

EXECUTIVE SUMMARY

COMPREHENSIVE STUDY ON AVAILABLE SKILL, SKILL GAP AND SKILL DEVELOPMENT POTENTIALS IN THE MIZORAM

I. INTRODUCTION

Employability of a growing young population has always been an integral and critical factor in the economic development of a region. Skill development increases the employability of the workforce which in turn contributes to further economic growth of the region. This study report has been prepared by North Eastern Development Finance Corporation Ltd.(NEDFi) on the overall skill development scenario in the state of Mizoram. The study seeks to understand the characteristics of Skill Development System operational in Mizoram, Traditional Skills of the state, Aspiration and Skill Development Needs of various categories of population of the state and Global, National and Local Skill requirement trends. Based on the understanding of these aspects, the study recommends strategies to take the skill development efforts in the state to the next level in short, to medium term.

Mizoram ranks as the second lowest populous state of North East India with an area of 21,087 square kilometers. The population of the state is 10,97,206 with a population density of 52 persons per sq.km (2011 census). Spatially, the state is divided into eight districts, viz. Aizwal, Champhai, Mamit, Serchhip, Kolasib, Lunglei, Lawngtlai and Saiha. The person of Mizoram is an amalgamation of various tribes having distinct heritage and culture.

The overall methodology of the study is a combination of extensive consultation with major stakeholders in the state, review of literature on skill development, secondary data collection from various sources and extensive primary survey. As a part of secondary research, reports and articles on skill development and related areas published by the government as well as The World Bank, Asian Development Bank, International Labour Organization etc. were also perused and reviewed.

An important aspect of the study is the extensive primary data collection and its analysis related to aspirations and skill development needs of various categories of population in the state. In this connection, extensive primary survey was conducted in all 8 districts of Mizoram at block level. As a part of primary interactions, a questionnaire survey was conducted among 5684 persons across seven strata viz. school students, graduate & post graduate students, vocational students, school drop-outs, vocational students trained under various skill initiatives, persons engaged in vocations and unemployed persons were collected during the survey. In addition to this, in-depth consultation with various stakeholders, detailed interactions with all the major vocational institutions in the state viz. ITIs, Polytechnics, Secondary and Higher Secondary Schools imparting Vocational Education, Vocational Training Providers and Government Departments responsible for skill development in the state and few industries were carried out. Focus Group Discussions with interest groups such as teacher/trainers of vocational institutes, parents of students, were also conducted. Detailed interactions with senior government officials

of the state were carried out for insights on declared policy priorities and skilling initiatives of their respective departments.

II. EDUCATION AND EMPLOYMENT CHARACTERISTICS OF MIZORAM

Education is the foundation and employment (both wage and self employment) is the ultimate desired outcome of skill development. An attempt has therefore been made here to understand the characteristics of the educational system of Mizoram in terms of Literacy Rate, Gross Enrolment Ratio (GER) at various Educational levels, School Drop-outs, Transition Rates etc. Similarly, assessing the employment characteristics of Mizoram is based on parameters like Labour Force Participation Rate (LFPR), Worker Population Ratio and Sector-wise distribution of workers of the state.

Literacy Rate: The literacy rate of Mizoram is 91.3%, which is much higher than the national average of 73%. It means that, out of the total population of 10,97,206 persons in the state, 8,48,175 persons possess the ability to read and write. The male literacy stands at 93.3% and female literacy at 89.3%, implying that 4,38,529 males and 4,09,646 females have the ability to read and write.

Educational Attainment: The educational attainment of population of Mizoram between the age group 5-29 years has fared better than the national average at Below Primary level, Primary Level, Upper Primary and Secondary level. However, the education attainment of the population of Mizoram at Higher Secondary, Diploma/Certificate, Graduate and Post Graduate and above levels is lagging behind in comparison to the national figures.

Gross Enrolment Ratio (GER): The Gross Enrolment Ratio (GER) at the Primary, Upper Primary, Elementary and Secondary levels in Mizoram is better than the national average except Higher Secondary level in which it is lagging behind the national figure.

Drop-out Rate: The drop-out rates in Mizoram in F.Y 2014-15 at Primary level, Upper Primary level and Secondary level were much higher as compared to the national averages. Further, it may be observed that although the drop-out rate in the F.Y 2014-15 is higher than all India figures the drop-out rates at all the three levels have decreased in Mizoram in F.Y 2014-15 in comparison with F.Y 2013-14 portraying a promising picture for the state.

Transition rate: The transition rates in Mizoram from Primary to Upper Primary and Elementary to Secondary was lagging behind the national average in the F.Y. 2012-13, but fared better in F.Y. 2013-14 and F.Y. 2014-15 where the transition rates were higher than the national averages. However, the transition rates from Secondary to Higher Secondary level is lagging behind the national average over the course of three years in between F.Y 2012-13 and F.Y 2014-15.

