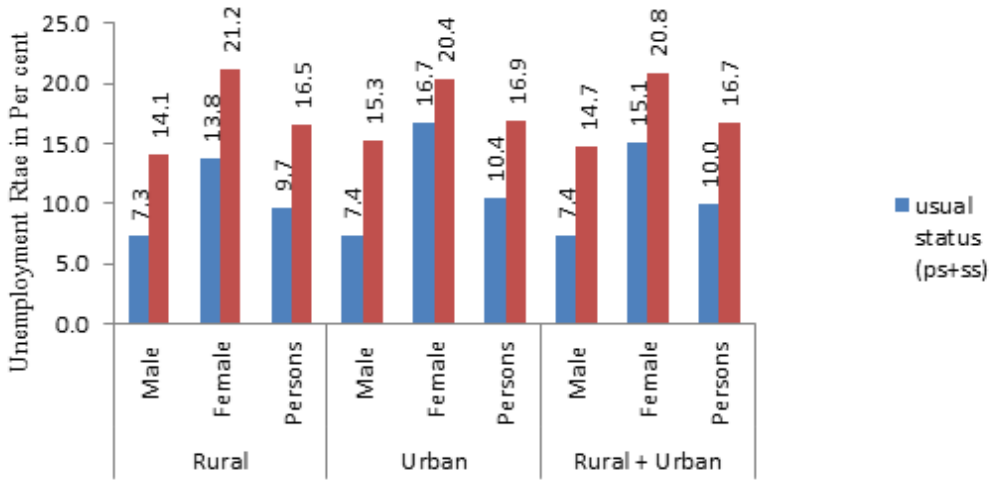
According to the Periodic Labour Force Survey (PLFS), unemployment under usual status (ps+ss) for persons of age 15 years and above, among the major States, Kerala has an unemployment rate of 10.0 per cent as against the all India level of 4.8 per cent (Figure 1).

Figure 1: Unemployment Rate (UR) according to usual status (ps+ss) for persons of age 15 years and above for each State/UT, in per cent



The male and female unemployment rate in Kerala in rural area as measured by Usual Status (PS+SS) and CWS approaches is found to be much higher than the all India average. Female unemployment, particularly in rural areas, is a matter of concern in Kerala. However, the Female Labour Force Participation Rate (LFPR) in Kerala is estimated at 25.8 per cent which is higher than the all India level of 20.6 per cent. As per the PLFS report, the Unemployment Rate (UR) in Kerala is lower in urban areas as compared to rural areas (Figure 2).

Figure 2 Unemployment rate in Kerala, in per cent (Both Usual Status (ps+ss) and CWS)

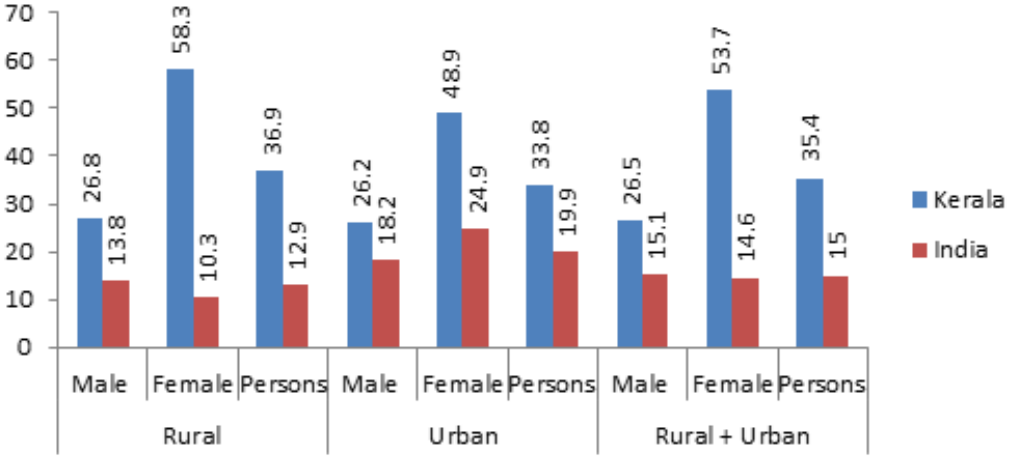


Source: PLFS report, 2019-20, GoI

Unemployment Rates (UR) of the Youth

In Kerala, the youth account for around 23 per cent of the State's population. As per the survey report, the UR among the youth in Kerala is much higher as compared to that of unemployment among all age groups. This reveals the severity of the unemployment problem among the youth in Kerala. The UR among youth is 36.9 per cent in rural areas and 33.8 per cent in urban areas. Similarly, the UR among female youth is much higher than that of the male youth. 58.3 per cent of the female in rural area are unemployed as against unemployment among males (26.8 per cent) (Figure 3).

Figure 3 Unemployment rate (in per cent) among the youth (15 to 29 years) in Kerala and India as per usual status (ps+ss)



Source: PLFS report, 2019-20, GoI

Employment in the Organised Sector

In Kerala, employment in the organised sector has remained more or less stagnant, showing

only a marginal increase from 10.9 lakh in 2012 to 12.5 lakh in 2021 (March 31, 2021).

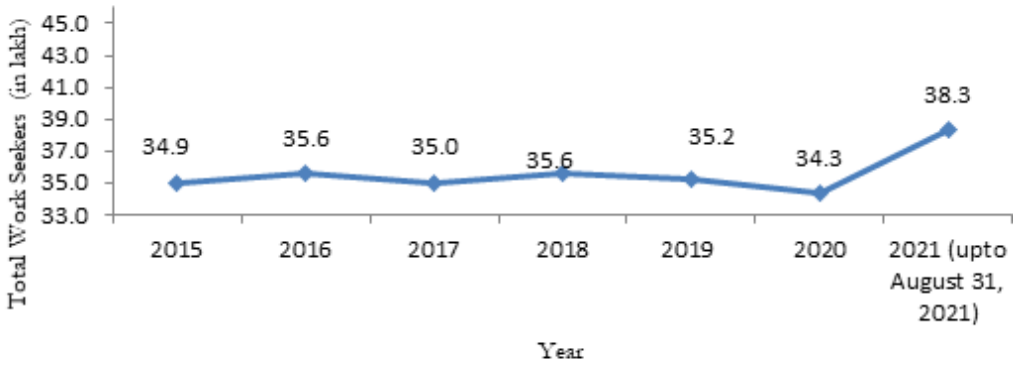
Employment in Unorganised Sector

Unorganised sector plays a crucial role in the Indian economy in terms of employment and its contribution to the Gross Domestic Product, savings and capital formation. More than 90 per cent of workforce and nearly 50 per cent of the Gross Domestic Product is attributable to this sector. A high proportion of socially and economically weaker sections of society are engaged in the unorganised economic activities in India and Kerala.

Registered Job Seekers

According to live register of employment exchanges in Kerala, the total number of job seekers as on December 31, 2015 was 34.9 lakh and it increased to 38.3 lakh as on August 31, 2021. Details of job seekers for various years are given in Figure 4.

Figure 4 Work seekers in Kerala (persons in lakh)



1.2 Overview of Schemes and Institutional Frame work during 13th Plan

Skills and knowledge are the driving forces of economic growth and social development in a country. India currently faces a severe shortage of well-trained, skilled workers. Realising the importance, more than 20 Ministries/Departments run 70 plus schemes for skill development in the country. The National Skill Development Mission launched by the Ministry of Skill Development and Entrepreneurship on July 15, 2015, aims to create convergence across sectors and States in terms of skill training activities. Besides consolidating and coordinating skilling efforts, it also aims to expedite decision making across sectors to achieve skilling at scale with speed and standards.

The schemes on skill development and employment are spread across various sectors and implemented by various departments. Most of these schemes are multi-purpose in nature that covers wage employment, self-employment, training and skill development activities also. List all Plan Schemes (Plan, Centrally Sponsored Schemes and Central Sector Schemes) related to Employment and skill development for Various Departments during 13th Plan is given in Annexure 1 and the existing institutional set up is given Annexure II. We have observed that most of the schemes are yet to be evaluated. Evaluation of the

schemes implemented for the last five years should be one of the priorities for the 14th Five Year Plan. For instance ASAP was a ADB funded programme for the last few years but not yet evaluated.

For Scheduled Caste and Scheduled Tribe, from 2016-17 to 2020-21 (up to September 30, 2020) there were 53 skill training courses conducted under this programme, 5355 candidates attended the training programme of which 2646 trainees got placement in India at various institutions and 22 people got placed abroad.

These programmes were conducted for SCST. Govt. of Kerala has given prime importance to job creation and additional skill acquisition, and started Kerala Academy for Skills Excellence (KASE), as a nodal agency for facilitating development of core employability skills. Moreover, State Govt. has initiated Additional Skill Acquisition Programme for skilling the youth. Unique skilling models have been adopted by KASE with industry tie-ups and placement linkages. In SCST department there is a separate scheme for skill training and employment and conduct placement linked skill training programmes through various Govt. and Govt. /private agencies having affiliation/accreditation /tie-up with KASE /ASAP/ or within National Skills Qualification Framework (NSQF)

Skill training programmes were conducted in Graphic and web designing, IT enabled service & BPO, Networking professional, python programming course, Certificate course in tally, Certificate course in software testing , Python programme & Web development digital marketing, Visual effect & Animation, Logistic & supply chain management, Training programme in Digital print & web designing Hotel management (internal) front office & housekeeping, PG diploma in advanced construction in management & PG diploma in retail management, Advanced certification in plumbing, Machine operator plastic processing, Placement linked training in industrial machine operator, Placement linked training in Arc welding, Training in Airline customer service, Fabric & Textile Designing, Pipe fabricator, HVAC Technician, etc. Trained persons were employed in the wage employment in private sector in India and abroad.

What is missing is a proper tracer study explaining where the trainees were trained and in what field they were trained. Further in what way the government sought the collaboration of training and placement activities with the private enterprises and employers. It appears that the government has not taken serious steps building public private participation in either in training projects or in placing those already trained without private participation.

In Apprenticeship Training Schemes (ATS) there were 2807 seats out of 7963 seats available, it implies 35% of seats located were utilized . By all practical reasons this is a very low level of utilization of seats. The Committee observed that one of the critical objectives should be the maximum utilization of seats allocated for training. In order to do this, we should know why the utilization has been low over the years. 14th plan worked to how best more apprenticeship programmes utilized by SMES. If this have constituted, they should be incentivized with the help of GoI.

It is to be noted quality of training is finally measured only by employability, and actual

employment obtained. We do not find much detail about employment record of trainees. ISO certification is only a process indicator, not an output or outcome indicator. In the 14th Five year plan the department concerned should follow up the employment record of trainers programme both in terms of quality and quantity. It also implies that PMKSY is continuously evaluated in the state. So that the weakness of the scheme is operationalizing the scheme in the state should be identified and rectified. It is important to note that Sharda Prasad Expert Committee Report 2016 has large number of recommendations which could be proactively approach by government of Kerala.

This is an important policy decision and it is to be corrected in the 14th plan. It is clear that this placement rate is very low. If there is the placement is low, it shows that the outreach of the scheme is low or implementation is poor.

It appears that no concrete steps has been taken to follow up the skill gap identified the state and to overcome the same through innovative schemes with the help of private enterprises.

1.3 Changing Scenario of Employment and Skills and Future Trends

Broadly it is understood that there are 3 categories of skill viz. cognitive, transversal or transferable, and vocational. This is particularly true with respect to Kerala and the unemployment has been excavated during Covid-19 crisis.

The COVID-19 pandemic has seriously disrupted the skilling, up skilling and reskilling of employees, apprentices and interns in all types of enterprises and organizations globally and particularly in Kerala during 2020. Millions of people were lost jobs, and others rapidly adjusted to working from home as offices closed. Many other workers were deemed essential and continued to work in hospitals and grocery stores, on garbage trucks and in warehouses, yet under new protocols to reduce the spread of the novel coronavirus.

Even before the COVID-19 pandemic, skills development and lifelong learning systems were facing increasing challenges in meeting the fast-changing demand of labour markets. Global megatrends, including new technologies, globalization, demographic shifts, climate change, and migration, are causing the loss of some jobs while also creating new opportunities. By intensifying the on-going challenges in the world of education and the world of work, the COVID-19 pandemic has placed an urgent demand on individuals to acquire new skills, reskill, and up skill to adapt to the new normal.

As the COVID-19 pandemic accelerated changes in the demand for skills and raised the possibility of structural shifts in labour markets around the world, there is an urgent need for quality training to support a robust economic recovery.

The COVID-19 pandemic has forced a whopping 8.7 lakh expatriates from Kerala to return home, most of them from the Gulf, since last May with a majority of 5.67 lakh citing job loss as the reason for it, according to official data. The state government has made significant efforts to use the skills of the

returning workers, and as an effort to provide employment participation in the gig economy

has grown rapidly over the past few years, and expanded exponentially since the onset of the coronavirus pandemic, due in part to the increased reliance on gig workers to home-deliver necessities to consumers. Furthermore, the crisis has upended the traditional 9-5 working world and caused many blue and white collar employees to pursue gig work for additional or even primary income during these unprecedented times. Now is the time for businesses to re-evaluate the role gig workers play in their organization and create a plan to retain them in the future.

In order to enhance the agility and resilience of societies to deal with the challenges posed by the pandemic and crises in the future, governments have a crucial responsibility in ensuring the continuation of training and development at workplaces, as well as improving the effectiveness of skills development and lifelong learning systems.

An effective skills development system depends on close coordination between governments, social partners, the private sector, and education or training providers. In particular, engaging employers in the roll-out of new training programmes and updating the curriculum and delivery of existing programmes is crucial to enhance the responsiveness of labour market needs. In this situation, our government agencies needs to focuses on developing modern-day professional skills such as digital skills and leadership skills in order to foster the construction of a more sustainable future.

CHAPTER 2
KNOWLEDGE ECONOMY

The knowledge economy is an economic system in which the production of goods and services is based principally on knowledge-intensive activities that contribute to advancement in technical and scientific innovation. In a knowledge economy where members acquire, create, disseminate and apply knowledge for facilitating economic and social development.

A knowledge economy emphasizes the importance of skills in a service economy, the third phase of economic development, also called a post-industrial economy. It is related to an information economy, which emphasizes the importance of information as non-physical capital, and a digital economy.

The World Bank has spoken of knowledge economies by associating it to a four - pillar framework that analyses the rationales of a human capital based economies:

- An educated and skilled labour force: The establishment of a strong knowledge-based economy required workers to have the ability to continuously learn and apply their skills to build and practice knowledge efficiently.
- A dense and modern information infrastructure: is of the easy access to the information and communication technology (ICT) resources in order to overcome the barrier of high transaction cost, and to facilitate the effectiveness in interacting, disseminating and processing the information and knowledge resources.
- An effective innovation system: a great level of innovation within firms, industries, and countries to keep up with the latest global technology and human intelligence so as to utilize it for the domestic economy
- Institutional regime that supports incentives for entrepreneurship and the use of knowledge: An economy system should offer incentives to allow for better efficiency in mobilizing and allocating resources, together with encouraging entrepreneurship.

It is important that Kerala government should take initiative in inviting national and international firms to set up R&D centres in Kerala. Given the fact that Kerala human resources are well educated, it would be easier and profitable for the international firms to set up R&D centres in Kerala. Kerala government take it as policy choices by offering basic infrastructure facilities to succeed.

There are a total of 36 research and development institutions in Kerala. Of these, 21 are Central government owned and 9 are State owned. Major sectors of research of these institutions are Infrastructure development, Agriculture, Development Institution, Education, Fisheries, Horticulture, Information Technology, Interdisciplinary, Medical, Plantation Crops, Public Policy, Science and Small Scale Industry.

Education, innovation and entrepreneurship are among the factors that foster competitiveness. By responding to the needs of labour markets, educational systems help economies avoid skills gaps and ensure that adequately trained human capital is available. Kerala's education sector, a key base of the knowledge economy, has to be transformed to

raise the skill levels of those who pass through it and enter the labour force, as well as of those who enter institutions of higher learning. In short, it needs to become a knowledge-creator of excellence.

The diaspora too can play an active role in the growth of the knowledge economy by making use of its global exposure to ideas, markets and institutions. This exposure can be then brought home to Kerala in various ways. Transitioning to a knowledge economy, thus, calls for an inclusive strategy that brings together education, science and technology, higher learning, entrepreneurship, land and labour rigidities and the diaspora.

The government has taken special measures for diaspora driven investments in SMES cooperative production sectors. The potential schemes identify health, tourism, education. NORKA has also established business facilitations category for offering competitive support services and since 2020, it has facilitated setting up of more than 30 enterprises attracting an investment of Rs. 110 crores and provides employment to more than 750 persons.

A knowledge-driven economy is not about a large number of high technology industries. Rather, it points to the emergence of knowledge as a new source of competitive advantage that applies to all sectors, all companies and all regions, from agriculture and retailing to software and biotechnology. Knowledge is the most strategic resource in a knowledge economy. A critical element of the success of a knowledge economy is an effective innovation system of firms, research centres, universities, consultants and other organisations that can keep up with the knowledge revolution, tap into the growing stock of global knowledge and assimilate and adapt it to local needs. It will, therefore, be vital for the Kerala government to strengthen its R&D strategies and initiatives to ensure that the State is scientifically, technologically and economically equipped to meet the challenges in the process of transition.

A Digital Platform for the Knowledge Mission

A comprehensive platform that takes care of the supply and demand side with capabilities for registration of candidates seeking jobs, curation of registered candidates to meet the demand as well as job publisher registration. Based on the Demand and Supply availability, Job seekers are prepared for meeting the demand and matched for taking up suitable work, candidates are routed to the agencies for skills upgrades. The technology and processes relating to the modules will be leveraged using existing platform players. Facilitation agencies are used at various levels.

Higher Educational Institution for Skills Development

In Kerala no significant sectors are undertaken in connecting collaborative research. In Tamilnadu, an industry university collaborative research was undertaken. However, such experiments are not taken in Kerala. Kerala government needs to bring out blue prints for s creative relations between industry and higher education institutions.

In the past Organisations were involved in Skilling the talent themselves and therefore the talent hunt was focussed more on knowledge levels of candidates, along with some of the innate soft skill aspects of the candidates. With changing times, and more important the

pace of change affecting industry, Organisations would prefer candidates with knowledge and skills and would like ready deployment of talent. While the higher education segment across the country has a strong focus on knowledge, the focus on skills has been relatively low. The gap was predominantly closed by Skills and Training Service Providers. For the KKEM initiative, the canvas is so huge and diverse, that the TSPs in the market cannot cater to the huge needs. It is therefore proposed that an integrated model where by a layer of Skills development needs to be added in the existing Educational Institutions. At present the BVoc. (Bachelor of Vocation) is not much established in Kerala and only few colleges started 22 different courses. There are 51 Polytechnics in Kerala with a total seat of 12066. Moreover MHRD supported certificate courses are also been established.

Integration with General Education System

Efforts are already being taken by State Government to introduce Skill Programmes as part of School Curriculum. It would be appropriate to include 21st Century skill sets including life skills in the curriculum. At the higher secondary level, one of the subjects can be replaced with an appropriate skill (presently there are four subjects) as done by CBSE. Such integration would ensure not only complete alignment with national educational framework but also would help our student population to get exposure in one of the domain sectors. A skill school is envisaged in all LSGs as part of KKEM. All schools in the LSG would be mapped with the Skill School. This would function on a Hub and Spoke Model. The skill School will have facilities for aptitude testing, Talent labs, Vocational Immersion programme, Simulation Programmes etc. Skill Schools would provide dedicated career counselling services to the students in the region and arrange industry interactions and industry exposure programmes. Teachers of Vocational Education System may be positioned at Skill Schools after providing required training.

Plan for Knowledge Transformation

The intervention plan for knowledge transformation and for creating local demand is an activity which requires inputs from the academia, research institutions, local governments, departments, industry, MSME, start-ups and individuals. A coordinated Programme Management for this requires extensive stakeholder consultations, visioning, creating action plans, implementing, and monitoring. The Digital University and K-DISC have initiated various interventions in this on the technology infrastructure side.

1. Creation of the Kerala Block chain Academy.
2. Launching of the Accelerated Block chain Competency Development Programme.
3. Creating a Laura WAN-based IoT system for Crop Monitoring, Meteorological Studies and Agricultural Insurance Payments.
4. Kerala Food Platform for Safe to Eat Food with traceability implemented in Palliyakkal Cooperative Bank with Proof of Concepts (PoCs) for traceability, Participatory Guarantee System, e-commerce and Green Army systems.
5. Carbon Neutral Wayanad for promoting sustainable cultivation of coffee.
6. Miyawaki Model (forests which could be cultivated even in a small area) for promoting urban forestry models.

7. Partnership with the Netherlands Government and TU Delft (The Delft University of Technology) for studies on carbon emission and measurements leading to carbon finance.
8. Specific proposals from Kerala Agriculture University (KAU), Kerala Veterinary University (KVASU) and Kerala Fisheries University (KUFOS) to undertake Proof of Concepts (PoCs) and pilots pertaining, but not limited, to cutting edge areas like: Precision Agriculture, Drone-based Agriculture, Smart Livestock Farming, Precision Feeding, Animal Health Monitoring, Precision Aquaculture.

Knowledge Society Model

Knowledge is more than science and information. It is about appropriate know-how available dynamically to all. The dynamic nature of knowledge and the need for rapid transition makes the notion of achieving the status of a knowledge society a moving target. It is achieved when appropriate know-how and innovation is dynamically democratised through an ecosystem that allows for the development, co-creation, discussion on appropriateness, transmission and adoption.

The development of Kerala's knowledge society is also set in an extremely vulnerable ecological context. Thus, what starts as a triple helix knowledge society model of engagement of Enterprise, Academia and Government, becomes a quadruple innovation helix framework with the inclusion of the public represented by the civil society in the form of the LSG and, a quintuple helix model with the integration of aspects of a sustainable environment.

The knowledge transformation in the Kerala society can be achieved through knowledge-based co-creation which brings together a dynamic partnership of innovative transformation. The partners of knowledge-based co-creation will be enterprise, academia, government and a civil society represented in the LSG which will benefit through employment and wealth creation in an ecologically sustainable manner. Specifically, the programme looks forward to the Digital University, Kerala Technological University, and Cochin University of Science and Technology as academic partners. Other partners specifically for Agri-tech could be Kerala Agriculture University, Kerala Veterinary and Animal Science University, and Kerala University of Fisheries and Ocean Science. For industry partners, there would be a focus on Start-up Mission and industry bodies which will have a link to governance bodies such as the Department of Industries.

It is important to have clearly defined blue print from each of the Higher education institutes explaining how they are going to develop industry education linkages with respect by the sectors concerned. It is also important that they work out in detail who would benefit such linkages and how their models are creative and imaginative in addressing the challenges of knowledge economy in Kerala.

Competitiveness for the Knowledge Economy

The workforce is "upskilling", both in terms of the average educational level of workers and the types of job that they are performing. White-collar, high-skilled jobs are driving employment growth. This is not just a question of the growth in knowledge "sectors". Work is becoming more skilled across industries and within individual occupations.

A group of "knowledge workers" can be identified as those performing knowledge-rich jobs. Such workers are typically but not universally well educated. Some knowledge workers have high levels of literacy and lower levels of education, implying that basic skills obtained beyond education are recognised in the knowledge economy. There are additional "workplace competencies" needed in the knowledge economy. Communication skills, problem-solving skills, the ability to work in teams and ICT skills, among others, are becoming important and complementary to basic core or foundation skills. Even more than other workers, knowledge workers rely on workplace competencies.

Workplace competencies

In order to improve the workplace competence, the employees have to acquire various combinations of skills such as cognitive, transversal or transferable, and vocational. A literature review reveals that the different types of workplace competencies that are most agreed upon by different analysts, surveys and country reports are:

Inter-personal skills:

- Team work and the ability to collaborate in pursuit of a common objective.
- Leadership capabilities.

Intra-personal skills:

- Motivation and attitude.
- The ability to learn.
- Problem-solving skills.
- Effective communication with colleagues and clients.
- Analytical skills.

Technological or ICT skills.

Gig Economy

Gig-based employment can create significant incremental economic value and increase livelihood opportunities for low-income workers. The gig economy benefits employers, employees, as well as the economy at large with gains extending beyond the traditional notions of convenience and on-demand availability and flexibility. Gig work is commonly understood as temporary on-demand labour employed in a task-based or a time-based manner. The underlying economic fundamentals that platform-enabled gig work addresses at scale and the collateral benefits it can expand into include:

1. Enhancing the efficiency of large-scale discovery and fulfilment for labour and services
2. Aligning the economic incentives across employers and workers, thereby increasing earnings for workers while reducing 'fixed' costs for employers
3. Catalysing economic recovery by providing labour on-demand even if employers remain tentative about hiring workers full-time
4. Expanding labour participation especially for women and students who may only be available for part time work to supplement household income
5. Accruing collateral benefits associated with 'formalizing' labour markets including financial inclusion and social protection

6. Driving overall improvement in productivity by reducing idle and unproductive time.

The following are the four distinct, critical, and inter-related components to the gig ecosystem.

1. Platforms: Providing gig services to end-users and addressing industry and worker-specific prerequisites, and innovations in offerings, pricing, and delivery models.
2. Ecosystem Enablers: Providing supporting and commonly used services across platforms, including background verifications, financial services, training and skill development.
3. Digital Public Goods: Providing a set of common, secured, and consent-based digital goods serving as 'community-owned' systems-of-records and interoperability frameworks to enable portability and transparency of demand and supply-side information.
4. Public Policy and Regulations: Governing the rules of the road for the gig economy, covering worker protection, social benefits, and standard of care.

CHAPTER 3
KERALA SKILL ECOSYSTEM

Skill ecosystems are defined as regional or sectoral social formations in which human capability is developed and deployed for productive purposes. The skill development ecosystem in Kerala is complex, large and diverse, providing varied levels of skills across an extremely heterogeneous population. The five pillars of Skill ecosystem are

1. Vocational Education
2. Apprentice ship
3. Recognition of Prior Learning (RPL)
4. Training
5. Institutional –Industry Linkages

While much of the skills reform agenda has focused on the supply of skills, reforming qualification systems, introducing competency based curriculum, strengthening training institutions and training markets, less attention is often paid to the demand for skills and its role in supporting employment and economic growth. So what Kerala needs, as do the remaining States of India, is to create a mechanism where all the pillars of the skill ecosystem systematically linked with the industry/employers, who in the non-farm sectors, are the actual users of the product of the pillars of the skills ecosystem. While making strategies for skill ecosystem in the state, the following points needs to be addressed:

- How skills are used in the workplace and how businesses engage with the local skills ecosystem are important factors that shape the real demand for skills.
- Linking skills policy and programmes with other efforts to support innovation and growth in regions and enterprises is necessary to make sure that skills contribute to and drive workplace innovation.
- Technical support to industry associations to form partnerships with local training and government organizations to address local skill needs.
- Syllabus of Curriculum /education course design to be linked with industrial needs and the employer must be involved in this process.
- Work-based learning, apprenticeships and recognition of prior learning at all levels of development are required to put work-based learning, particularly apprenticeships high on the policy agenda. Ensuring work based learning as part of the course curriculum of vocational education and training, in each pillar of the skills ecosystem has the s potential to reduce skills mismatch, meeting skills demand of a fast changing labour market, providing cost-effective training, promoting private sector development and smoothing transitions to the world of work.
- Work-based learning refers to all forms of learning that takes place in a real work environment.
- Apprenticeships (formal and informal), internships/traineeships and on-the-job training are the most common types of work-based learning. These should be provided for in the 14th Five Year Plan period in Kerala, which will become an exemplar to all

the other states of India.

- Combine elements of learning in the workplace with classroom-based learning.
- It demands close collaboration between social partners, enterprises, public authorities and TVET institutions.
- The Recognition of Prior Learning (RPL) process can help those individuals, who do not have qualifications, to acquire a qualification that matches their knowledge and skills, and thereby contribute to improving their employability, mobility, lifelong learning, social inclusion and self-esteem. Provision will need to be made to incorporate RPL for workers in the informal sector as well as the organized sector, so that workers without any certification are assessed and certification. But RPL should beyond mere certification to include upgrading of cognitive knowledge, transferable skills (e.g. communication, computer skills, English language knowledge) as well as vocational/ technical skills.

1. Skills with jobs in Vocational Education

The Industrial Training Department aims to contribute skilled labor to the industrial sector in India as required, to increase the quantity and quality of industrial products with the help of skilled labor. The Department also helps to address the unemployment of educated youth through training in job-oriented sectors and to develop the work ethic of the youth for finding self-employment. In our economy, especially the manufacturing, industrial and employment sectors, is on the path of comprehensive development. The development of technology has drastically increased the need for skilled labor. Survey reports indicate that we can only supply 2.5 million skilled workers through existing training institutes where the demand for skilled labor is 12.8 million per annum. This means that an additional 10 million skilled workers need to be recruited through job training centers every year.

At present there are 104 government ITIs under the Department of Industrial Training for the year 2020-21 with a seat strength of 23874 and the enrolment for the period is 22839. Out of the total enrolment in 2020- 21, 5291 are women candidates, 3612 are SC students and 474 are ST students. In addition, there are 246 private ITIs with a seat strength of 23627. In 2021-22, there are 389 Vocational Higher Secondary Schools (VHSS) in the State with a total of 1,101 batches. Out of these 261 are in the government sector and 128 in the aided sector.

There are 175 engineering colleges in the State with a sanctioned intake of 47,025 in 2020-21. Out of these engineering colleges, 163 (93.1 per cent) are self-financing colleges (unaided), 9 (5.1 per cent) are government colleges and 3 (1.7 per cent) are government aided colleges. There are 45 government polytechnics and 6 government aided polytechnics in Kerala in 2020-21. The annual intake of students in government polytechnics and government aided polytechnics in 2020-21 are 11,727 and 1,553 respectively. The total number of students in government polytechnics in 2020-21 is 31,285 and that in government aided polytechnics is 4,458.

There are jobs in the market where there are no skilled people and there are skilled people with no jobs. We need to have a balanced approach where skill development fulfils the

skill gaps across the country. Currently the mismatch is alarming with a growing demand for skilled resources required by the industry, especially in the manufacturing sector. The truth is that the demand for jobs and salary levels are falling and there is an over-supply in this sector. This is in sharp contrast to the huge shortage in manufacturing sector where employers are not getting skilled people Till now, we have overemphasized the need for education and a degree as the means to getting a job and build a career. Sadly, this has led to many graduates and post-graduates becoming unemployable or underemployed. As an alternate, skill development leading to an outcome – wage or self-employment – needs to be recognized, respected and pursued for not only graduates, but school dropouts too. The parental mind-set is still on graduation and the obsession of getting a degree by hook-or-crook has many a time stressed out upcoming youth leading to frustration and confusion without proper employment.

2. Apprenticeship Training Scheme (ATS)

The Apprenticeship Training Scheme is being conducted as per the provisions mentioned in the Apprentices Act 1961. This Apprentices Act, 1961 was enacted with the objectives to regulate the programme of training of apprentices in the industry so as to confirm to a standard syllabi, period of training, skill sets etc. and to utilize the facilities available in industry for imparting practical training with a view to meet the requirements of skilled manpower for the industry. Apprenticeship is a contract between an apprentice and an employer to provide a stipend fixed as per the Apprentices Act 1961. The Central/State Government acts as the third party in contract regulating and monitoring the process.

Recently, Government of India introduced the National Apprentice Promotion Scheme (NAPS) through which the Central Government will reimburse 25 per cent of stipend to the establishments.

Apprenticeship training in Kerala is both a Central and State Initiative. National Apprenticeship Certificate (NAC) is issued to those who complete the apprenticeship training in an organization and passes the National Apprenticeship Trade Test. Apprenticeship schemes in the state are implemented through office of the State Apprenticeship Advisor, and Assistant Apprenticeship Advisor in 14 districts. There are 81 trades in which seats have been located for Apprenticeship Training.

In 2020-21, as per the scheme, the total numbers of seats located were 12612 and the number of seats utilised were 4282. The total numbers of establishments located were 2443 (Government: 869, Private: 1574) and the number of establishment utilised were 746 (Government: 251, Private: 495). These figures shows a mismatch by utilizing the available seats and Department of Labour needs to conduct a study with the employers, SMEs. Based on the study, the department's goal should be double the number of apprentices in Kerala during the 14th Plan period.

Kerala State Apprenticeship promotion Scheme

- NAPS is a scheme launched by the Central Government on 19th August 2016 to promote apprentice training.

[1]*Industrial Training Department, Government of Kerala, 2022*

- The Industrial Training Department has recommended to launch a similar Kerala State Apprenticeship Promotion Scheme to attract small scale industries (MSMEs) in the State to the Apprenticeship Scheme
- The Budget has sanctioned Rs. 50 lakh for this scheme. Under this scheme, it is proposed to re-imburse the employer Rs.1000 / - per trainee.
- Monitoring of the Implementation of Apprentices Act 1961
- Directorate General of Training under Ministry of Skill Development and Entrepreneurship monitors the implementation of the Apprentices Act in respect of Trade Apprentices in the Central Government Undertakings & Departments and establishments operating business 4 or more states through six Regional Directorates of Apprenticeship Training (RDAT) located at Chennai, Faridabad, Hyderabad, Kanpur, Kolkata, & Mumbai.
- State Apprenticeship Advisers are responsible for implementation of the Act in respect of Trade Apprentices in State Government Undertakings/ Departments and Private Establishments.
- Department of Education in the Ministry of Human Resource Development is responsible for monitoring the implementation of the Act in respect of Graduate, Technician & Technician (Vocational) Apprentices. This monitoring is done through four Boards of Apprenticeship Training located at Chennai, Kanpur, Kolkata and Mumbai.