Labour Force Participation Rate: The Labour Force Participation Rate (15 years and above) of the state is 68.4% which is higher than the national average of 52.4%, which indicates that Mizoram is in a better position than national average as a whole with respect to Labour Force Participation Rate.

Worker Population Ratio: The Worker Population ratio in Mizoram is 67.4% which is higher than the national average of 50.5%.

Sector-wise Employment: The primary sector has provided 52.9% employment in Mizoram (2015-16). The employment in the primary sector in Mizoram is more than the national average of 47.3%, which indicates the importance of the primary sector in the state's economy. It is worth mentioning that in the rural areas, 73.8% of the labour force is engaged in the primary sector as against 24.4% labour force in the urban areas. In the tertiary sector, 35.9% workforce is employed in the urban as well as rural areas which are more in comparison with the national average of 30.2%. The urban workforce engaged in the tertiary sector is 58% and the rural workforce is 19.9%. It is seen that in Mizoram the employment in the secondary sector is least as only 11.2 of working population are engaged in it, whereas at the national level 22.5% of the workforce are engaged in the secondary sector.

III. CHARACTERISTICS OF SKILL DEVELOPMENT SYSTEM OF MIZORAM

The existing skill development system of Mizoram almost mirrors the prevailing system in practice in other parts of the country. The understanding of Characteristics of Skill Development system of the state mainly depends upon the understanding of the Technical Vocational Education and Training (TVET) System, Traditional Skill Sectors, initiatives of various Central and State Government Agencies, Governance Model adopted for skill development, Partnerships between the Government and Private Training Providers and the Financial Resources available with the key departments of the State engaged in skill development which are discussed here.

a. Technical and Vocational Education and Training (TVET) System of Mizoram

The TVET system of Mizoram mainly consists of the vocational education and training provided by Industrial Training Institutes (ITIs), Polytechnics, Secondary & Higher Secondary Schools providing vocational education and Private Vocational Training Providers. Characteristics of all these institutions are briefly discussed below:

Industrial Training Institutes (ITI): There are currently three (3) Government ITIs imparting vocational training courses, which are located at Aizawl, Lunglei and Saiha. The total combined capacity of these three (3) government ITIs in the F.Y 2015-16 stands at 760, out of which ITI Aizawl has the highest capacity of 512, ITI Saiha has a capacity of 108 and ITI Lunglei's capacity stands at 92. The total enrolment of the ITIs of Mizoram in F.Y 2015-16 was 450, which is 59.2 percent of the total enrolment capacity of the ITIs.

In addition to these three (3) existing ITIs, three more ITIs in the state are proposed which are presently at various stages of its development. These ITIs are proposed at Champhai, Serchhip and Kolasib. In case of the ITI proposed at Champhai, the construction work is complete. In terms of the proposed ITI at Serchhip the construction work is in progress and in case of ITI proposed at Kolasib the construction work has not yet started.

Interactions at the ITIs highlighted that in general the mindset of the youth as well as the parents is to go for higher education. Along the line at times there are a few drop-outs who after finding no other avenues go for vocational education in these ITIs. So, awareness amongst people to opt for the vocational courses provided in the ITIs at an early stage is highly required. The popular trades which are in demand in these ITIs are

Electrician, Wireman, COPA, Stenography, Electronic Mechanic, Mechanic (Motor Vehicle) and Plumber. The trades which are not so popular are Mason (Building Construction), Fitter, Carpentry and Sheet Metal Worker. The locals are more interested in work related to Stone Masonry rather than Masonry (Building Construction). Apart from this, in recent times the local population has started showing interest in Bakery & Confectionery and Cutting & Sewing/Sewing Technology. Till recently Hair & Skin Care was quite popular but lately the interest in this trade has gone down among people.

In view of this, there is a need to immediately look into the utility and viability of few of the courses offered in these ITIs and accordingly restructure and revamp the course structure taking into consideration the need and interest of the local economy. In case of trades which are in demand such as Electrician, Wireman, COPA, Stenography, Electronic Mechanic, Mechanic (Motor Vehicle), Plumber, Bakery & Confectionery and Cutting & Sewing/Sewing Technology, the enrolment capacity should be increased and the latest know-how in these trades should be provided during trainings. The courses which are not much in demand like Mason (Building Construction), Fitter, Carpentry and Sheet Metal Worker should gradually be phased out. This may be taken into consideration while deciding and drafting the course structure for the proposed ITIs at Champhai, Serchhip and Kolasib.

Polytechnics: Currently there are two (2) Government Polytechnics viz., Mizoram Polytechnic, Lunglei and Women's Polytechnic, Aizawl under the Directorate of Higher & Technical Education, Mizoram. The Mizoram polytechnic was the first polytechnic established in the year 1981 and later in the year 1998 the Women's polytechnic was established with the objective of making facilities available for technical education, quality improvement and training in specific fields of technology specially designed for women. The combined enrolment capacity of these two polytechnics stands at 210 for the year 2016 and the enrolment stands at 197, which is 94% of the enrolment capacity portraying a positive picture in the state. In addition to the 2 existing polytechnics at Aizawl and Lunglei, 6 new polytechnics are proposed in the remaining districts of Mizoram which currently do not have any polytechnic. The districts where the new polytechnics will be established are Serchhip, Champhai, Kolasib, Mamit, Saiha and Lawngtlai. In case of polytechnics proposed at Serchhip, Champhai and Kolasib, the construction work has been completed and the polytechnic building is ready. In the rest of the proposed polytechnics at Mamit, Saiha and Lawngtlai, the construction work is underway and is expected to be completed within 1 to 2 years.

Placement is an area where these polytechnics are struggling both due to internal and external factors. In terms of internal factor the prime cause is the absence of active placement cells in these polytechnics and the major external factor which is causing the gloomy placement scenario in these polytechnics is the dearth of industries in the state of Mizoram. Addressing the external factor is quite challenging and is dependent upon many factors and in the near future the possibility of the state being highly industrialized is quite remote. However, the internal factor can be worked upon by creating highly active placement cells in these polytechnics which not only network with the potential employers within the state but also tie-up with employers outside the state for placement and apprenticeship. Though the provision of placement cells is already present in these

polytechnics, but during the discussion it came to light that the key post of Training & Placement Officers (TPO) is lying vacant since a long time. It is advisable that the state government should immediately fill the position of TPO in these polytechnics and take care that in the upcoming polytechnics there is a provision of robust and active placement cell from the start.

Vocational Education in Secondary & Higher Secondary Schools:The Vocationalization of School Education scheme is operating at Secondary and Higher Secondary schools. There are 10 Government Secondary Schools under RashtriyaMadhyamikSikshaAbhiyan (RMSA) and 15 Government Higher Secondary Schools under the Directorate of School Education. The skill trainings provided by the Directorate are conducted by in-house trainers' whereas skill trainings are outsourced to temporary qualified trainers under RMSA. The 15 Higher Secondary Schools offering eight vocational trades viz. *Computer Technique and Computer Software, Automobile Engineering Technology, Medical Laboratory Technology (MLT), Commercial Designing & Making, Horticulture & Sericulture*. The 10 Secondary schools are offering courses in *IT & ITES, Healthcare and Automobile* as per National Skill Qualification Framework (NSQF).The total number of students trained in the Higher Secondary Schools in the F.Y 2015-16 stands at 762. The total number of students trained in the Secondary Schools in the F.Y 2015-16 stands at 280 (IT & ITES) and 270 (Healthcare) respectively.

The Teacher/Trainers of the Secondary Schools were of opinion that since vocational education started as recently as 2015; the schools are still in the preliminary stage of understanding and implementation. They felt that career counseling is important for the students and needs to be given after the completion of the elementary level. The quality and learning outcomes in schools need to be given importance especially in case of government schools located in rural areas. They also felt that instead of introducing vocational education in schools, there is a need to strengthen the basic education system especially up to elementary level. The teachers felt that the selection of vocational subjects should be based upon local needs and requirements.

As a part of the study, interactions were held in few schools to understand the performance of these vocational courses in these schools. The vocational education courses at the Higher Secondary level (XI and XII) have been running for a long time in the state. However vocational education at the Secondary level (IX and X) has recently started in the F.Y 2015-16. The courses introduced at the secondary level would be NSQF compliant conforming to Level I and Level II of NSQF. Interactions at few schools highlighted that the vocational courses at the Secondary level is new to the state, nothing much can be said about the performance at this stage. However, at the Higher Secondary level which is running for quite some time the experience has not been very encouraging especially in terms of vertical mobility. During the interactions, it came to light that the school authorities are planning to have a relook at the utility of running few vocational courses at higher secondary level, Computer Technique course being one of them.

This situation is not surprising because if one considers the performance of the same scheme elsewhere, those results too have not been encouraging. Similar study conducted by NEDFi in the state of Sikkim and Arunachal Pradesh had revealed that most of the

students enrolled in vocational subjects are interested in pursuing higher education after completion of secondary level.

The issue of vertical mobility of students of vocational streams at school level in higher education is fast becoming an issue as there are limited numbers of seats in institutions of higher education for these courses for vocational students with related streams, against large number of students passing from vocational streams of senior secondary schools. Moreover, few of the specialized institutions which are providing training at higher levels in these streams do not give any preferential treatment to the students who have completed their senior secondary level with vocational streams. They are treated on par with students of general senior secondary students.

It is suggested that focus should be more on providing quality general elementary and secondary education in the schools so that smart, bright individuals with good cognitive skills can be developed. In fact these are the skills which an employer looks for mostly in prospective candidates and schools are the best place to develop those skills. So, in schools instead of diverting students' attention towards narrow vocational skilling, focus should be more on improving the quality of general education and learning outcomes. In this connection, it is worth mentioning that in a study on "Skill Development in India - The Vocational Education and Training System" by The World Bank in 2007, it suggests in clear cut and unambiguous terms that focus should be more on providing quality general secondary level education and not necessarily training students with narrow vocational skills. This is not to say that the vocational skills are not important but what is important is the manner in which we are providing the vocational skills to our youths.