Apprenticeship Training is conducting at par with Apprentices Act 1961. Department of industrial training have Assistant Apprenticeship Advisors (AAAs) in each districts and they are continuously interact with all types of industries in the respective districts and mobilise maximum numbers of apprentices for training. Moreover the department is conducting Apprentice Mela in all districts at par with DGT's instruction in time by time. This event would help the department to enhance more numbers of apprentices in every year. As per act, all establishments having work force (regular and contract employees) of 30 or more are mandated to undertake Apprenticeship Programs in a range from 2.5% -15% of its workforce (including direct contractual employees) every year. However for establishments having a workforce between 4 - 29 this is optional. Establishments have a workforce of 3 or less is not permitted to engage apprentices. In compliance with this, the department recently introduced a novel scheme "Kerala Apprenticeship Promotion Scheme(KAPS) through which we had envisaged to leverage more apprentices by encouraging MSMEs or firms have employees in between 3 and 29 wherein engagement of apprentices are said as optional in the act.

The department could able to increase the number of apprentices during the year 2017 to 2022.There are hardly of 2097 apprentices were in 2017-18 are now increased up to 4940 in 2021 – 22. Session wise apprenticeship completion numbers in the state under

designated trades are shown in the Table 1

Table 1. Apprenticeship Completion from 2017-18 to 2021-22

Period	Number of apprentices
2017-18	2097
2018-19	2607
2019-20	3103
2020-21	1787 ((Due to Covid 19 Restrictions)
2021-22	4940

Categories of apprentices

There are five categories of apprentices:

1. Trade apprentices
2. Graduate apprentices
3. Technician apprentices
4. Technician (Vocational) apprentices
5. Optional trade apprentices

Coverage

- It is obligatory on the part of employers having manpower strength 40 or more and having requisite training infrastructure as laid down in the Act, to engage apprentices.
- Employer shall engage of apprentices in a band of 2.5% to 10% of total manpower strength of the establishments including contractual staff.
- The total engagements of apprentices in the band with of 2.5% to 10% include all categories of apprentices engaged by establishment.
- The establishments /Employers can decide the categories of apprentices and trade(s) in which the apprentices to be engaged depending upon the facility available with them for imparting on-the- job training/ practical training at his workplace.

Stipend

- The minimum rate of stipend per month payable to trade apprentices is shown in Box No 1:

Box No.1 Minimum Rate of Stipend Payable to Trade Apprentices

Stipend (Year wise)	
Year	Minimum Rate of Stipend
First Year	70% of minimum wage of semi-skilled workers notified by the respective State or Union territory.
Second Year	80% of minimum wage of semi-skilled workers notified by the respective State or Union territory.
Third & Fourth Year	90% of minimum wage of semi-skilled workers notified by the respective State or Union territory.

- The expenditure on stipend for trade apprentices is borne by the employers.
- The rates of stipend for Graduate, Technician & Technician (Vocational) apprentices are Rs. 4984 p.m., Rs. 3542 p.m. and Rs. 2758 p.m. respectively. (with effect from 19th December, 2014)
- Expenditure on Stipend for the categories of Graduate, Technician & Technician (Vocational) apprentices is shared equally between the employer and the Central Government.

4. Training of Trade Apprentices

- Minimum age is 14 years.
- Qualifications vary from Class VIII pass to XII class pass (10+2) system.
- Period of training varies from 6 months to 4 years.
- Training comprises Basic Training and Practical Training followed by Related Instructions as per prescribed syllabus for each trade.
- 259 trades in 39 trade groups have been designated (Department of Industrial Training had completed discussion with the State Industries Department, Institute Management Committees of ITI s, SCVT Members, other stakeholders' periodically through State Steering Committee meetings (SSC) and selected the trades under different sectors which is most suitable for Kerala's skill context. Currently the department has selected 87 trades for training in ITIs in 19 sectors).
- Numbers of seats for apprentices are calculated in the band of 2.5% to 10% of the total strength of the workers.
- Every apprentice and employer has to enter into a contract of apprenticeship training, which is registered by the Apprenticeship Advisers.
- Employers and apprentices have to fulfil their obligations under the Act.

Testing and Certification of Trade Apprentices

- All India Trade Tests (AITT) for trade apprentices are conducted by National Council of Vocational Training (NCVT) twice a year (October/ November and April/May).
- National Apprenticeship Certificates (NAC) are awarded to those who pass the AITT.
- NAC is recognized for employment under Govt./Semi-Government departments/

organizations.

Skill Competition of Trade Apprentices

With a view to fostering healthy competition among apprentices as well as establishments, skill competition is organized at local, regional & All India levels.

- Skill competition is held for 15 trades namely; Fitter, Machinist, Turner, Welder (Gas & Electric), Electrician, Mechanic (Motor Vehicle), Tool & Die Maker (Die & Moulds), Tool and Die Maker(Press Tool, Jigs & Fixture), Instrument Mechanic, Draughtsman (Mechanical) , Mechanic Machine Tool Maintenance, Wireman, Mechanic(Diesel), Refrigeration & Air-Conditioning Mechanic and Electronics Mechanic.

Skill competitions are conducted in national level at par with the directions issued by Director General of Training(DGT).Trades in which the competition to be held is solely selected by DGT so that the department of industrial training couldn't include more trades than the selected trades by DGT. All India Skill Competition is now stopped by DGT and merged it as part of National Skill Competition which is to be held for the selection of competitors for world skill competition. Successive footsteps of World Skill competition are district level, regional level of State; State level, regional Level of Nation and National Skill Competitions. Department of Labour is conducting state level competition as India skills Kerala and the last one was held at Kozhikode during February 2020 along with 252 competitors in 39 Skills. From these 84 competitors are declared as State level winners and they were competed in National regional competition held at Vishakhapattanam and 41 had selected for India skills National held at New Delhi during December 2021 and finally 19 are qualified to participate in World Skills competition to be held in Shanghai of China this year.

Department of Industrial Training has been informed all key features and benefits of such skill competitions well in advance and have been submitted completion reports of each one to Department of Labour in year by year. No study in this regard been conducted by any of the institutions in Kerala so far.

3. Recognition of Prior Learning (RPL)

Kerala's problem is not a lack of skilled people; it is more an issue of certified skilled people. How does one recognize the skill level of a person in the absence of any assessment and certification? When a carpenter or an electrician or plumber lands up at your door, you can only make a 'guess' about his/her competency because he/she is not certified. There are millions who get 'skilled' by observing and informally skills get passed on from one person to another. But, this doesn't guarantee that the skills meet the current standards of the industry. For example, most electricians may not be even aware of Health, Fire and Safety standards. So, there is need to recognize prior skills through formal assessment and certification.

- According to the existing special rules in the department, employees in the post of Instructor are eligible for further promotion only on completion of Crafts Instructor Training Scheme (CITS) training.

- As per DGT's course curriculum, the Instructor qualification have been stated as Degree in Engineering approved by AICTE with one year experience in the relevant field or 3 years diploma in Engineering approved by AICTE with 2 years' experience in the relevant field or NTC/NAC passed in the trade with 3 years' experience in the relevant field. Curriculum and qualification for instructors are decided by Curriculum development committee constituted by DGT with academicians, trade experts, industry nominees, regulatory body's nominees. Each trade syllabus consists of a number of Learning Outcomes and assessment Criteria. The Instructor should have possess all learning outcomes specified in the trade syllabus. Craft Instructor Training Programme has been developed in such a way that to cover all learning outcomes along with training in teaching methodology. Though a major chunk of new Instructor recruits have relevant industry experience, the department is trying to depute all instructors for CITS in DGT,s field institutes all over the country. Training of Craft Instructor is the mandated responsibility of DGT and it has been operational since the inception of Craftsmen Training Scheme. Comprehensive training both in skills and training methodology is imparted to the instructor trainees to make them conversant with techniques of transferring hands on skills to train skilled manpower for the industry. National Skill Training Institutes(NSTIs) and IToTS(Institute of Training of Trainers) are conducting CITS courses in our country.
- Latest syllabus of CITS included hands on skills in industries and this is achieved with the cooperation of NSTIs/IToTs with Sector Skill Councils (SSCs)/Industries. Hence the department of industrial training has given prime importance to CITS which specifically covered all Learning Outcomes (LOs) required for each trade. Owing to this reason, the department of Industrial Training had framed special rules for promotion of an instructor only if he/she successfully completed CITS.
- Accordingly, till the period of 2018, the staff of the post of Instructor were regularly assigned by the Department for CITS training on deputation basis in the semester scheme.
- The Directorate General of Training (DGT) has introduced the Recognition of Prior Learning under CITS from 2019 to December 2020 for employees who have three years of teaching experience in the instructor post, to appear for the examination directly without participating in the training and to obtain the National Craft Instructor Certificate (NCIC).
- Eligible employees can register directly for RPL online and registered employees can download the hall ticket from their own profile and appear for the examination at the NSTIs prescribed by the DGT.
- During the period, 84 employees from the department have registered for the RPL examination.
- In the first phase, RPL was started for 36 trades in various National Skill Training Institutes (NSTI (W) / NSTI). DGT charges a registration fee of Rs. 3000 / - per employee.
- The RPL Guidelines (Under CITS) (Paragraph 8) made available by the DGT states

that, the National Crafts Instructor Certificate (NCIC) issued by the RPL in the past is equivalent to the NCIC issued to instructors who pass the written test.

- Instructors are assigned for training through RPL, they are required to appear at the training centers / examination centers only for the examination. Therefore the Government will bear, Rs. 3,000 / - as registration fee and travel expenses for the employees.

4. Fresh skilling/Training

The vision of Kerala Training programme on Skill is to provide world class skill training environment for enabling the employability of individuals and meet the needs of Industries. It is a fact that thousands of youth would be joining the work force for the next 10 years. They have to be freshly skilled – skills that the industry wants. They cannot be vague and directionless and pursue general education. For example, it is not good enough to learn a programming language only without being skilled to run and maintain an Application say, an online billing system for a hospital or an insurance company, where they can apply their IT knowledge to add value to their employer.

For providing livelihood security to the weaker sections, different types of skill development training programmes including human resource development training and job oriented training programmes, were implemented for Scheduled Castes. Through the "Assistance for Training, Employment and Human Resource Development" scheme, 1786 SC youths received skill training during the last two years (2019-20 and 2020-21).

- Effective implementation of Training Scheme and Apprenticeship Training Scheme in the state.
- Ensuring world class training infrastructure in ITIs.
- Enhancing industries linkage with ITIs.
- Capacity building and continuous improvement of faculties and trainees.
- Nourishing entrepreneurial mindset, Facilitating placements, and
- inculcating the spirit of social commitment.
- Confidence building among trainees by providing real time industry

exposure.

- Facilitating international best practices and competitions.

5. Institutional –Industry Linkages

How do we convert our traders and businesspersons into entrepreneurs? We need to groom them to be entrepreneurs who have a vision for their business, who can manage finances, track their progress through financial statements, plan for uncertainties and meet changing customer needs. It is an entire ecosystem of where to sell, where to get money from, how to plough back your profits, where to get advisors so that your business becomes a success. Each Entrepreneur will employ more people which will lead to job creation and multiplication.

District Skill Parks will be established in all districts in Kerala under the aegis of the Mission in a phased manner. Out of these parks five each will be under the responsibility of ICT Academy of Kerala, and ASAP company Ltd. and the remaining parks will be under KASE. While the ICT Academy concentrates on IT and ITES courses, the ASAP and

KASE will concentrate on their areas of expertise.

Government will encourage Arts and Science Colleges, Professional Colleges, Polytechnic colleges, ITIs, to undertake skill courses as part of the extension of skill eco-system in our state. The project is envisaged in such a way that it would be helpful to develop production centers along with educational institutions. This project will be implemented on 'One Constituency- one Institution' basis in all 140 assembly constituencies.

Industrialists raise the concern that they are not getting enough trained people for the needs of IT as well as for Non-IT industries. It is pointed out that there are limitations in providing required training to job seekers through skill training centres and finishing schools. Therefore, it is intended to implement 6 months internship training programme for educated candidates in IT and other industrial institutions. The interns will be provided a monthly stipend of an amount up to ₹ 5000 as Government contribution and appointing institution should also bear at least the same amount. On completion of the internship, the institutions can appoint the competent people. Thereby, this can be transformed into a good training programme. In the current year, assistance will be provided to 5000 people for internship. A common facilitation programme will be implemented in Techno park and Info Park, which is capable of providing the training required for companies. Along with this, a pool of teachers /trainers will be prepared.

CHAPTER 4
EVALUATION OF THE SKILL ECOSYSTEM IN THE STATE

Kerala is the most literate state in the country with the literacy rate of 94%, compared to the India average of 74.0% and also the net exporter of trained and skilled labour force for the rest of the world. In fact, the remittances from the population who work outside Kerala, both abroad and in other States in India, has been vital to the socio-economic development in the State.

Though Kerala has a very rich human resource pool, it is seen that the unemployment rate in Kerala is almost twice as much as the national average, with the current unemployment rate being 11.4 per cent as opposed to the national average of 6 per cent. This exacerbates further as we look at youth unemployment, with Kerala recording an unemployment rate of 36.3 per cent compared to the national 17.8 per cent, both very high rates (Periodic Labour Force Survey, 2017-18). There are a total of 37,71,628 job seekers registered in the employment exchanges in Kerala as on July 2021. And compared to other States, Kerala has the highest number of graduates registered.

Deloitte and NSDC conducted a district skill gap analysis for Kerala in 2012 wherein they looked at the current (2012-2017) and future (2017-2022) skill gaps. The aspirations of the youth were captured through Focus Group Discussions held in each district of the State. The main reasons for unemployment were concluded as the poor employability of students and the absence of employers in keeping with the demand.

The youth who participated expressed a clear preference for Government sector jobs as they offered security of employment, pension and other benefits. However, students of courses such as Hotel Management, Hospitality, and Fashion Design preferred to work for private sector and would like to migrate to another state/country.

Most students mentioned the need for inculcating communication and English language skills while pursuing skill development courses as this would significantly improve their employability and prospects of employment outside the state. Students also find a mismatch between training received in the institute and the actual work environment in the industry. Thus, students suggested the need for more industry-based practical training and paid internships as a mandatory part of training.

Students of vocational training courses opined in the discussions, that the Government and institutes could focus on supporting their better employment opportunities through strong tie-ups with industry rather than merely increase the seats in skill development institutes every year. Students also felt the need for industry to appreciate the value of vocational trades since they are competing with polytechnic/ engineering graduates in the job market. Students of hospitality and tourism trades also suggested that institutes should take initiative to build relations with sectors other than hotels such as airlines, event management companies etc.

Although most vocationally trained students preferred to be employed in their home

districts, students in northern districts were willing to migrate to other districts and states such as Karnataka, Tamil Nadu etc. due to limited opportunities here.

The Nielsen tracer study conducted in 2019 covering 1.21 lakh school students who enrolled in Additional Skill Acquisition Programme during the academic years 2012-13 to 2016-17 and underwent communication and foundation modules of domain skill programmes of interest showed that they were more confident, articulate and were more employable and accepted by the industry when they entered the job market. 67% of those trainees were continuing their higher education at the time of survey, and only 17% of them (20,900) had sought a job on completing their training. Out of the job seekers, 38% (7975 out of 20,900) trainees were employed, which is far higher than the effectiveness of other skill training programmes. 16% were not in education, employment or training (NEET).

The annually produced India Skills Report from 2015 to 2021 has found a stubborn unemployability of more than 50% amongst graduates in the country as assessed by objective skill tests and by a cross section of employers. Kerala does not find a mention in this Report as significant numbers of students did not even participate in it. Therefore this year, ASAP Kerala decided to partner in the survey leading to a number of colleges and students participating in the survey, the results of which are yet to be published.

The Kerala State Job Portal is maintained by the Department of Labour and Skills under Government of Kerala. In 2020, when 57875 job seekers sent in their profiles for a job, 571 employers registered and posted 5586 vacancies. However only 23 could be offered jobs.

The only sector from which professionals do not queue up in massive numbers before the Employment Exchanges is the health sector. Analysis of this will reveal that that the key difference between the health sector and others is that hands on experience or clinical training is an integral part of the training.

A. Current Institutional Framework

The knowledge that skills and knowledge are the driving forces of economic growth and social development has made several Departments in the State to take up skilling and short term training programmes for the people of the State.

1. Additional Skill Development Programme (ASAP KERALA) under Higher Education Department

The Additional Skill Acquisition Programme (ASAP) was conceptualized, designed and launched jointly by the Department of Higher Education and the Department of General Education in 2012 to tackle the preventive dimension of un employability by "catching 'em young". It received ADB funding in 2014 for 5 years for a total project cost of Rs 1000 crores where the ADB component was approx. Rs 700 crores and the State share Rs 300 crores. The target population of the programme was high school and higher secondary school students and the objective being the provision of meta skills of communication and English articulation, along with IT and specific domain skills of their interest and demand in the market.

ASAP offered skill training to more than 2 lakh students drawn overwhelmingly from the lower

socio economic status in Government schools through 121 Skill Development Centres connecting nearly 1268 educational institutions including 1118 Higher Secondary Schools. The training was offered free of cost through trainers who were drawn from the community and trained for the specific modules. Thus 2144 Skill Development Executives were developed as trainers which also economically strengthened their families.