For vocational streams the quality of training is very important and that can be ensured only by providing proper infrastructure in terms of quality workshops, laboratories, equipments, advanced teaching aids and tools and trained teachers/trainers. Since it is not possible to provide this kind of facility in each and every school, it makes sense for imparting the kind of vocational trainings being done by specialized vocational training institutions which are created solely for that purpose.

Private Vocational Training Providers (VTPs): There are various organizations and institutes besides the ITIs and Polytechnics which play a pivotal role in providing trainings in various trades under schemes such as Skill Development Initiative Scheme (SDIS), Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Deen Dayal Upadhyaya – Grameen Kaushal Yojana (DDU-GKY), Deendayal Antyodaya Yojana - National Urban Livelihood Mission (DAY-NULM) etc. They are the Private Vocational Training Providers (VTPs) from both within and outside the state which are imparting various vocational courses under skill initiatives of the state government. The empanelled local and non-local VTPs are mainly involved in skill training under the Skill Development Initiatives Scheme (SDIS). So far as per the Labour, Employment & Industrial Training Department information, 2927 (approx) students have been trained under the SDI scheme of which 1550 have been placed.

As a part of the study, interactions were held with few local VTPs in order to understand the issues related to delivery of skill development courses from their perspective. Most of these local VTPs which conduct courses under SDIS, DAY-NULM and PMKVY 1 are

franchisee institutions that have been contacted by bigger VTPs based out of the state who are working as NSDC's partner VTPs. The major difficulties which they highlighted are the implementation of the courses under NSQF and the issue of assessment and certification of the courses by third party assessors. Presently, as all the assessors are based outside the state, the VTPs are facing huge delay in certifying their trainees. So, according to them the entire system of assessment and certification needs to be simplified along with the capacity building of local institutions for assessment and certification purposes.

b. Traditional Skills of Mizoram

Mizoram is composed of about sixteen (16) major tribes and 3 sub-tribes spread across the entire landscape. Most of the tribes identify themselves with some craftsmanship which is peculiar to them. The tribes live in different areas of the State and practice traditional skills which have been handed down over generations. They have been blessed with the fine knowledge of utilization of their natural resources and creation of beautiful products with their own hands. This knowledge and proficiency has been continuing over generations. Their deft fingers have produced beautiful pieces of artefacts over the years. The various traditional skills practiced in the state are Handloom Weaving, Wood Carving, Carpentry, Bamboo & Cane Craft, Weaving, Tailoring, Shifting cultivation, Broom Making, Animal Husbandry, Tin smithy and Black smithy. Traditional handloom and handicrafts plays a big role in the local economy. Most of the produce of handloom and handicrafts especially produce of trades like weaving, cane & bamboo and wood carving have captive markets within the state as a part of their local festivals, rituals, ceremonies etc. Some of the produce are also exported to its neighboring states like Manipur, Meghalaya and Assam.

c. Initiatives of the Central Government & State Government for Skills Development in Mizoram

At the Central Government level, currently, apart from the nodal Ministry in Skill Development & Entrepreneurship, there are as many as 20 ministries which are working in the area of skill development in their respective domains. In the state of Mizoram most of these ministries have a presence with their schemes and programmes under the state government departments and implementation status of these are discussed in the subsequent sections. As a part of the study, the NEDFi study team visited various departments of the Government of Mizoram to gain insight into the initiatives undertaken by the departments towards skill development. The findings are discussed below:

1. Department of Labour, Employment & Industrial Training Department: The Labour, Employment & Industrial Training Department deals with Labour Regulation, Employment Services and Skill Development. Presently, the department conducts skill development programmes and also imparts training through Vocational Training Providers (VTPs) from both within and outside the state. The training programmes are conducted under Craftsmen Training Scheme (CTS) and Skill Development Initiative Scheme (SDIS). About 2,927 (approx.) students have been trained under the SDI scheme out of which 1,550 received placement and 317 students declined placement. Around 55

Vocational Training Providers (VTPs) have been registered by the Directorate of Labour, Employment & Industrial Training. Out of the 55 VTPs, 31 are from outside Mizoram and 24 are local VTPs.

2. Department of Education: The Education Department is another key department in the state providing skill development courses through the polytechnics, schools and other institutions established under the department. The department is implementing the skill development through its two directorates, namely - the Directorate of School Education and the Directorate of Higher & Technical Education. The Directorate of School Education has introduced Vocationalization of School Education through introduction of vocational courses in 15 Higher Secondary schools and 10 Secondary Schools. The 15 Government Higher Secondary Schools offer courses in *Computer Technique and Computer Software, Automobile Engineering Technology, Medical Laboratory Technology (MLT), Commercial Designing & Making, Horticulture & Sericulture*. The 10 Government Secondary Schools offer trainings in *IT & ITES, Healthcare and Automobile*. Further, the Directorate of Higher & Technical Education conducts courses through Polytechnics through two (2) Government Polytechnics in the state. The trades in which training is imparted in these polytechnics are *Civil, Mechanical, Electrical Engineering, Computer Science and Engineering, Modern Office Practice, Electronics and Telecommunication, Garment Technology and Beauty Culture & Cosmetology*.

The Community Colleges Scheme provides vocational and diploma courses in the Mizoram Polytechnic at Lunglei. The trades being offered are *Computer Fundamentals, Basic Automobile Servicing (4 wheel) and (2-3 wheel), Repair and Overhauling of Engine System (Petrol & Diesel), Repair and Overhauling of Engine System (Light Vehicle), Electrical House Wiring, Repair of House Appliances, Tailoring (Basic Sewing Operator), Electronics, Masonry, Fabrication and Welding, Screen Printing, Plumbing, Basic Food Preservation, Vermiculturing and Vermicomposting, Mushroom Cultivation, Basic Refrigeration and Air-conditioning and Repair and Maintenance of Refrigerators and Deep Freeze*. Under the Mizoram Polytechnic, Lunglei the Hnahthial Extension centre, Lungsen Extension centre, Bunglei Extension centre and Tlabung Extension centre are the Training centres conducting the above courses. One (1) Jan Shikshan Santhan was established at Aizawl under the National Literacy Mission Authority, in order to support the Voluntary Agencies for Adult Education & Skill Development.

3. Department of Agriculture, Mizoram: The Agriculture department conducts skill development trainings as a part of Extension services provided to farmers in the form of Farmers Field Schools, Agri-Clinics and Agri-Business Centers and Farm Schools through institutions such as Krishi Vigyan Kendras (KVKs) and Integrated Training Centers. As per the information provided by the department, the KVKs conducted Farmers Field School trainings on Integrated Pest Management on Rice. In the F. Y 2015-16, 390 farmers were trained under the above mentioned training programme. The department conducted trainings (2 years duration) for 25 students in Basic Agriculture and Allied subjects in the Integrated Training Centre in which 34 farmers were trained in the F.Y 2015-15. An amount of Rs. 107.17 lakhs was spent by the department on these trainings.

4. Department of Commerce & Industries, Mizoram: The department of Commerce and Industries in Mizoram has been promoting skill development in the state through the training conducted under the State Plan Scheme, Integrated Skill Development Scheme and Block Level Handloom Cluster under Ministry of Textiles. The various trades offered under these schemes are Knitting & Tailoring, Weaving, Cane & Bamboo, Computer Foundation Course 'O' Level, Weaving, Designing and Dyeing. The department is using departmental trainers to conduct training in 13 centers within the state of Mizoram. The total enrolment of students under the various schemes in the F.Y 2015-16 is 1,545 out of which 30 students have been placed and 1,255 are self-employed. An amount of Rs. 466.07 lakhs was allotted in the F.Y 2015-16 for these trainings.

5. Department of Tourism, Mizoram: The two flagship schemes of the Ministry of Tourism, Government of India, viz. Hunar Se RozgarTak Initiative and Scheme of Capacity Building for Service Providers is not being implemented in the state of Mizoram. However, the department conducts internal and departmental trainings on food crafting and cooking for the staff of Tourist Lodges, Resorts and the department. Skill trainings provided by the department are conducted in-house in the tourist lodges in Aizawl by department officials/trainers. The department has taken up the initiative for the establishment of a State Institute of Hotel Management (SIHM) through Central grant amounting to Rs. 10 crores, which includes the Institute building and the hostel for both boys and girls. Out of this amount, Rs. 800 lakhs has already been utilized for construction work and Rs. 200 lakhs is lying with the Central Government which could only be released by Ministry of Tourism, Govt. of India as and when the creation of posts for the faculties and staff is made by the Finance department, Govt. of Mizoram.

6. Department of Urban Development & Poverty Alleviation, Mizoram: The department conducts skill development trainings under Employment through Skills Training and Placement (EST & P) component of DeenDayalAntyodayaYojana -National Urban Livelihood Mission (DAY-NULM) since F.Y 2014-15. These trainings are provided through the empanelled private VTPs. The trades offered are Apparel, Automotive, Beauty and Wellness, Construction, Electronics & Hardware, Healthcare, IT & ITES, Security, Telecom, Tourism & Hospitality, Handloom & Handicrafts, Media & Entertainment, Food processing, Knitting, Flower Making, Hair Cutting, Candle Making, Shoe Repair and Metal Work . In the F.Y 2014-15 2996 persons were trained of which 311 were placed and 246 got self-employed. Further, in the F.Y 2015-16, 3143 persons were trained, out of which 209 were placed and 218 got self-employed. An amount of Rs. 514.47 lakhs was allotted in the F.Y 2015-16 to the department for such training programmes.