Following the 2019 Nielsen Report that showed that the majority of ASAP students who had gained confidence and the necessary skills were not entering the job market but going for higher education to get a better job, and that 38% of the job seekers had found productive employment due to ASAP, the focus of ASAP shifted to equipping technical students in engineering colleges. Advanced Skill Development Centres were developed in 99 Engineering colleges and 45 Polytechnics for Industry relevant futuristic course skilling. ASAP also started the construction of 16 Community Skill Parks for industry led, multi skill training of the community.

It received recognitions of "Best Practice" by Niti Ayog in 2017 and the award for best Gender Gap implementation by ADB in 2020.

In January 2021, Government of Kerala converted the project as a Section 8 company, to make it sustainable and carry forward its activities to further higher end skills and placements in higher order job roles for the educated youth of the state.

As on November 1, 2021, ASAP Kerala has trained nearly 2.5 lakh youth including housewives and runs 80 plus courses in 17 sectors including the health sector and foreign languages. Its courses are certified by Universities or Sector Skill Councils or calibrated by the industry. It has curated courses such as Artificial Intelligence and Machine Learning with the help of IITMadras and IIT Palakkad faculty and aligned it to Level 7 of NSQF. Communicative English Trainer, Business Analytics, coding skills, Robotic Process Automation, High Tech Farming, Drone micro pilot training are some of the high end courses offered. It has placed 2637 trainees in higher end job roles.

The revenue model of the company arises from the need to make students use the acquired skills for productive employment and thereby create wealth and benefit the society, and therefore students have to pay for their courses, in part.

In 2021, ASAP Kerala took up the challenge of providing AICTE approved, specially curated DVoc programmes in the evening through 5 Community Colleges in 5 polytechnics in the State for drop outs and other working students. In order to develop an industrial environment in each of the 41 government polytechnics, an Industry on Campus scheme has also been established and industries around it mapped to get job works and thereby enable students to also "Earn while they Learn".

ASAP Kerala also undertakes training programmes to groom candidates offered by other Departments. The training programme for Kudumbasree dependents called 'Connect to Work' has been successful in finding hyper local employment opportunities for the trainees.

2. Kudumbashree under Local Self Government Department

Kudumbashree, the unique programme that has successfully empowered the women of the State, is the nodal agency of centrally sponsored programme called Deendhayal Antyodaya Yojana-National Rural Livelihood Mission [DAY-NRLM]. Under this scheme, with the aim of demand-led skill training at no cost to the rural poor, Deen Dayal Upadhyaya Grameen Kaushalya Yojana [DDU GKY] provides skill based training to men and women, among whom large numbers are Kudumbashree members.

3. Kerala Academy for Skills Excellence (KASE) under Department of Labour and Skills
Kerala Academy for Skills Excellence (KASE), is a non-profit company under the Department of Labour and Skills and the designated State Skill Development Mission for facilitating and coordinating various skill development initiatives of the State.

KASE has set up Centres of Excellence in Nursing, Security Skills, Oil and Rig, Teaching, Water and Waste Water Treatment and Construction, where training is imparted in small batches and placements made with the help of relevant industry.

KASE is the nodal agency for the implementation of Centrally Sponsored Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and has been able to successfully achieve its target set for the State.

4. Centre for Continuing Education Kerala under Department of Collegiate Education
CCEK, a Society runs the successful State Civil Service Academy to prepare students for the Civil Service Exam. It also runs short term skill training programmes in select colleges and polytechnics through private partners.

5. Kerala Knowledge Economy Mission under Kerala Development and Strategic Innovation Council
Government of Kerala in January 2021 announced the setting up of Kerala Knowledge Economy Mission under KDISC to "coordinate skilling activities in the State" and skill 60 lakh people in high end job skills and provide employment to 20 lakhs in the high end job roles in the state in 5 years. The original allocation of Planning Board of Rs 15 cores to KDISC was increased to Rs 300 crores which has been subsequently increased to Rs 400 crores.

The vision and Strategy adopted by the Mission declares that it will not duplicate the existing activities of the various stake holders but will provide a "platform of platforms" to conduct registration of candidates from the grass root level, virtual job fairs through AI and strengthen employment opportunities by linking demand from industry and job portals.

As on November 2021, the platform has been created. More than 30,000 registrations have been made. The data base of ASAP has been shared. The feeds of Monster.com and others have been obtained. But it is not known whether any employer listed in the platform has made any job offer. Stake holders like ASAP, KASE, Directorate of Employment and Training have not got any of their proposals approved or funding for any of their activities. No virtual job fairs have been held. But 14 physical job fairs are planned for December , district wise, exactly as has been done by KASE and ASAP and Youth Welfare Board in the past, for not just high end job roles.

Concerns:
The Knowledge Economy Mission runs the risk of increasing the numbers registered for employment from the current 37 lakhs while high end jobs are not being created in commensurate numbers. And if they are indeed catering to the lower end job roles as well, then a new platform does not appear to be necessary, rather strengthening and improving the existing agencies would have achieved the goal. Another risk arises from the concomitant loss of funding to the existing skilling agencies thereby choking them to slow death.

B. Doing Job While Pursuing Education
Directorate of Collegiate Education, Government of Kerala have 73 colleges out of 66 Government Arts and Science Colleges, 7 are Special Grade Colleges. Apart from these institutions many private colleges and engineering colleges are also running very well in Kerala.

Persistent jobless growth has reached crisis proportions, especially among the young. A toxic mix of factors has contributed to the crisis, from mushrooming youth populations in Kerala to a growing mismatch between the skills people have and those that employers need. Addressing the Kerala's youth unemployment challenge requires a multipronged, long-term effort involving multiple stakeholders, such as governments, employers, educational institutions and civil-society organizations – as well as families, communities and peer groups.

There are five basic strategies that could be pursued:
1. Boosting job creation and labour demand
2. Better preparing young people for the job market
3. Illuminating pathways to productive work
4. Improving financial well-being, both current and long-term
5. Fostering entrepreneurship

Governments, for example, should develop state action plans targeting youth employment. They should establish enterprise incubation programmes and infrastructure projects that hire and train young people. They should also incentivize education institutions and private operators to do the same.

Employers can create entry-level job opportunities, implement college-to-work apprenticeships and on-the-job training programmes, as well as support young entrepreneurs through mentoring. Educational institutions can incorporate entrepreneurship into the curriculum and work with employers to ensure they offer students the appropriate training.

The Kerala government has given its nod to a proposal aimed at encouraging students aged between 18 and 25 years to take up part-time jobs while pursuing education so as to help them gain work experience and hone their skills.

Aim

- The aim is to ensure that in a fiscal, 90 days of work is assured for students in government departments, local body organisations, PSUs and private companies.
- This will help in developing a work culture among students.

Target Group

Students aged between 18 and 25 years will be permitted to become part of the scheme which will help them to gain work experience and hone their skills, the release added.

COVID-19 has disrupted life for college students, especially as the ongoing pandemic continues to hamper the job market. While some experts have predicted a return to pre-pandemic employment numbers by the end of 2021, college students are still at a disadvantage.

Action Plan

So, what can higher education institutions do to better prepare students for the tough job hunt ahead?

Colleges can develop a specific action plan that highlights ways to better prepare students post-graduation, strengthening connections between college to career. This action plan should include initiatives that help students build on their strengths, set ambitious goals and gain experiences for bold paths after graduation.

These initiatives could include an advanced mentorship program that connects students with on-campus mentors and advisors. These relationships—which start early and last long after

graduation-can educate students on academic skills, professional agility, and overall life talents that have become most desirable in the workforce.

A recent study found that 68% of students felt stress in choosing their career paths at college, leaving many overwhelmed and confused, which also can lead to unsuccessful college experiences. To overcome this, colleges can offer more tailored professional career planning pathways that seamlessly connect life in college to life after graduation.

Each pathway can shape students' interests into a simplified and customized lane, leading them to their most desired career and future. These paths should not only focus on courses, but field experiences, clubs, summer internships, mentors, alumni, study abroad programs and more to better align students' passions to their full-time careers.

For instance, if a student has a passion for theatre, environmental arts, and communications, the college could provide the student with the resources to turn those passions into a career, like working in a company dedicated to sustainable clothing practices. If a student wants to run their own business, offer the necessary on-campus resources dedicated to student ventures that help bring those ideas to market.

One way to do this is by placing students in groups with alumni volunteers based on aligned interests, experiences, and passions, giving them a more substantial boost in today's job market. Although alumni involvement is a big commitment, we've proven here at Beloit College that it helps ensure a strong foundation for students' professional success and produces graduates who are confident, focused, and employable. So it's imperative for colleges and universities to build the kinds of alumni programs that provide consistent and resourceful networking opportunities for young students.

Navigating the job market in 14th Plan

Not all industries have been hit the same by the pandemic. The hospitality and leisure industry, for example, took one of the biggest blows. Retail has also taken a beating. The transportation industry has also seen steep losses, largely due to waning travel and tourism.

It's not all bad news, though. Many industries have actually expanded in recent months, and focusing your job search in these sectors may help make the job search easier.

The health and family care sectors are just a few of such thriving industries. Health care employment and social assistance jobs increased, while child care, family services and private education saw notable upticks as well. Here's a quick look at some of the best- and worst-performing industries during the most recent months of the pandemic.

Industries going strong in recent months:
- Retail trade.
- Professional and technical services.
- Construction.
- Manufacturing.
- Transportation and warehousing.

Industries hit hard in recent months:
- Educational services.
- Arts, entertainment and recreation.
- Accommodation and food services.
- Government.

Shifting your focus to some of these stronger markets might lead to more opportunities. You should also consider looking outside your geographic area. Since many companies are now operating remotely, you may be eligible for positions in other states or even other countries.

Take on a side gig or part-time job

Food delivery services like DoorDash, Uber Eats and other similar apps have exploded thanks to stay-at-home orders. The same is true for grocery delivery services like Instacart and Shipt.

Some other potential side gigs include:

- Dog walking.
- Housesitting.
- Mowing lawns.
- Babysitting or nannying.

Though these gigs don't come with massive salaries, they can help you stay afloat during difficult times. They're also pretty flexible schedule-wise, which is helpful if you line up an interview.

Post-pandemic potential

Finally, colleges can adapt and respond in innovative ways to crises by implementing solutions that meet the moment. For instance, many colleges pushed back their 2020 or 2021 academic calendars to mitigate potential COVID spikes following breaks.

Rather than just giving students extended time off, Beloit launched a two-week career accelerator program that helped students identify, prepare for, and apply for internships, jobs, and other career-related opportunities, with more than one-third of our student body participating.

The spread of COVID-19 has been felt by all and made its mark on our economy and job market. We have met these challenging times with thoughtfulness and vigor by launching new programs that have proven to better prepare students to address the job market head-on.

CHAPTER 5
SKILL REQUIREMENTS AND INSTITUTIONAL FRAMEWORK

Over the coming decade, a non-negligible share of newly created jobs will be in wholly new occupations, or existing occupations undergoing significant transformations in terms of their content and skills requirements.

The 2020 version of the Future of Jobs Report reveals that the leading positions in growing demand are roles such as Data Analysts and Scientists, AI and Machine Learning Specialists, Robotics Engineers, Software and Application developers as well as Digital Transformation Specialists. However, job roles such as Process Automation Specialists, Information Security Analysts and Internet of Things Specialists are newly emerging among a cohort of roles which are seeing growing demand from employers. The emergence of these roles reflects the acceleration of automation as well as the resurgence of cyber security risks.

The adoption of cloud computing, big data and e-commerce remain high priorities for business leaders, following a trend established in previous years. However, there has also been a significant rise in interest for encryption, non-humanoid robots and artificial intelligence.

In addition, Materials Engineers in the Automotive Sector, Ecommerce and Social Media Specialists in the Consumer sector, Renewable Energy Engineers in the Energy Sector, FinTech Engineers in Financial Services, Biologists and Geneticists in Health and Healthcare as well as Remote Sensing Scientists and Technicians in Mining and Metals. The nature of these roles reflects the trajectory towards areas of innovation and growth across multiple industries.

At the opposite end of the scale, the roles which are being displaced by new technologies: Data Entry Clerks, Administrative and Executive Secretaries, Accounting and Bookkeeping and Payroll Clerks, Accountant and Auditors, Assembly and Factory Workers, as well as Business Services and Administrative Managers.

This resulting set of emerging professions reflects the adoption of new technologies and increasing demand for new products and services, which are driving greater demand for green economy jobs, roles at the forefront of the data and AI economy, as well as new roles in engineering, cloud computing and product development. The table below revels that the top 20 job roles in increasing and decreasing demand across industries based on the Future Jobs Survey Report 2020.

Institutional Ecosystem for Skilling in Kerala

India has moved towards the adoption of a skilling framework with the National Skill Development Policy (2009) and the subsequent National Policy for Skill Development and Entrepreneurship in 2015. The operationalisation of this policy was mainly envisaged through public private partnerships or increased private participation, through the setting up of the National Skills Development Corporation (NSDC), which was initially a PPP body and subsequently converted into a for profit company. The NSDC is in now comprehensively in charge of the skilling ecosystem, with its sectoral skill councils responsible for curriculum development, certification of trainers and the formulation of occupational standards for the evaluation of trainees from both government and other institutes. At the level of formal education, the effort to vocationalise higher education has been inaugurated by extending vocational training to classes 9 and 10 at the school level as well as creating a National Skills Qualification Framework, which certifies skills acquired across general, vocational and technical educational contexts on a standardised scale.

The main problems identified in implementation of skilling programmes in comparative studies are primarily at two levels – questions of provision of skill training and questions of integration into the job market after training (Mythreyi et al 2019, Rowchowdhury and Upadhya 2020).

Box No.2 Top 20 Job Roles in Increasing and Decreasing Demand Across Industries (Future Jobs Report 2020)

Increasing Demand	Decreasing Demand
Data Analysts and Scientists	Data Entry Clerks
AI and Machine Learning Specialists	Administrative and Executive Secretaries
Big Data Specialists	Accounting, Bookkeeping and Payroll Clerks
Digital Marketing and Strategy Specialists	Accountants and Auditors
Process Automation Specialists	Assembly and Factory Workers
Business Development Professionals	Business Services and Administration Managers
Digital Transformation Specialists	Client Information and Customer Service Workers
Information Security Analysts	General and Operations Managers
Software and Applications Developers	Mechanics and Machinery Repairers
Internet of Things Specialists	Material-Recording and Stock-Keeping Clerks
Project Managers	Financial Analysts
Business Services and Administration Managers	Postal Service Clerks
Database and Network Professionals	Sales Rep., Wholesale and Manuf., Tech. and Sci.Products
Robotics Engineers	Relationship Managers
Strategic Advisors	Bank Tellers and Related Clerks
Management and Organization Analysts	Door-To-Door Sales, News and Street Vendors
FinTech Engineers	Electronics and Telecoms Installers and Repairers
Mechanics and Machinery Repairers	Human Resources Specialists
Organizational Development Specialists	Training and Development Specialists
Risk Management Specialists	Construction Laborers

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At the level of training

1. Lack of coordination between various stake holders, resulting in contradictory targets and goals
2. Privatisation of skill training and certification, resulting in reduced state control over quality of output
3. Insensitivity to industry demand and the consequent pressures of demand generation on institutions and trainers
4. In-built exclusion mechanisms using preliminary screening based on gender, language etc

After training

1. Lack of appropriate certification
2. Lack of data on employability of people who passed out
3. Lack of data on how long people worked, in what capacity and under what conditions
4. Lack of placements
5. Lack of awareness about labour rights

The institutional ecosystem of skilling in Kerala is populated by a number of stakeholders at various levels, ranging from the apex body KASE (the state skill development mission), departments of education and vocational training, the ministry of labour and employment, industry players and private providers of skill training. The nature of coordination between these stakeholders, as well as the nature of the relationship between central and state agencies is operationalising the skilling environment is unclear. Several recent studies that have examined the implementation of skilling programmes in India have pointed at the lack of coordination between various agencies, and the lack of alignment of goals and division of responsibilities as an important challenge. The operation of various skilling schemes under different departments and ministries may pose considerable challenges to integration, especially if the state intends to respond to industry demands in a unified fashion. The

competitive nature of national versus state level certification, the limited rolling out of ASAP programmes etc are also issues that need remedying.

In depth assessments of the institutional ecosystem governing skilling in Kerala are not available. Hence, an important first step would be to conduct a study with the view of comprehensively understanding the operation of this ecosystem. The study could have the following objectives:

1. Identify the institutional framework governing the skilling programme in the state, with a specific focus on national and state level division of responsibilities, and misalignments if any
2. Document the organisation of government, private and non-government bodies in the implementation of skilling
3. Assess the awareness of various agencies and actors of the nature of policy, as well as their roles
4. Assess the practical difficulties faced by various agencies in implementing skilling programmes

The most important handicap of skilling programmes in general has been our inability to precisely assess their impact in employment generation, and the gap in data as well as institutional mechanisms to address the work trajectories of trainees post training. Collection of longitudinal data pertaining to the impact of skilling programmes across state, private and NGO platforms present challenges to our efforts to bolster the skilling environment. It is hence suggested that an integrated institutional mechanism for gathering data about outgoing trainees from all skill training institutions in Kerala, and the periodic follow up of such trainees to document their employment trajectories is designed and implemented, preferably under the guidance of KASE. Individual institutions may be made responsible for the collection and collation of data pertaining to each batch of trainees and submission of the same on an integrated portal. Questions may also cover features like factors influencing the difficulty in accessing jobs, channels of recruitment used by trainees to get jobs, wages and increments etc. Availability of regularly updated data will provide us with a useful tool to:

1. Assess the skill profile of trained workers in the market
2. Understand the relative relevance of skill training programmes that are currently on offer
3. Identify areas for accelerated state provision in new areas that show promise
4. Identify institutional gaps in making trainees labour market- ready
5. Stay consistently sensitive to industry demands

Generation of data on a periodic basis can also be channelled into identifying extra-technical gaps in skill training in formal educational institutions, and introducing elements of language and communication training, IT training, labour rights awareness etc universally within the curriculum, rather than offering them in capsulised forms in specific centres.