7. Department of Social Welfare, Mizoram: The Department of Social Welfare provides skill development trainings in trades such as ICT, Beauty and Wellness, Garment Making, Hotel Management, Electrician, Electronics, Plumbing, Tailoring, Shoe Making and Training of Anganwadi Workers and Helpers. The trainings are conducted through the institutions like Residential Institute & Training Centre, Vocational Training Centre Lunglei, Vocational Training Centre Serchhip, Vocational Training Centre Kolasib, Handicapped Training Centre Aizawl, Handicapped Training Centre Lunglei and Anganwadi Worker's Training Centre. The total enrolment of students in the F.Y 2015-16

was 887 and the department was allotted with a fund of Rs.160.08 lakhs in the F.Y 2014-2015.

8. Department of Horticulture, Mizoram: Horticulture is one of the most important sectors for the state, which has huge economic potential that needs to be exploited for employment generation for various categories of population. Floriculture is another sector which has huge economic potential in Mizoram. Currently, the skilling in horticulture is mainly done through the extension services by the department provided for the farmers engaged in horticulture practices, though these services are not enough to boost the horticulture sector. In the recent past, the Department also conducted few trainings in flower arrangement and food processing for women and trainings on cultivation of different vegetables and fruit crops for the farmers under the Mission on Integrated Development of Horticulture (MIDH). Moreover, it may be mentioned here that as per department information, this department has no separate fund dedicated for skill development.

9. Department of Sericulture, Mizoram: The Department of Sericulture provides short-term training in skill development for in-service personnel as well as private Sericulturists for improvement of their skills. These trainings are provided at the Sericulture Training Institute (STI) located at Zemabawk in Aizawl. The institute has a well-established 40 bedded capacity hostel with separate hostel kitchen. Due to the absence of any faculty in the center, the department is engaging in-house departmental officers to conduct these trainings. The Department also runs a number of Government farms like Government Mulberry Seed Farms, Government Eri Seed Farms, Government Muga Seed Farms, Government Oak Tasar Seed Farms and Government Chawki Rearing Centre for Mulberry Silkworm, Seling. These centers are not training centers but demonstration and production centers for producing silkworm seeds.

10. Department of Animal Husbandry & Veterinary, Mizoram: The Department of Animal Husbandry & Veterinary has undertaken various skill development initiatives such as Training in Artificial Insemination in Cattle, Training in Artificial Insemination in Pigs, Elementary Science in Veterinary & Animal Husbandry. The training centres imparting skills training are A.I Training Centre at Sihphir for poultry, A.I Training Centre at Selesih for pig and Integrated Veterinary & Animal Husbandry Training Institute. The department conducted the skill development trainings for 40 trainees in F.Y 2015-16 for which an amount of Rs. 30,000 was allotted.

11. Department of Rural Development, Mizoram: The Rural Development department is another key department working towards skill development for the rural masses. The main programmes under which the department implements skill trainings are DeenDayalUpadhayaGrameen Kaushal Yojana (DDU-GKY), Rural Self Employment Training Institute (RSETI) and livelihood related skill development training under Integrated Watershed Management Programme (IWMP). The implementing agency for DDU-GKY scheme in the state is Mizoram State Rural Livelihood Mission (MzSRLM). A detailed action plan for the implementation of DDU-GKY in the state got approved on December 1st, 2016. As per the plan there is a target of providing skill development training to 4668 candidates during the period 2016-18. Out of the total trained candidates,

70% has to be placed. NABARD Consultancy (NABCONS) is the Central Technical Support Agency for the scheme for monitoring purpose. This scheme will be implemented through private VTPs who will act as Project Implementing Agencies (PIAs).

d. Assessment of Effectiveness of Short-Term Placement Linked Skill Development Programmes

In order to assess the effectiveness of Short-Term Skill Development Training provided under the skilling initiative of the State, a primary survey was conducted among the trainees who had completed courses under various skill initiatives of the state. Apart from interacting with these trainees, interactions were also held with other stakeholders to understand the major challenges faced in the implementation of the scheme. A total of 476 successful trainees were contacted for this purpose.

The database of trainees revealed that the short-term placement linked training were provided in trades such as Banking, Welder (Gas and Electric), Carpenter, Plumber, Mechanic, Beauty and wellness, IT & ITES, Construction, Cutting & Sewing, Civil Engineering, Electrician, Garment Making, Handloom Healthcare, Masonry, Hospitality, Modern Office practice, Plastic Processing, Stenography, Tailoring, Weaving. Most of the trainees were trained in Tailoring followed by IT & ITES and Carpentry. The various trades in which they were engaged are Automobile, Banking, Beauty & Wellness, Hospitality, Hotel, Industry, IT & ITES, Social Welfare, Tailoring and Teaching. The average salary of the employed persons was around Rs. 9400 who were mostly engaged in assistant level jobs like Assistant Teacher, Receptionist, Data Entry Operator, Office Assistant, Customer Service Executive etc.

During the survey, out of the total respondents only 16% were found to be employed 37% self-employed and the remaining 47% were still looking for jobs. The sectors in which respondents were found employed are Automobile, Banking, Beauty & Wellness, Hospitality, Hotel, Industry, IT & ITES, Tailoring, Teaching and Social Service. The respondents stated various reasons for leaving their first job, viz. low salary, health problems and culture as well as climate adjustment problems etc. It can be noted that although 75% of these respondents were satisfied with their present job only 76% got financial stability. It was further recorded that 75% respondents wanted to change the job and it is important to note that 93% of these employed respondents accepted that the training programme had helped them to get the job. Only 8% of the students were either employed or self-employed before attending the training programme and stated that the trainings helped in improving their technical skills. A large number of the respondents (65%) were satisfied, 25% were neither satisfied nor dissatisfied with the training programme and 9% was very satisfied and remaining 1% were dissatisfied with the training programme.

It was felt that the duration of training currently in practice is not sufficient in case of most of the trades. The duration of the trainings which include on-the-job training should not be less than 6 months and if possible should be extended to 1 year in case of few courses. Pay package and Working Environment in many cases are not attractive for the

youth for placement outside the state. It was also seen that many VTPs were not following up with recruitment post- training and majority of the candidates who were placed are returning back to their home-towns citing improper placements, low salary and irregular payment as reasons for return. There is the need to fix the accountability of Private VTPs by supervising and regulating the activities of the VTPs and their placements. Also, trainings should be organized locally instead of sending candidates outside the state for short term training.

e. Governance Model

In order to govern various skill development initiatives in the state, the government of Mizoram has created institutions such as State Skill Development Mission, Mizoram Skill Development Co-ordination Board, Skill Development Society of Mizoram, Mizoram State Council for Vocational Training and the Department of Labour, Employment & Industrial Training. The effort of this institutional framework has only been limited to the implementation of the CTS and SDIS schemes, which are being implemented by the ITIs and private VTPs. The Department of Labour, Employment & Industrial Training is involved in implementing the Craftsmen Training Scheme (CTS) and Skill Development Initiative Scheme (SDIS). The skill development schemes implemented by the other ten(10) departments are not currently part of this institutional structure. The need of the hour for State Skill Development Mission is to act as an integrated mission which combines the efforts of various state departments in achieving the skill development targets for the state. Though the integration of so many schemes under one umbrella is a challenging task, but not impossible, e.g. the state of Uttar Pradesh has achieved considerable success in combining the efforts of various state departments in achieving the skill development target for the state. In case of the state of Mizoram, the Department of Labour, Employment & Industrial Training may spearhead in bringing the efforts of various state departments under the State Skill Development Mission. The other governance related issues which needs to be addressed in the state are:

(1) Need for a Dedicated Department for Skill Development, (2) Effective Planning of Skill Development Schemes (3) Adequate Availability of Skilled Teachers/Trainers for Skill Development Trainings, (4) Strengthening & Effective Utilization of Existing TVET Institutions, (5) Strengthening of the Regulatory and Quality Control Body for Skill Development at the State Level, (6)Developing aLabour Market Intelligence System (LMIS).

f. Quality Assurance System

A closer look at the Skill Development system of the state of Mizoram reveals that at present there exists a mechanism to ensure quality control and quality assurance system which takes care of the quality related issues of all the skill development schemes being implemented in the state. The Mizoram State Council for Vocational Training was constituted in 2015 to regulate the skill development initiatives in the state. However, the role of this Council is limited to looking into the quality aspect of only few courses, thereby creating the need to strengthen the Council.

Over the last few years, the central government has been working hard towards creation of a single quality assurance framework through steps such as development and implementation of National Skill Qualification Framework (NSQF), creation of Sector Skill Councils (SSC) which helps in creating National Occupational Standards (NOS) for different sectors bringing the much needed industry perspective into the skill training standards. These initiatives of central government aimed at developing a quality assurance framework is expected to help shifting emphasis to outcome based learning - both in the general and vocational space. In spite of the efforts of Central government in creating a quality assurance framework, different skilling priorities at the state level may exist. Hence, there is a need for a state specific Quality Assurance System. The framework suggested here for a quality assurance system here is based upon the Total Quality Management (TQM) Approach. The features of suggested quality management system are:

- (1) Preparation of a realistic skilling plan for the state removing redundancy in training and mobilization and taking into consideration the nature of the economy, availability of resources and skilling needs of each district taking into consideration the existing and upcoming sectors of each district in which people are engaged or willing to engage both in terms of wage employment and self-employment.
- (2) Monitoring and Regulating the quality of general education provided at elementary and secondary levels in the state, as the cognitive skills which lay the foundation for employability, are mainly dependent upon the quality of education at these levels.
- (3) To see the relevance of courses offered by premier vocational institutions like ITIs and Polytechnics and to suggest any necessary alterations in the course curriculum, duration of courses etc. if required.
- (4) To check the quality of trainings provided in Government Higher & Secondary Schools having vocational subjects. The areas in which the QMS should look into are the quality of available training infrastructure, quality of teachers and trainers and also the relevance of providing such training at school level.
- (5) Selection and Empanelment of the Vocational Training Providers who have the requisite qualifications for providing high-end skill training in the areas or sectors in which the state needs to intensify its skilling efforts. The selection should be based upon the proven capacity and ability of the VTPs in providing skill trainings within the state.
- (6) Clear guidelines to control the quality of trainings provided by vocational training institutions and periodic quality checks and certification of the training providers to take care of quality aspect of issues such as physical infrastructure, teaching/training aids, tools, implements etc. available with institutions providing vocational training in the state.
- (7) Concurrent Process Monitoring of the various skill development schemes to keep a close watch upon the quality of implementation on real time basis, so that the quality issues can be addressed as and when required.