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Integration of Institution, Training Agencies, Companies and Organisations for Skill Development

The structure of labour market is undergoing drastic changes today, particularly in the backdrop of Industrial Revolution 4.0 and Covid-19 pandemic. The impact of covid-19 pandemic on family, social and official life and work environment is so explicit that human kind globally is moving towards a new normal situation for continued existence. The hardships created in the socio-economic fabric of our life, to a greater extent, eased by technology disruption by creating new work environment and new job opportunities. Needless to say that Global Employment scenario has worsened during 2019-20 making long lasting impact on the informal and service sectors. The situation has warranted a through relook on employment generation and skill development programmes to cope with Knowledge Economy.

One of the major problems that Kerala faces today is growing unemployment among educated youth. With cent per cent literacy, good network of higher educational institutes and progressive outlook, Kerala provide a fertile environment to its citizens to pursue higher education after school days. Barring professional/Technical Universities and institutes higher education facilities in Kerala are provided by 7 Universities, 66 Government Colleges, 163 Aided Colleges, 112 University Centres, 405 Self-financing Colleges, 32 Arabic Colleges, 2077 Higher Secondary Schools and 389 Vocational Higher Secondary Schools. (Vocational higher secondary schools in Kerala offer technical courses along with all courses offered by higher secondary school, literally enabling students to end up in Arts & Science colleges for UG and PG programmes). All the institutes enrol nearly 7.5 lakh students every year. Since the higher education sector neither do not give emphasis on vocational programme in their curriculum. The pass out by and large remain unemployable by the companies and other organizations. Appropriate measures have to be taken giving emphasis to vocational/ hard skill related to the on-going courses. The pass outs and drop outs from higher education institutions in Kerala including technical institutes constitutes a major segment in the unemployed army who need special attention. By integrating the role and activity of various institutions, organizations, agencies and departments, a road map for providing gain full employment can be prepared for students, pass out and dropout from higher education institutions can be prepared. Dropout by and large are not addressed in the employment sector even if they possess talent or skill in some specific area they generally considered as failed candidates. This section discuss the need and scope for skill development of students perusing higher education and the dropouts separately.

I. Skill Development and Employment for students in Higher Education Sector

Realising the lacuna that exist between education and employment, efforts are being taken

to impart soft and hard skills to students pursuing higher education in the State. The role of Kerala Academy of Skill Excellence (KASE), Additional Skill Acquisition Programme (ASAP), Institution of Human Resources Development (IHRD), universities and Affiliated Colleges need special attention While colleges and universities provide career development centres and placement cells, the department of labour and skills, government of Kerala launched a single window facility for job seekers and employers to boost employment in the State Educated Youth care make use of both facility to self-employed. A quick scan on the results achieved shows that during 2020 the placement given by Mahatma Gandhi University is 138, Kerala University 222, Cochin University of Science and Technology 425, Calicut University 148 and Kannur University 156. The performance of Kerala State job portal is given in the Table 2

Table 2 Kerala State Job Portal 2020

Sl.No	Items	Number
1	Job seekers registered	57875
2	Employers Registered	571
3	Partnered institutes registered	137
4	Vacancies posted	5586
5	Job application	8006
6	Interviews conducted	1253
7	Job offered	23

The above discussion stands a testimony to the poor employability of students from higher education institutions. However, no attempt has been taken by these institutes to understand whether the recipient through the portal continue in the job or joined with the reserve army of unemployed at a later day.

Underlying Issues

Multiple causes work behind the poor employability of students coming from the higher educational institutions in Kerala that demand policy interventions.

- The existing curriculum, teaching methodology and evaluation system are not supportive of developing neither soft skill nor hard skill.
- Outcome based/application oriented learning is given little importance.
- Field study/care study, industry visit, internships and training are not evaluated on the basis of the skill acquired by students.
- Industry visit, training programmes and internships are designed exclusively by academicians/institutes giving secondary importance to industry requirements.
- Quite often duration and time of internship does not match with the business environment of the organisation, making the programme name sake for fulfilling mandatory requirements of curriculum.
- Inability of students to develop communication skill in at least one language after learning three languages for 15 years.

Any attempt to superimpose skill development in Higher Educational Institutes will meet with failure unless the fundamental issues are addressed by creating an enabling environment in the campus.

Creating an Enabling Environment
A. Role of Universities and Colleges

The following can be considered in this context.

- First and second language teaching at Plus Two and Under Graduate Level should give more focus on developing communication skill (Listening, Reading, Writing and Speaking).
- Syllabus may be redrafted incorporating vocational subject that are closely connected to the core subject of the course taught.
- Outcome based/application oriented teaching methods to be incorporated.
- Invariably one semester in each coursed should be devoted for practical learning in household environment, neighbourhood, society, institutions, organisation, Production- manufacturing-Service sectors or Research and Innovation.
- Students need to submit outcome based report on field/internship which will be evaluated based on the skill developed/acquired.
- Supplementary skill development sources giving focus to Knowledge society.
- Developing work culture among students by promoting the Government announced programme "Doing job while pursuing Education" (Earn while you Learn).
- Reschedule working time of Educational Institutions. So that the forenoon session can be devoted for teaching and afternoon session can be allotted for

a. Doing job while pursuing Education
Or
b. Research and Innovation
Or
c. Additional skill acquisition courses
Implementation of the above (a, b & c) demand the support and co-operation of other agencies/institutes, organisation as well as the Government.

B. Role of Local Self Government
Following decentralisation of power to local bodies under the Panchayath Raj system more than 20 areas were assigned to local bodies where they can prepare Plan and implement programmes. Local Self-Government besides their routine administrative work demand human resource for preparing, implementing and evaluating development programmes. The much needed human resource can be draw from colleges. LSGs can present their requirements along with specification to colleges to provide the service of students/pass out students who remain unemployed.

C. Role of Training Agencies
Training agencies on receipt of request from colleges should design and conduct training programmes in colleges or identified sites and equip the concerned to undertake the task. A

separate facility for skill certification based on international standard should be put in place to certify the skill of the trainee so that the certificate can be used as a passport for getting employment within India or abroad without any other training. KASE in association with digital university can be considered.

D. Industry, Institution and Organisation

They can identify areas of part-time work, problem solving research and use the needed human resources from Colleges and support the venture.

E. Colleges and University Departments

Colleges and University departments can play a pivotal role in operationalising the programme. The existing career development cum placement cell can take a lead role in this by collecting demand/requirements of LSG, industry, institutions and other organisations. The cell should mould the students to undertake the task.

College can get in touch with LSG, State and Central Government departments, private institutes, NGOs and Gig economy to list out avenues for part-time employment/work from home.

The cell can develop an education cum training cum work mechanism which can promote work culture among students.

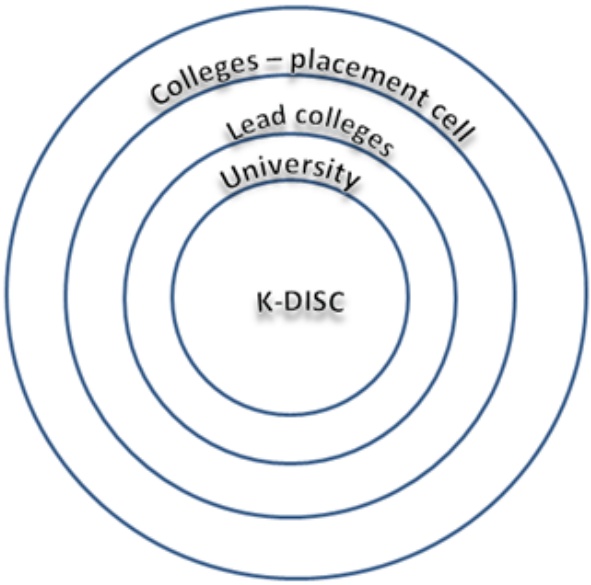
F. K DISC

K DISC can give technical support to promote innovation and start up by students in this context Incubation centres can be started in identified colleges in each district where more facilities are available and neighbouring colleges can be connected to the incubation centre. A cluster of four or five colleges can be suggested for this. Colleges falling in each cluster should submit programmes/project to the lead college where incubation centre is located and enable the students to indulge in innovation, start-up and research. All lead colleges under a particular university may be supported by the university concerned which will work in consensus with K DISC.

Total 778 collages including university study centres are operating under seven universities in Kerala. To provide research, innovations and start- ups among the youth in these initiatives, it is proposed to divide them in to 78 clusters across the State. Ten colleges under a cluster and the colleges having the best infrastructure facility will be identified as lead college where students from other college in the cluster can come and work. The lead college will be given guidance and technical support by K-DISC with the ultimate objective of disseminating the facilities to the maximum number of youth including those who are unemployed and ready to take up start up initiatives.

The integration of activity by different organisation for promoting innovation/research and start-up can be summarised in figure 5.

Figure.5 Thematic Representation of Different Organisation for Promoting Innovation/ Research and Start-up



The placement cell can conduct placement programme accordingly in each college to all those students who have required skill certificates by agencies concerned.

II. Areas of Acute Shortage of Skill where Dropouts and Passouts can be Considered

Availability of qualified human resource with adequate skill sets is a pre requisite for increasing production and productivity. Ten areas that demand the presence of skilled human resource is identified for providing skill/training to youth. An overview of the area revealed that most of the existing workers are neither qualified nor properly trained. They are having only a general understanding of the skill sets required. It is suggested that the separate skill development/ training programme may be designed and implemented under the leadership of ASAP for the target groups. An indicative sector, areas and target group for skill requirement is given the table below. The target group can include SSLC pass outs and dropouts from Higher secondary education/VHSCC/colleges and technical educational institutes. Based on the attitude, the target group may be given specific skill training to meet the present market requirement which will enable them to deliver quality services while ensuring a decent living within the state or outside. The institutional integration mechanism may be developed to implement the programme towering LSGs, educational institutions, concerned departments, company and ASAP.

Table 3 Indicative Areas for Skill Requirements

Sl. No	Sector	Area	Target group
1.	CONSTRUCTION INDUSTRY	Plumbing, electrical works, carpentry, masonry, painting, drilling	SSLC/HSE
		Earthwork related machinery operation	10th standard pass out
		Soil testing	B.Sc.
		Green building management	civil engineering drop outs or ITI drop outs and VHSE pass outs
		Water conservation	Engineering drop outs, ITI holders, polytechnic graduates.
		Energy management	engineering students, ITI, diploma holders and retired engineers
		Road/land Survey training	HSE and VHSE dropouts
		Waste management	graduates or drop outs from colleges
		Bio waste management	educated unemployed housewives
2	HEALTH	Ayurveda Nurses	HSE/VHSE
		Ayurveda Pharmacists	HSE and above
		Geriatric care	care givers from ANM or GNM
		Alzheimer's care	care givers from ANM or GNM
		Baby sitting	existing care givers
		Post Covid care	multi- disciplinary team of health professionals
		Epidemic management	NRHM workers/ ASHA workers
		Dental Hygienist	VHSE/Graduates
		Pharma Assistant	VHSE/Graduates
		Occupational Therapist	graduates
3	SERVICE SECTOR (DAY TO DAY SERVICE)	Utilities Services Management	10th standard and above
		Appliances Services	ITI, Poly technic drop outs
		Home manager	SSLC/HSE/VHSE
		Food Production/Bakery/ Confectionery	10th class and above

		Cooking (traditional recipes)	10th standard and above
4	FOOD INDUSTRY	Food safety management	VHSE graduates who complete the food production course or Home science course.
		Dairy group	HSE pass outs/ drop outs
		Driver-cum guides	10th standard and above
		Specialist Guides/ interpreters	Graduates.
		Front office	Graduates.
5	TOURISM INDUSTRY	Housekeeping	10th standard and above.
		Tourist Assistant	graduates and above
		Online marketing/ Social media marketing	Graduates
6	MARKETING	Teachers	Graduate teachers
7	EDUCATION	Vocational Trainers	Graduate students
		Farm Mechanisation	10th standard and above
8	AGRICULTURE-RELATED LABOUR	Farm Consultant	Graduates
		Logistics management	Graduates
		Quality control	Graduates
9	EXPORT/IMPORT SECTOR	Merchandising	Management graduates
		Actuaries	commerce graduates
10	ACTUARIES/ TRAINED ACCOUNTANTS		

CHAPTER 6
KEY IDEAS AND RECOMMENDATIONS EMERGING FROM THE WORKING GROUP

1. High Touch High Tech (HTHT) education with the Assistance of Artificial Intelligence (AI): A new learning system using high technology combined with classroom teaching (human touch) transformed methods of teaching and learning in South Korea, especially after Covid-19, from one of mass standardisation to mass personalisation. An Artificial Intelligence based tutoring system, developed to provide dialogue-based tutoring, can help identify what a student does or does not know and provide better personalised attention to the students with diverse levels of learning. A teacher using AI tutor can develop a personalised learning path for each student. Its success in implementation is seen not only for Universities but also for schools and for skill development.

2. Lessons from Vocational Education Training System of Germany: Five success factors Vocational Education Training (VET) system developed by Germany helped it become a manufacturing superpower: First and most important is the cooperation of Government, the business community, and social partners (employers' associations and chambers and the trade unions), who work together in this system. Secondly, there are two co-ordinated venues of learning, company and the Government school. Around 70 per cent of learning takes place on the job. Thirdly, national standards are accepted by all stakeholders. This has created a system that allows mobility within and outside the country. Fourthly, there are regulations emphasizing the need for qualified VET staff. Fifthly, Federal Institute of Vocational Training (BIBB) gathers and analyses information and advice regarding further improvements.

1. Unprecedented impact of Covid-19 on the labour markets. Covid-19 has caused loss of employment, increase in unemployment, decline in overall participation rates and decline in global incomes. In addition, there has been a shift to inactivity, particularly important for policy makers when talking about skills development for young people. How to get this huge group of young people back into the labour market? Others who have been disproportionately affected by the pandemic are the self-employed, women, low-skilled workers and migrant workers.
2. Need of new skills in technology: Worldwide data indicate that there is a decline in demand for medium-skilled workers. This is particularly important because most young people entering the labour force are actually at the middle skill level, so it requires a rethinking of skill needs. There is a growth in the adoption of robots in manufacturing. This has implications in the long run for new kinds of skills which are more in tune with the new technology.
3. Research shows that young people of today seem to have the perception that they will have fewer fulfilling career options than their grandparents did. There is an anxiety aspect to technical achievement and competence. This anxiety is heightened not only by the threat of losing jobs but also by the problems of gaining access to the jobs that are being created.

4. Skilling in Care Sector: The Covid-19 crisis has shown that there will be a need for more jobs in the care sector. Kerala is already aware of this fact and has a number of schemes in place. The ILO estimates that there could be 269 million new jobs in the care economy. We must ensure that these provide decent employment. Issues related to skilling and gender issues in this sector are to be addressed.
5. Need to strengthen Technical and Vocational Education and Training (TVET) governance system in South Asia: The governance of Technical and Vocational Education and Training (TVET) needs to be strengthened, as was done elsewhere, for example, in Germany. Three specific takeaways were the following:

1 Take a sectoral approach in implementing skills development. The care industry can be a sector on which India can concentrate, transforming it from an informal to a formal sector with requisite training and higher earnings;
2 Expand the recognition and validation of skills and competencies; and
3 Develop more flexible learning delivery systems, particularly considering the difficulties of face-to-face learning during the pandemic.

6. Higher education and vocationalisation: A skill ecosystem is influenced by two important factors: 1. Linkage to the modern education system. 2. The requirement of skilling that is driven by industry demand and economic development.
7. Skill qualification framework: Kerala needs to formulate policies to modernize apprenticeship programmes, now being done as part of an ILO project in four countries.
8. New opportunities and lifelong learning: In accordance with the changing world of work, outlined by the ILO Global Commission, people need to be equipped with skills for the job opportunities emerging from new sectors, including the (a) digital economy; (b) green economy; (c) care economy; and (d) rural economy. The rural economy will continue to play an important role in job creation. The new skill eco system sees lifelong learning (LLL) as a guiding principle, supporting people throughout the active stages of their life, allowing multiple job transitions in people's lives, focusing on competencies (not just formal qualifications).
9. Focus on service sector: The skill eco-system in Kerala has to be focused on the service sector within which about nine modern segments have been generating most of the jobs in the last decade and a half. These include the sale, maintenance, and promotion of vehicles, ecommerce, water transport, air transport, financial intermediation, insurance and pension funds, IT, education, and health.
10. To create a mechanism where all the pillars of the skill ecosystem systematically linked with the industry/employers, who in the non-farm sectors, are the actual users of the product of the pillars of the skills ecosystem.
11. Ensuring work based learning as part of the course curriculum of vocational education and training, in each pillar of the skills ecosystem has the potential to reduce skills mismatch, meeting skills demand of a fast changing labour market, providing cost-effective training, promoting private sector development and smoothing transitions to

the world of work.

12. Provision will need to be made to incorporate Recognition of Prior Learning (RPL) for workers in the informal sector as well as the organized sector, so that workers without any certification are assessed and certification.
13. During the 14th Plan period, the department's goal should be to double the number of apprentices in Kerala from the existing level.
14. Latest syllabus of Crafts Instructor Training Scheme (CITS) included hands on skills in industries and this is achieved with the cooperation of NSTIs/IToTs with Sector Skill Councils (SSCs)/Industries. Hence the department of industrial training has given prime importance to CITS which specifically covered all Learning Outcomes (LOs) required for each trade.
15. Provide world class skill training environment for enabling the employability of individuals and meet the needs of Industries.
16. For providing livelihood security to the weaker sections, different types of skill development training programmes including human resource development training and job oriented training programmes needs to be implemented for Scheduled Castes.
17. For creation of employment opportunities, District Skill Park to be established in all districts and 50% of the total land area of the skill park will be reserved for established firms.
18. Government needs to encourage Arts and Science Colleges, Professional Colleges, Polytechnic colleges, ITIs, to undertake skill courses as part of the extension of skill eco-system in our state and it would be helpful to develop production centers along with educational institutions.
19. In order to address lack of trained people in industries, to implement 6 months internship training programme for educated candidates in IT and other industrial institutions. The interns will be provided a monthly stipend of an amount up to 5000 as Government contribution and appointing institution should also bear at least the same amount.
20. Skilling in clusters: Formal industry in Kerala could be engaged in skill development in agroprocessing, bamboo, coir, cashew, ship building and MSME clusters that are doing well. Support could also be sought from the National Skill Development Corporation to start skilling centres near the clusters.
21. Formal policy framework to encourage R & D of multinationals. Kerala could put in place a formal policy framework that encourages multinationals to locate their research and development centres in Kerala. Such R&D centres will have multiplier effects in terms of skill generation.
22. Attract venture capital. The Government can take steps to attract venture capital from non-resident Keralites for start-ups in the technology space and other spaces.
23. Incentivize skill training. Incentivize skill trainings, especially at the undergraduate level. There is also a need to have an incentive structure for firms and organisations that undertake on-the job skilling.
24. Incentivize educational institutions and enterprises to maintain diversity not only in terms of gender, and social and economic status but also in terms of subjects of

learning.

25. Promoting a state fund to support grassroots innovators, with the aim of building a state register of innovators, converting innovations into viable business plans, and disseminating knowledge of indigenous innovations, especially for job creation.
26. Creating adequate space in higher education for multi-disciplinary and inter-disciplinary exploration.
27. Kerala must provide students with a strong education in science, technology, engineering and mathematics (STEM), and prepare them to succeed in the global economy and ensure the culture of knowledge creation. The state government must initiate STEM education programmes across selected institutions, with high quality delivery, impact and visibility.
28. Establishing science and technology parks to encourage industry-university collaboration. Such parks might attract R&D work from both foreign and domestic firms if the parks are situated close to reputable academic institutions.
29. Strengthening partnerships among government agencies, research and academic institutions, private companies, and nongovernmental organizations (NGOs) to ramp up the ICT infrastructure and achieve faster penetration of ICTs.
30. Evaluation of the schemes implemented for the last five years should be one of the priorities for the 14th Five Year Plan.
31. Taking a leaf from the health sector, unemployment can be tackled in two dimensions: the preventive and the curative. Taking preventive steps is far cost effective and efficient than curing the graduate.
32. There is need to regularly update the academic curriculum with Industry participation to equip students with tools that are relevant in the industry today.
33. Credits must be offered by Universities for technology-based skill modules as provided by the National Education Policy 2020.
34. The skill training programmes to prepare students for high end job roles are costly. Hence skilling scholarships and skill loans should be made available rather than full grant, with the state ensuring secondary default loan guarantee.
35. The revolutionary changes in the industry call for exposure and development of skills by the youth and students in cutting edge areas such as AIML, Big Data Analysis, electric vehicles, AR/VR, genomics, nano technologies. This calls for setting up of labs in these areas to be set up in Community Skill Parks with industry participation.
36. In the 14th Five year plan the department concerned should follow up the employment record of trainers programme both in terms of quality and quantity.
37. It appears that no concrete steps has been taken to follow up the skill gap identified the state and to overcome the same through innovative schemes with the help of private enterprises.
38. It is important to have clearly defined blue print from each of the Higher education institutes explaining how they are going to develop industry education linkages with respect by the sectors concerned.. It is also important that they work out in detail who would benefit such linkages and how their models are creative and imaginative in

addressing the challenges of knowledge economy in Kerala.

39. Curriculum teaching methodology and evaluation system in higher education institution need a through revamping in order to enhance the employability of the students. The placement cells need to be structured giving importance to industry, academic and LSG interface. The cells can undertake and promote entrepreneurship programmers drawing support from industry/government.
40. Role of alumni should be effectively tapped to explore emerging areas of employment, internship and placement.
41. Separate skill development courses need be started in higher educational institute with the support of KASE to ensure gainful employment to dropouts.
42. School level curriculum should focus on developing communication skill (reading, writing, listening and speaking skill).

APPENDIX I

List of Skill Development Schemes in the State During 13th Plan (Rs.in lakhs)

SLNo	Department/ Agency	Schemes/Programmes	2017-18		2018-19		2019-20		2020-21		2021-22		13 th FYP Gross Outlay	13 th FYP Gross Expenditure	Remarks
			Outlay	Expenditure	Outlay	Expenditure	Outlay	Expenditure	Outlay	Expenditure	Outlay	Expenditure			
I	**Education Department**														
1	Additional Skill Acquisition Programme	Skill Development Programme	42963	11500.6	28220	9350.92	28194	11714.1	5000	10967.8	2500	2042.3	106877	45575.79	It is an externally aided project (EAP). State share also included
2	Directorate of Technical Education	Multiple schemes	570	149.43	625	437.46							1195	586.89	Schemes include Placement and training, Finishing school in polytechnics, NVEQF in technical high schools and polytechnics, Additional

															skill developme nt in engineering colleges, and Production and training centres in polytechnic colleges.
II	**Local Self Government Department**														
1	Kudumb ashree	(a) National Rural Livelihoo d Mission (40% state share)	1000	63.3	7227	3613.98	7500	2680	6500	5633.86	6500	2177.08	28727	14168.22	Deen Dayal Upad haya Gram een Kaush al Yojan a (DD U-GKY) is the main skill develo pment progra m under

															NRLM. NRLM also includes Start-Up Village Entrepreneurship Programme (SVEP) and Mahila Kisan Sasakthikaran Pariyojana (MKSP).
		(b) National Urban Livelihood Mission (40%	1650	913.62	4000	1547.26	3000	1389.78	2000	1643.47	2500	612.45	13150	6106.58	NULM consists of several other components along with skill

		state share)													development.
		(c) kudumba shree Programmes	2050	2034.9	2400	19170.1	18325	11352.2	20000	17229.7	20000	3619.87	62775	53406.74	Expenditure Includes Micro Finance, Micro Enterprises activities and Agricultural activities,A &OE,BUDS,
III	**Labour and Skills Department**														
1	Industrial Training Department	(a) Jobs and Skill Development Scheme (40% state share)	1400	0	1151	0	152	50.7	152	406	220	0	3075	456.7	There are three programmes under this scheme- State Skill Development Mission (implemented by KASE), Setting up Model ITI, and Skill Strengthening for

														Industrial Value Enhancement (STRIVE) programmme.
		(b) Skill Development Programme of Industrial Training Department--Kerala Academy for Skills Excellence (KASE)	3500	3500	3800	3800	3900	1497	3435	2699.01	3400	200	18035	11696.01	
		(c) Upgradation of ITIs			500	0	447	0	395	0	400	0	1742	0	The scheme is to upgrade existing ITIs to increase the yearly intake
2	Employment Department	Conversion of Employment Exchanges into Centre of Skill and Employability Department	800	475	800	150	600	28.82	450	396.64	450	0	3100	1050.46	

3	NORKA Roots	Overseas Placement Operations	779	225	779	225	628	73.23	628	73.23	563	9.23	3377	605.69	The scheme aims to upgrade the skill of young workforce to meet the challenges in the overseas employment market.
IV	**Kerala Start-Up Mission**														
	Kerala Start-Up Mission	Youth Entrepreneurship Development Programme	6999	1855.95	7000	3920	7000	3156.66	6500	4368.99	5875	0	33374	13301.6	
V	Scheduled Caste Development Department	(a) Assistance for training, self-employment, and human resource development	4000	3545.6	4300	3851.87	3800	3379.89	5000	3843.21	5000	1055.5	22100	15676.07	

	(b) Improving facilities and renovation of pre-matric and post-matric hostels	1500	1637.2	600	672.69	600	1068.82	600	711.59	600	13.79	3900	4104.09	includes cost of providing coaching, programmes for soft skill development and for extra/remedial coaching, cost for conduct of seminar and workshop,and skill development for the inmates of the hostel.
Industries Department														
Directorate of Handloom and Textiles	Training and Skill Development Programme	225	204.74	200	146.51	200	95.22	168	128.45	150	7.17	943	582.09	
Khadi and Village Industries Board	Khadi Gramam Programme	452	60.34	432	39.61	100	20	170	100	70	0	1224	219.95	The scheme aims to impart skill development training to prospective entrepreneurs to reap

														advantages of the demand in the khadi sector.
3	Directorate of Industries and Commerce	(a) Capacity Building Programme	800	775.03	800	778.2	800	648.46	800	294.74	500	263.35	3700	2759.78	Activities under this scheme include entrepreneur awareness camps, seminars, entrepreneurship development programmes, conduct of technology clinics, sector specific training programmes, industrialization drives, etc.

		(b) Development of Bamboo-Related Industries	200	200	120	120	40	40	120	75	120	0	600	435	Activities under this scheme include skill upgradation training programmes for artisans and craftsmen.
VII	**Department of Social Justice**														
1	Social Justice Department	Gender Park	1100	0	1210	0	1050	487.28	1458.8	411.26	1550.5	72.55	6369.24	971.09	Scheme includes other components in addition to skill development.
2	Kerala State Women Development Corporation	Programme on Finishing School for Women	175	121.41	150	100.02	175	105	125	41	134	25.76	759	393.19	This expenditure is to meet the infrastructure requirements.
VIII	**Power Department**														

1	Agency for non-Conventional Energy and Rural Technology	Renewable Energy Public Engagement, Outreach, Studies and Development	1765	1000.1	1470	460.16	1700	582.76	400	399.98	468	0	5803	2443	This amount is allocated for the entire scheme. It includes renewable energy technician training and skill upgradation programmes
2	Energy Management Centre	Energy conservation activities	345	345	310	200.07	312	175.9	228	239.41	278	5.14	1473	965.52	Total allocation for the scheme in which skill development and awareness programmes are also included.
IX	**Scheduled Tribe Development Department**	(a) Assistance for self-employment and skill development training	500	409.55	550	323	1000	431.42	1000	788.8	1000	153.76	4050	2106.53	
		(b) Assistance to tribal welfare institutions	220	220	300	297.78	200	124	100	100	150	50	970	791.78	

X	**Fisheries Department**	Alternative/supportive livelihood activities for fisherwomen	500	500	1760	756.26	1500	578.85	1500	721	1500	0	6760	2556.11	The scheme aims to provide support to the new fisherwomen groups for alternate livelihood activities.
XI	**Tourism Department**														
1	Kerala Institute of Tourism and Travel studies	Providing quality educational programmes and training	400	300	440	176	440	211.2	300	299.99	300	0	1880	987.19	This amount is for academic programmes, skill labs, and infrastructure development.
2	Food Craft Institute	Imparting training in various trades of hotel and tourism industry	350	350	385	258.247	385	100.74	400	0	400	0	1920	708.987	This amount is for academic programmes, modernisation of labs, and infrastructure

														development.
3	State Institute of Hospitality Management	Imparting professional skills in the field of hospitality management	300	300	330	263.99	330	128.93	300	295.67	300	88.14	1560	1076.73	This is the entire amount allocated to the institute to meet expenses for academic programmes, infrastructure and purchase of equipment.
XII	Backward Communities Development Department	(a) Skill Development Training and Tool Kit Grant for Traditional Craftsmen among OBCs	310	309.95	310	247.94	200	199.77	250	249.95	250	44.21	1320	1051.82	The scheme aims to upgrade the skill of traditional craftsman, artisans, and other semi-skilled labourers belonging to Other Backward Communities.

		(b) Assistance to traditional pottery workers	180	134	200	4.75	50	33.37	28	28	28	14.25	486	214.37	The scheme aims to revive the traditional pottery industry by imparting training to pottery workers on modern methods and techniques of production.
		(c) Career in private industry through PPP	40	16.38	40	15.19	100	74.66	50	50	50	7.73	280	163.96	
XIII	**Minority Welfare Department**														
1	Directorate of Minority Welfare	Reimbursement of fees to the minority students in various skill training programmes	300	300	300	300	200	200	296	237.82	296	0	1392	1037.82	
XIV	Kerala State Welfare Corporation for	Development of Skill/Entrepreneurial Activities	0	0	100	0	100	0	300	169.65	300	0	800	169.65	

	Forward Communities Limited													
XV	Kerala State Information Technology Infrastructure Limited	Skill Delivery Platform Kerala	0	0	2537	0	3500	0	4200	1229	1000	0	11237	1229	Skill Delivery Platform Kerala links Engineering Colleges in the State with IT parks via tele-presence network connecting 150 Hi Tech classrooms to deliver skills training to approximately 50,000 students per year. The skills programmes will cover minor degrees as well as

															various certification programmes and expert lectures to enhance the employability of students.
XVI		Kerala State Innovation Council-Innovation Challenge Fund	100.00	9.8	100.00	950.36	1500.00	837.84	1275.00	1741.07	1500.00	4773.69	4475.00	8312.76	
	Total		**75473**	**31456.9**	**73446**	**52177.36**	**88028**	**41466.64**	**64129**	**55574.27**	**58352**	**15235.99**	**359428**	**195911.16**	

APPENDIX II

Existing Institutional Set up and Employment and Skill Development Activities during 13th Plan

Additional Skills Acquisition Programme (ASAP)

Additional Skill Acquisition Programme (ASAP), part of the State Skill Development Project (SSDP), was launched in 2012 jointly by the Higher and General Education Departments. It aims at tackling the problem of educational unemployment by introducing market-relevant foundation training, vocational training and career counseling alongside the general curriculum at the higher secondary and under graduate levels. ASAP has delivered quality skill training in the State to 2, 01,409 students from more than 1,100 Higher Secondary Schools and Art and Science Colleges.

Regular Skill Training Programmes of ASAP

Its regular mode of training includes a foundation skill training comprising of 100 hours of communicative English and 80 hours of basic IT skills provided to the students. This is followed by an assessment and certification by the language proficiency test of the British Council called 'APTIS' with a fee structure determined by the State Government.

ASAP has designated selected schools and colleges as specialized training centres called Skill Development Centres (SDC) where skill training classes are carried out. A major focus in 2019-20 was strengthening the Advanced Skill Development Centres (ASDCs) set up in Engineering Colleges and Polytechnic Colleges. (see Chapter on Education).Currently foundation classes are conducted in 121 SDCs. In 2019-20, ASAP has spent 51.73 crore for training.

- In 2019-20, 62 skill courses were provided by ASAP
- 30,869 students enrolled in ASAP in 2019-20
- 5529 women enrolled under She-Skills 2019
- In the year 2019-20, 34,768 APTIS certificates and 24,496 Skill course certificates were issued
- 22 polytechnics were selected for conducting the programme 'community college' which aims to uplift the weaker sections of communities by identifying local employment and self-employment opportunities and provide relevant skill training
- 16 Community Skill Parks are to be implemented in the State out of which 9 of them are already operational ,while the remaining 8 CSPs are under construction phase

Skill Training Programmes for Kudumbashree and SC/ST

Kudumbashree, the State poverty eradication mission, was formed with the objective of poverty eradication through the empowerment of women. As a part of skill development among women, this agency conducts many training programmes at State level. It is the nodal agency of centrally sponsored programme called Deendhayal Antyodaya Yojana-National Rural Livelihood Mission [DAY-NRLM]. Under this scheme, with the aim of demand-led skill training at no cost to the rural poor, Deen Dayal Upadhyaya Grameen Kaushalya Yojana [DDU GKY] provides skill based training to men and women, among whom large numbers are Kudumbashree members. The details are given in Table 5.

Table 4 Number of persons trained and appointed, 2019-20 and 2020-21

Name of the Scheme Components	Components	Physical achievements (in number)	
		2019-20	2020-21 (upto September 30, 2020)
DDU GKY	Persons Trained	13,113	125
	Persons Appointed	9,957	120

Source: Kudumbashree Mission

SC/ST Skill based training programme details

The lack of education, skill development and limited employment opportunities has kept Scheduled Castes and Tribes out of the commendable human development in Kerala. Skill development among this class is the need of the hour so as to make them confident, to develop in them the ability to participate in decision making and become self-reliant. By empowering them through education and skill development, they can live with dignity and self-esteem. There are two skill development schemes for SC/ST,

i. Assistance for self-employment skill development training to ST youth; and
ii. Assistance for Training, Employment and Human resource Development (SC). Details are given in Table 6.

Table 5 Details of Skill training conducted for SC/ST

Year	No. of Skill Training conducted	No. of Courses	No. of Persons Attended	Placement	
				India	Abroad
2016-17	3	5	457	288	1
2017-18	4	8	1430	1393	
2018-19	6	14	870	659	10
2019-20	11	22	1148	306	11
2020-21	4	4	1450		
Total	28	53	5355	2646	22

Source: SC/ST departments, GoK

For Scheduled Caste and Scheduled Tribe, from 2016-17 to 2020-21 (upto September 30, 2020) there were 53 skill training courses conducted under this programme, 5355 candidates attended the training programme of which 2646 trainees got placement in India at various institutions and 22 people got placed abroad.

Industrial Training Department

Industrial Training Department is functioning under the Labour and Skills Department, Government of Kerala. It is the State level nodal agency for implementing various skill development activities of Director General of Training, Ministry of Skill Development and Entrepreneurship, Government of India. The Director of Training heads the Department.

The Department is implementing the two major schemes introduced by the DGE&T, namely Craftsman Training Scheme and Apprenticeship Training Scheme through various Government and private institutes spread in urban, semi urban and rural areas of the State. The free training and other assistance given to the trainees helps to bring backward sections of society into the main stream of technological advancement. By using the latest technologies in imparting training the Department enhances the employability of the trainees. The aim of the DGE&T is to create a skilled and technically qualified workforce who would contribute to the growth and development of the nation and to provide quality training to all possible people so as to achieve the national goal of 500 million skilled persons by 2022 so as to reduce unemployment.

Craftsman Training Scheme (CTS)

The Craftsman Training Scheme was introduced by the Government of India in 1950 to ensure a steady flow of skilled workers in different trades for the domestic industry, to raise quantitatively and qualitatively the industrial production by systematic training and to reduce unemployment among the educated youth by providing them employable training. National Council for Vocational Training (NCVT) is the apex authority in the country in the implementation of the scheme. As per the scheme National Trade Certificate (NTC) is issued to the trainee who completes the training in a particular trade and passes the All India Trade Test. There are about 85 trades in which seats have been allocated for Craftsman Training with a total seat capacity of 54060 (Government ITIs – 35772 and other institutes (SCDD/STDD, and Private ITIs)-18288).

Apprenticeship Training Scheme (ATS)

The Apprenticeship Training scheme is being conducted as per the provisions mentioned in the Apprentices Act 1961. Apprentices Act, 1961 was enacted with the objectives to regulate the programme of training of apprentices in the industry so as to conform to a standard syllabi, period of training, skill sets and to utilise the facilities available in industry for imparting practical training with a view to meeting the requirements of skilled manpower for the industry. Apprenticeship is a contract between an apprentice and an employer to provide a stipend fixed as per the Apprentices Act 1961. The Central/State Government acts as the third party in the contract, regulating and monitoring the process. Recently, Government of India introduced National Apprentice Promotion Scheme (NAPS) and through this scheme Central Government will reimburse 25 per cent of stipend as reimbursement to the Establishments.

Apprenticeship trainings in Kerala are both Central and State initiatives. National Apprenticeship Certificate (NAC) is issued to those who complete the apprenticeship training in an organisation and passes the National Apprenticeship Trade Test. Apprenticeship schemes in the State are implemented through office of the State Apprenticeship Advisor and Assistant Apprenticeship Advisor in 14 Districts. There are 81 trades in which seats have been located for Apprenticeship Training.

- Number of seats located : 7963
- Number of seats utilised : 2807

- Number of Establishments located : 2443 (Government: 869, Private: 1574) Number of Establishments utilised : 746 (Government: 251, Private : 495)
- Around 2000 students are certified every year under this scheme.

Industrial Training Institutes

There are 99 Industrial Training Institutes under the Industrial Training Department. Private ITIs are also functioning in the State. A total of 35772 seats are available in these ITIs, 30 per cent of seats are reserved for women candidates. 14 women ITIs are functioning in the State in Government sector. In addition, 44 ITIs are operating under Scheduled Caste Development Department (SCDD) and 2 ITIs are operating under Scheduled Tribe Development Department (STDD).

Skill Updating Institute for Industrial Training (SUIT) – Kerala, Kazhakkuttom. Skill Updating for Industrial Training – Kerala, was started in 1999 at Kazhakkuttom, Thiruvananthapuram, to update the skill and knowledge of instructional staff and others to keep pace with new technical developments. The activities of this institute are, study on Training Need Assessment (TNA) and preparation of course design, research in new methods of teaching, skill updating programmes of technical staff, soft skill training, training programmes under State Training Policy at IMG, off campus training programmes, monitoring of virtual class training and coordinating DLP training of DGE&T.

India Skills-Kerala 2019

Inspired by the resounding success of skill competition, India Skills 2018, the Department opened up the stage for 'Battle of Skills' – this time with more vigour and more colour. Titled 'India Skills Kerala 2019', the skill competition was held in February 2020 at Swapnanagari, Kozhikode.

India Skills Kerala 2018 witnessed tremendous response from the youth of the State. 7422 participants registered for the District level and the finals at Marine Drive was a one-of-its-kind event with 112 finalists.

Further, winners and runner-ups of each trade were given special training and represented the State for the regional competitions of national competition 'India Skills 2018' held from 21-23 June 2018. Out of the 40 contestants from the State at the regional competition, 20 emerged as winners and represented Kerala at the national level competition convened from October 2-5, 2018 at New Delhi 2018. Out of this, 3 candidates represented our country in the World Skills 2019 held at Kazan, Russia. Two participants from Kerala bagged Medallions of Excellence awards. One government ITI trainee won the award in wall and floor tiling and a B.Tech graduate won in 3D Game art. To sum up, India Skills Kerala 2018 opened the gate way to World Skills 2019.

The Winners of India Skills Kerala 2018 also represented our country in various international skill competitions such as Euro skills 2019, Asia Skills 2019, Hi Tech Russia 2019 and World Skills Australia 2019.

ISO Certification

Quality has been the hallmark of our Industrial Training Institutes. Various innovative

techniques are introduced in training. The target is to ensure result oriented performance by our institutes. These initiatives of the department are recognised with ISO certification awarded to 34 ITIs.

ISO Certified ITIs are listed below

ITI (W) Kozhikode, ITI Ettumanoor, ITI Mala, ITI (W) Kalamassery, ITI Kozhikode, ITI Kalpetta, ITI Kannur, ITI (W) Kazhakkuttom, ITI Attingal, ITI Chenneerkkara, ITI Kalamassery, ITI (W) Chalakudy, ITI Arecode, ITI Chengannur, ITI Dhanuvachapuram, ITI Chackai, ITI Kollam, ITI Kollam (W), ITI Pallickathode, ITI Kattappana, ITI Chalakkudy, ITI Malampuzha, ITI Kannur(W), ITI Kasaragod, ITI Arayanadu, ITI Chathannoor, ITI Malayinkil, ITI Pallipadu, ITI Attappady, ITI Kayyur, ITI Koilandy, ITI Nilambur, ITI Kuzhalmannam, ITI Madayi.

Development of Websites for ITIs

Department developed separate websites for all the Government ITIs in the State according to the guide lines of DGE&T. It provides information about the institute, courses, admission details, faculty, services, specialities, consultancy and its future plans to all stakeholders.

Group Insurance Scheme

Around 30,000 trainees were trained in various schemes through Government ITIs in a year. Trainees were trained with heavy and sophisticated machinery in the workshops of the institutes and at factories during in-plant training. Trainees are thus prone to dangerous hazards throughout their training period. Hence, a Group Insurance Scheme was introduced for the trainees in 2018-19. This offered one year insurance protection for ITI Trainees (3 lakh coverage).

Technical Exchange Programme

Department introduced Technical Exchange Programme for ITI Trainees. The main objective of the scheme is to give training to trainees in training institutes abroad. In 2018-19, 46 trainees in various trades were selected to participate in a training programme conducted by ITE Education Service Singapore. According to data received from Training Directorate reveals that 25 out of the 46 trainee's details are available. Among them 4 are working abroad, 10 working private and government sector, 5 trainees are not employed and rest of them are engaged in higher studies which includes BTech. and Polytechnics.

Naipunya Karmasena

The Naipunya Karmasena was formed by the Department to rectify the electrical, plumbing, carpentry issues that emerged following the flood. Besides ITI trainees a team of officials having technical knowledge, participated in the activities. Department setup Naipunya Karmasena as a permanent establishment in 2020-21.

Placement Cell

2139 trainees got placement through placement cell in 2019-20.

Major Milestones in the financial year 2019-20

- India Skills – Kerala 2020 -the skill competition was an arena for celebrating world class excellence in skills and an avenue for the youngsters to showcase their functional and

vocational skills. The winners will represent the State at the national skill competition 'India Skills 2020', which will open the gates to the 'World Skills Shanghai 2021'.

- Job Fair was conducted in three regions for getting placement.
- Department has taken action to upgrade 10 ITIs to international standards through KIIFB Funding. The selected ITIs are ITI Dhanuvachapuram, ITI Kollam, ITI Chengannur, ITI Ettumanoor, ITI Kattapana, ITI Chalakkudy, ITI Malampuzha, ITI Koyilandi, ITI Kannur, and ITI Kayyur.
- Introduced Green Campus project in 14 selected ITI s with the support of Haritha Kerala Mission.

Centre for Research in Education and Teacher Training (CRETT)

The Centre for Research in Education and Teacher Training (CRETT) is a joint initiative of the Kerala Academy for Skills Excellence (KASE) and Sadhbhavana Group at Kozhikode, to provide relevant training to educators in conformation with contemporary needs and affirming quality and excellence with 70 per cent assured placement.

Kerala Academy for Skills Excellence (KASE)

With the objective of skilling the young workforce of Kerala and elevating their skills to global standards for employment in India and abroad, the Government of Kerala has set up Kerala Academy for Skills Excellence (KASE), a non-profit private company as the nodal agency for facilitating and coordinating various skill development initiatives of the State. It is incorporated to pursue its main objectives to promote, establish, set up, monitor, govern and regulate institutions and academies for skills excellence for development of core employability skills, competency standards and for promoting technology that meets the demands of various industries globally.

Skill Convergence in Kerala

For institutional strengthening at the National, State and District level, Kerala Academy for Skills Excellence (KASE) has been designated as the State Skill Development Mission (SSDM). Various departments have their own skilling programmes, which inadvertently result in duplication. This emphasizes the need for convergence across the departments under a mission at the State level. This mission would guide, coordinate, monitor and evaluate skilling initiatives and bring all skill development activities of the State under a single umbrella. To achieve this objective, KASE as the State Skill Development Mission, proposed a focused, integrated skill continuum with the following features:

- Governed by an administrative framework for governance
- SSDM as the skill secretariat
- World Skill Lyceum – think tank for the skill secretariat

Administrative framework for Governance consists of the following two administrative bodies at the Government level for regulating skill development initiatives in the State.

1. State Level Steering Council – A policy formulating authority for skill development in the State. It is designed to be a governing body and would approve the process flow to be followed by skill development centres across Kerala, monitoring and guiding

the high powered committee in tune with the skill policy of the State. The council is chaired by the Hon'ble Chief Minister with various Ministers, Chief Secretary and representatives of industry as members of the council. The council shall be convened by the Secretary, Labour and Skills Department.

2. High Power Committee – Chaired by the Chief Secretary and convened by Managing Director, KASE, the Committee implements policy decisions taken by the State Level Steering Council and regulates skilling programmes conducted by various organisations. Members of the committee include Secretaries of various Departments.

International Skill Training and Employability Programme (i-STEP)

Considering the peculiar demographic characteristics of the State of Kerala, unique skilling models have been adopted by KASE with industry tie-ups and placement linkages. KASE associates with industrial partners or prospective employers or entrepreneurs through the i-STEP (International Skill Training and Employability Programme), a single window initiative to associate with the skill development mission of Government of Kerala. i-STEP is open to any sector of the industry, where the skill gap is identified by the stakeholders. Projects proposals, with the aim of imparting employability skills and 60 per cent assured placements, can be submitted for consideration under i-STEP initiative of KASE.

Models under i-STEP are as follows:
A. Centres of Excellence (CoE)
B. Accreditation of Skill Training Courses
C. Skill Training programme
A. Centres of Excellence

KASE has set up Centres of Excellence in Nursing, Security Skills, Oil and Rig, Teaching, Water and Waste Water Treatment and Construction.

1. Nursing Institute for Career Enhancement (NICE)

Nursing Institute for Career Enhancement (NICE), the Centre of Excellence in Nursing, is a first-of-its-kind initiative in India which provides world-class training facilities for enhancement of the employability skills of nurses. KASE partnered with M/s. Trivandrum Specialties Hospitals (NMC Healthcare Group, UAE) to set up this Centre of Excellence in Nursing at KINFRA International Apparel Park, Thiruvananthapuram. A total of 586 candidates have completed the training and 190 have been placed till June 2020 and now 28 students are undergoing training.

2. Centre for Advanced Training in Security (CATS)

KASE has partnered with the International College for Security Studies (established under M/s. Pragmatic Educational Society) to establish a Centre of Excellence in National Security named as Centre for Advanced Training in Security (CATS) to impart advanced training in security skills at KINFRA International Apparel Park, Thiruvananthapuram. A total of 192 students have successfully completed the training, of which 76 have been placed up to June 2020.

3. Enlighten Skill Training Programme for Oil and Rig (ESPOIR)
KASE has partnered with Eram Engineering WLL, Qatar to set up the Centre of Excellence in Oil and Rig for equipping the youth with requisite skills needed for this industry. The academy, located at INKEL TOWER, Angamali focuses on imparting practical skills and hands-on training through its well-equipped labs and workshops which meet international standards. Out of 1107 candidates who have completed training, 723 have been placed till date and 165 students are currently undergoing training.

4. School of Water Technology (SWAT)
Green Method Engineering (P) Ltd located at Kochi is one among the pioneer institutions in focusing on water and waste water treatment plant. The institution offers a range of water and waste water management solutions using most up-to-date equipment and technologies. Upto June 2020, total 48 candidates got trained, out of which 40 students have been placed and 14 candidates are currently undergoing training.

5. Indian Institute of Infrastructure and Construction (IIIC)
The Government of Kerala, through KASE, is setting up the Indian Institute of Infrastructure and Construction (IIIC) at Chavara, Kollam, which is of international standards with the aim of offering high end courses in Construction Engineering and Management and also providing skill training for workforce ranging from trades including masonry, carpentry, plumbing, electrical to draftsman with CAD expertise, supervisor and site manager. IIIC would impart skill training for technical personnel like ITI certificate-holders, Diploma holders and Engineering graduates, and would make them readily employable in national and international arena. IIIC started functioning in October 2018 with a vision to be recognized as a nationally reputed institution for skills training and to train as many youth as possible and make them employable in India and abroad.

There were 7 courses in the first phase, among them, 3 three month courses were completed in January 2019. All students, except 5 who have opted for higher studies have been placed. Two six months courses, plumbing engineering and painting and finishing work were completed in April 2019; 80 per cent of students have been placed.

Besides, IIIC has signed a MoU with Cambridge English for the conduct of BULATS course (Business Language Testing Services). All students of managerial courses and staff participated in the 5 day training of BULATS, the first session was conducted on March 29 and the last batch completed on May 4. About 150 students and staff successfully completed the BULATS course and they will be receiving certificate issued by Cambridge English.

B. Accreditation
Reputed skill training institutions can associate with KASE in getting them accredited so as to enhance their reach and acceptance in attracting suitable candidates. The public acceptance in the services of accredited institutions is increased when they know that standards are being monitored and enforced. The KASE symbol is a means of identifying institutions that uphold and sustain high standards.

1. Hedge School of Applied Economics, Kochi

Students with background in commerce, management or aptitude for business are offered a unique opportunity to build their analytical and practical skills essential for marketing/ operations in financial and banking services through KASE accredited programs at Hedge School of Applied Economics, the knowledge initiative of M/s. Hedge Equities. Out of 2258 candidates, 402 have been placed up to June 2020.

2. Induscan Petroleum, Nilambur, Malappuram

KASE has accredited the courses namely; Quality Control Engineer and Quality Control Inspector offered by Induscan Petroleum Institute, Malappuram- an institute pioneering in customised skill training for all kinds of mechanical construction industries especially in oil and gas sector. The course syllabus is designed and developed for fresh engineers/ diploma holders to take independent responsibilities in planning, purchase, materials, piping, fabrication, welding, inspection and Quality Assurance (QA)/Quality Control (QC) engineers after successful training. 263 students have completed training and 165 students have been placed up to June 2020.

3. SMEC Automation Private Limited, Kochi, Ernakulam

KASE accredited course namely, Certified Automation Engineer, offered at SMEC Automation Pvt. Ltd., Kochi is an advanced industrial automation skill excellence programme tailor made for fresh and experienced engineering graduates, diploma holders and students from ITI. 132 students have completed training and 46 students have been placed up to June 2020.

4. Dhanwanthari Educational and Charitable Society, Idukki

KASE has partnered with Dhanwanthari Vaidyasala through its division Dhanwanthari Educational and Charitable Society, Idukki, by accrediting the courses such as Diploma in Panchakarma Therapy, Diploma in Ayurveda Nursing and Diploma in Ayurveda Pharmacy. The course module in Diploma in pharmacy consists of Panchakarma, Ayurveda utpatti, Branches of Ayurveda, Concept of vada/pitta/ kapha, Pancha mahabhuthas, concept of Agni, concept of saptadhatu and Trimala, dravya guna, concept of rasa/guna/virya/vipaka/ prabhava, collection, preparation and storation of drug, Pharmacology, preparation of sandhana kalpana, preparation oftaila/grutham/gulika/vataka/capsules. Out of 260 students who have completed training, 166 have been placed up to June 2020.

5. Atheos Institute of Skills Excellence, Palakkad

KASE has partnered with Atheos Educational Initiatives Pvt. Ltd, Bangalore, through its division Atheos Institute of Skills Excellence, Palakkad in Tourism and Hospitality sector by accrediting the courses such as Kitchen Steward, House Keeping Attendant, Food and Beverage Trainee. They are imparting vocational educational and skill development training to achieve sustainable, inclusive growth for both the rural and urban economy in alignment with the objectives and guidelines of National Skills Qualifications Framework (NSQF) and Skill India initiative. A total of 440 candidates have been trained of which all have been placed.

6. Intercad Systems Private Limited, Thiruvananthapuram

Computer Designing is increasingly gaining importance in the present industrial world. So for the skill development of youth in computer designing for Civil/Architecture and Mechanical sector, KASE has partnered with Intercad Systems Private Limited, Thiruvananthapuram for conducting the following courses accredited by KASE namely, Revit Architecture, and 3DS Max Design and AutoCAD, PTC Creo and Diploma in Mechanical CAD. 44 students have completed training up to June 2020.

7. Blitz Academy, Kochi, Ernakulam

Blitz Academy is a training provider of KASE engaged in training programmes in Mechanical and Civil Engineering such as ASNT NDT Level II, Welding Inspection, Piping and Pipeline Engineering, Mechanical QA/QC, Civil QA/QC and Quantity Surveying. Total numbers of candidates trained up to June 2020 are 1450 of which 812 have been placed.

8. Sports and Management Research Institute, Thiruvananthapuram

Synergians Society through its division Sports and Management Research Institute is engaged in training programmes such as PG Diploma in Sports Management, Certified Sports Manager, Advanced Diploma in Sports Business and Advanced Diploma in Sports Engineering. Total number of candidates trained till date is 44, out of which 27 have been placed.

9. Thoughts Academy, Thiruvananthapuram

The course offered at Thoughts Academy is "Certified Learning and Development Professionals" having duration of 40 hours with 36 hours of class room training and 4 hours of WebEx Services. The curriculum covers 60 hours of Project and 6 hours of Co-facilitation with number of assignments. The minimum eligibility for enrolling to this programme is Graduation or Diploma. The course is targeted for currently employed trainers, learning and development professionals, freelance or entrepreneurship prospects, soft skill trainers and professionals who are aspiring to be trainers.

Kaushal Kendras

KASE has set up Kaushal Kendras across Kerala as rural skill hub focused on rural youth with world-class training facilities. Kaushal Kendras are community skill hubs focused on rural population having facilities for providing training in different sectors such as communication skill, digital literacy, quantitative aptitude, analytical skills and soft skills. It will be a one-stop guidance complex with a multitude of career cluster touch points and a helping hand for students, job aspirants and unemployed candidates to achieve their specific goals in education and career. The career counsellor in Kendra will provide career guidance for the registrants and relevant information about the details of educational loans, career prospects of a particular course, details of institutions for higher education, various competitive examinations and scholarships. In addition to this, Kaushal Kendras will act as a platform for improving the communication skills and employability skills of the candidates.

Objectives

1. To train rural candidates in areas such as digital literacy, communication skills, quantitative and analytical aptitude and financial literacy and also to provide

employability skills and employment enhancement training programmes and information regarding education and placement to all candidates who approach the Centre.

2. To provide information regarding details of educational loans, various scholarships, fellowships, furnish details of the institutions for higher studies, various competitive examinations, assist the candidates to apply online for various educational programmes and examinations, information regarding the various skill development programmes and employment opportunities.

Kaushal Kendras offer the following various courses;

- English language (Basic & Intermediate) by Cambridge University Press
- Quantitative Aptitude and Analytical Reasoning by Centre for Management Development
- Digital Literacy and Computer Skills Training by National Institute of Information and Information Technology (NIELIT)
- Basic Electrical training

Currently three Kaushal Kendras have been set up at Kollam, Kozhikode and Palakkad Districts. Upto September 30, 2019, a total of 8448 candidates were registered and trained at Kaushal Kendras.

Kerala State Institute of Design (KSID)

The Kerala State Institute of Design (KSID) was established as a unit of KASE and is located at Chavara, Kollam, for the purpose of creating a vibrant design community in Kerala through synergistic partnership between artisan community, professional designers and the general public. It was supported by National Institute of Design (NID) Ahmedabad.

The primary objective of KSID is to promote design education and enhance interplay of technology, management, creativity and design skills among youth, and most importantly to improve the quality of lives, through design application. The Institute provides modern courses like, Integrated Textile and Apparel Design, Integrated Lifestyle Product Design, Information and Technology Integrated Communication Design.

Courses for all three courses commenced in 2015. The number of admissions from 2016 to 2019 are shown in Table below.

Table 6 Number of students enrolled for courses in KSID, 2016 to 2019

Sl No	Year	No of Students
1	2016	16
2	2017	16
3	2018	29
4	2019	23

Source: Industrial Training Department, GoK

Employability Centers

Concerted and systematic efforts are required to make the youth employable and to place them in private sector by making them competent to avail the employment opportunities. With this objective, Government of Kerala through Directorate of Employment and Training and KASE have set up Ten Employability Centers in the Districts of Ernakulum, Kannur, Kozhikode, Kollam, Palakkad, Kottayam, Alappuzha, Thrissur, Malappuram and Kasaragod. These Centres are functioning beside the Employment Exchanges in the respective Districts. The infrastructure facilities to conduct training and other HRD process are available within the Employability Centre itself. Government, through KASE, provides the necessary hardwares and softwares for the smooth functioning of Employability Centres.

- One more Employability Centre in the District of Idukki will be operational by 2020.
- A total number of 1,67,164 candidates were registered up to 31.03.2019, out of which 1,11,687 have completed basic soft skill training and 49,922 candidates were placed in various sectors through Employability Centres.

Career Development Centres

KASE in association with National Employment Service Department, Government of Kerala, is in the process of setting up Career Development Centre/Mini Employability Centre (CDC/MEC) across Kerala. The Centre acts as a destination where individuals can obtain authentic solutions for all kinds of career issues faced by them. The Centre adapts the latest technologies and appropriate tools in Career Management to address the issues of individuals. The Centre offers various services like assessment and counselling, well equipped library with internet facility, various outreach programmes in educational institutions, career lectures/ workshops, exposure visits, soft skill training etc.

- Currently Five Career Development Centres have been set up at (Perambra) Kozhikode, (Chittur) Palakkad, (Neyyattinkara and Palode) Thiruvananthapuram and (Kayamkulam) Alappuzha Districts.
- One more Career Development Centre in the District of Ernakulam (Thripunithura) will be operational by 2020. A total number of 18,122 have been registered and trained upto September 30, 2019.

Kerala State Job Portal

Department of Labour and Skills, Government of Kerala has launched a unique single window facility for job seekers and employers to boost employment in the State. State Job Portal (http://statejobportal.kerala.gov.in/) is envisaged to be a one-stop solution or all-inclusive support system for job search and recruitment. It is envisaged as a platform beyond a regular job bank and has multiple features that are engaging and interesting for the job seekers and job providers. Students passing out of various Government and non-government institutes across Kerala will get automated access to the Job Portal. Companies who would like to recruit students from colleges or institutes henceforth need not even visit colleges. State Job Portal provides end-to-end recruitment solution starting with job posting till issue of final offer letter.

Current Status of State Job Portal:

- Total Job Seekers Registered: 57875Total Employers Registered: 571 Total Partnered Institutes Registered: 137Total Vacancies Posted: 5586 Total Job Applications: 8006
- Total Interview Scheduled: 1253
- Total Job Offered: 23

Skill Registry

Skill Registry is a mobile application developed to avail the services of skilled workforce for the daily household and commercial needs directly to the public. Skilled labourers can register as Service` Providers and those who require their services can register as customers at www.keralaskillregistry.com. The app has been developed by KASE (Kerala Academy for Skills Excellence) in cooperation with Industrial Training Department, Kudumbashree and Panchayat department. The application provides an opportunity for skilled laborers to find day to day jobs and making them capable to find their daily work by themselves. Skilled labourers who are not certified or professionally trained will also be considered on producing a declaration certificate by the Panchayat. This also acts as a platform for the customers to find their daily job requirements without any intermediaries. Major Services in 24 service sectors namely AC, washing machine, refrigerator, oven, fan/iron box, computer, mixer and grinder service and repair, electrician, plumber, carpenter, painter, coconut climber, day care-child care in home, driver, gardening and landscaping, geriatric care-in home/hospitals, grass cutting, home cleaning, house-keeping, house maid, laundry and ironing, masonry-small construction work/renovation/compost pit/ring work, mobile beauty parlor-services at home, santhwanam-health check-up at home (sugar, cholesterol, BP) television repair and installation has been included in the mobile application. In the primary stage, the application is operational only in Thiruvananthapuram District which will be extended to other Districts gradually. The details are given in Table below.

Table 7 Current Status of Skill Registry Mobile Application

Registered Service Providers	Pending service providers for approval	Approved Service Providers	Total customers registered	Total Service orders	Total Services available
6899	550	4643	16377	716	42

Source: Industrial Training Department, GoK

Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 2.0

Kerala Academy for Skills Excellence (KASE) is the nodal agency for the implementation of Centrally Sponsored State Managed (CSSM) component of Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 2.0 scheme, by virtue of its designation as the State Skill Development Mission. PMKVY is the flagship outcome-based Skill Training Scheme of the Ministry of Skill Development and Entrepreneurship (MSDE). This Skill Certification Scheme aims to enable and mobilize a large number of Indian youth to take up skill training and become employable and earn their livelihood. The details are given in Table below.

Table 8 Status of PMKSY 2.0, April 2018 to September 2019

Details	Number
A. Empanelment of Training Partners and Target Allocation	
EoIs floated for empanelling Training Partners	3
Training Partners empanelled	73
Training Targets allocated to Training Partners	46570
B. Status of Training	
Candidates enrolled for training	11753
Candidates certified	6728
Candidates Placed	885

Best Practices

- According to PMKVY Scheme guidelines, the trainers should be ToT (Training of Trainers) certified by respective Sector Skill Councils (SSCs) and this should be ensured by the Training Partner. However, for the early commencement of batches, KASE has approached various Sector Skills Councils and exclusive ToT for trainers within Kerala has been done.
- Also, to ensure National Institute for Entrepreneurship and Small Business Development (NIESBUD) certification of Trainers, KASE in association with NIESBUD has conducted exclusive training for the PMKVY Trainers (148 nos) in Kerala.
- KASE in association with National Skills Development Corporation (NSDC) has conducted various handholding sessions to the Training Partners, including the workshop on new skill India portal.

SANKALP

The Government of India has launched a World Bank assisted project Skills Acquisition and Knowledge Awareness Livelihood Promotion (SANKALP) Programme, under Ministry of Skill Development and Entrepreneurship (MSDE), to strengthen the institutional mechanisms for skill development and increase access to quality and market relevant training for youth across the country. As part of implementing the SANKALP project III, regional workshop was held from February 13 to 15, 2019 at Institute of Management in Government (IMG), Thiruvananthapuram with the participation of 45-50 officers from States, MSDE, NSDC and World Bank along with the Senior Officers from the States of Rajasthan, Gujarat, Chandigarh, Daman and Nagaland. In addition to these, the representatives from Wayanad, Idukki and Kasaragod had participated in the Workshop.

Skill learning enables students to get a job in a variety of ways and thereby earn regular income stream. In addition, skill learning helps to increase access to employment opportunities. Central and State Governments have identified such skill gaps and are working to address them and enable skill development.

APPENDIX-III

PROCEEDINGS OF THE MEMBER SECRETARY
STATE PLANNING BOARD
(Present: Sri. Teeka Ram Meena IAS)

Sub: - Formulation of Fourteenth Five Year Plan (2022-27) – Constitution of Working Group on **Knowledge Economy, Employment & Skills** – reg.
Knowledge Economy, Employment & Skills

Read: 1. Note No. 297/2021/PCD/SPB dated: 27/08/2021
2. Guidelines on Working Groups

ORDER No.SPB/437/2021/PPD/W (1) Dated: 7/9/2021

As part of the formulation of Fourteenth Five Year Plan, it has been decided to constitute various Working Group under the priority sectors. Accordingly, the Working Group on **Knowledge Economy, Employment & Skills** is here by constituted with the following members. The Working Group shall also take into consideration the guidelines read 2nd above in fulfilling the tasks outlined in the ToR for the Group.

Co – Chairpersons

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Members

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4. Dr. P. Sureshkumar, Director, IHRD, Vazhuthacaud, Thiruvananthapuram-14, Ph. – 2323597, 2322985, Mob:085470 05000 E-mail-director@ihrd.ac.in

5. Anoop Ambika, Chief Executive Officer, Genpro Research, Trivandrum, E-mail-anoop.ambika@genproresearch.com Mob: 9447168522

6. Smt. Usha Titus, CMD, Additional Skill Acquisition Programme (ASAP), Trans Tower, 3rd Floor Thiruvananthapuram, Kerala 695014, 9495999718 cmd@asapkeral.gov.in

7. Smt.P.I., Sreevidya IAS,Executive Director, Kudumbashree,Thiruvananthapuram -695011,Phone: 91-471-2554714, Email: info@kudumbashree.org

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9. Sri. Gopalakrishnan K IAS, Managing Director, Kerala Academy for Skills Excellence (KASE), 3rd Floor, Carmel Tower, Vazhuthacaud, Trivandrum-14 kase.kerala@gmail.com, Phone 2735949 ,2735949

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11. Dr. K P Vipin Chandran, Assistant Professor of Economics, Krishna Menon Memorial Government Women's College Kannur,670004 (Pin), Mobile: 9447650112, Email: kpvipinchandran@gmail.com

12. Dr. Jipson V Paul, Assistant Professor of Political Science, St.Mary's College Sultan Bathery, Wayanad, 673592(Pin), Mobile:9946911677, Email: jipsonmecheril@gmail.com

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16. Shri A Bheemeshwar Reddy, Department of Economics and Finance, Birla Institute of Technology & Science (BITS) Pilani, Hyderabad Campus, Jawahar Nagar, Shameerpet Mandal, Hyderabad - 500 078, bheem@hyderabad.bits-pilani.ac.in, 9494231250.

Convener

Dr. V. Santhosh, Chief, Perspective Planning Division, State Planning Board, drsanspb@gmail.com, chiefppdspb@gmail.com, 8547434266

Co-Convener

Smt. K.B. Sreelatha, Joint Director, Perspective Planning Division, State Planning Board, 9645390896

Terms of Reference

1. To comprehensively review the status of employment and unemployment in Kerala with special emphasis on the 12th and 13th Five Year Plan periods.
2. Evaluate the skills required for the new knowledge economy, including skill gaps, and suggest measures to meet the skill gaps.
3. Provide guidance on how to improve the system of institutional arrangements and the coordination mechanisms regarding youth employment policies and skills development programmes.

Terms of Reference (General)

1. The non-official members (and invitees) of the Working Group will be entitled to travelling allowances as per existing government norms. The Class I Officers of GoI will be entitled to travelling allowances as per rules if reimbursement is not allowed from Departments.

2. The expenditure towards TA, DA and Honorarium will be met from the following Head of Account of the State Planning Board "3451-00-101-93"- Preparation of Plans and Conduct of Surveys and Studies.

Sd/-
Member Secretary

To

The Members concerned

Copy to

PS to VC
PA to MS
CA to Member (Dr. K. Raviraman)
Sr. A.O, SPB
The Accountant General, Kerala
Finance Officer, SPB
Publication Officer, SPB
Sub Treasury, Vellayambalam
Accounts Section
File/Stock File

Forwarded/By order
Sd/-
Chief, PPD,
State Planning Board