g. Funding of Skill Development in the State of Mizoram

The major institutions and skill development schemes constituting the bulk of TVET system in Mizoram mainly comes under the Department of Labour, Employment & Industrial Training and Education Department. The schemes such as CTS is being implemented through the ITIs and the schemes SDIS is implemented through the private VTPs and are funded by the Labour, Employment and Industrial Training Department. The department of Education through its Directorate of School Education provides funds for Vocationalization of Secondary Education scheme and the Directorate of Higher & Technical Education provides funds for Community Development through Polytechnics scheme besides running the regular diploma courses. In this study, an effort has been made to get a fair idea about the amount of fund received by TVET system and their subsequent utilization so as to ascertain the quantum of expenditure being incurred on TVET system of Mizoram. In addition, as skill development activities are spread across various departments, efforts have also been made to get approximate idea about the expenditure being incurred on these activities. The idea here is to obtain if not accurate, an approximate expenditure happening in the state on skill development system as a whole. The CTS under which 3 ITIs in the state are functioning have seen a small increase in fund allocation over the years. The ITIs received a fund of Rs. 348.15 lakhs in the F.Y 2013-14 which decreased to Rs. 342.01 in the F.Y 2014-15 and again increased to Rs. 363.66 lakhs in the F.Y 2015-16. The SDIS started in the year 2008 and the funding received for the F.Y 2014-15 was Rs. 264.00 lakhs. The funding received for Short-Term Job Oriented Courses in the F.Y 2014-15 was Rs.58.22 lakhs. In case of schemes under the Education department, the scheme Vocationalization of School Education received Rs.328.35 lakhs in the F.Y 2015-16. In case of Polytechnics, the Polytechnics received an amount of Rs. 740.97 in F.Y 2013-14 which increased to Rs. 791.39 in F.Y 2014-15 and increased to Rs.1222.01 in the F.Y 2015-16. The composition of total funding for TVET system in Mizoram was Rs.1397.4 lakhs in the year 2014-15.

The Department of Commerce & Industries received a funding of Rs.18.50 lakhs in the F.Y 2013-14, which increased to Rs. 48.88 lakhs in F.Y 2014-15 and further increased to Rs.466.07 lakhs in F.Y 2015-16. The Department of Sericulture received funding of Rs. 2.68 lakhs in F.Y 2015-16. In case of the Department of Urban Development & Poverty Alleviation, Rs. 653.52 lakhs was allotted in F.Y 2014-15 which decreased to Rs. 514.48 lakhs in F.Y 2015-16. The Department of Art & Culture received Rs. 54000 in the F.Ys 2014-15 and 2015-16 respectively. The Department of Animal Husbandry & Veterinary received funds amounting to Rs. 30,000 each for F.Y 2014-15 and 2015-16. Further, the Agriculture Department received a funding of Rs. 100.05 lakhs in F.Y 2013-14 which increased to Rs. 110.25 lakhs in F.Y 2014-15 and decreased to Rs. 107.17 lakhs in the F.Y 2015-16.

If we consider the funding figures of TVET system and the above mentioned departments, the total fund received in the F.Y 2015-16 on account of skill development is Rs. 2676.92 lakhs and the total expenditure incurred in the F.Y 2015-16 was Rs. 1928.37 lakhs. However, this is an approximate figure as information related to various schemes for skill development could not be provided by other departments.

If we take into consideration the composition of total expenditure of Rs.1393.67 lakhs for TVET system, we find that the highest share of expenditure is for the Polytechnics which

form 57 % of the total expenditure. This is followed by CTS scheme which forms 24% and the SDIS scheme which forms 19% of the total expenditure. The scheme Vocationalization of School Education has had no share in expenditure for the F.Y 2014-15.

IV. ASPIRATIONS AND SKILL DEVELOPMENT NEEDS

As a part of the study, detailed primary survey was undertaken at block level across all 8 districts of the state to ascertain the Aspiration and Skill Development Needs of: (i) School Students, (ii) Graduate & Post Graduate Students, (iii) Vocational Students, (iv) School Dropouts, (v) Persons Engaged in Vocations and (vi) Unemployed Persons. Focus Group Discussions were held with Parents of Students and Teachers and Trainers of institutions like ITIs, Polytechnics, Secondary and Higher Secondary Schools with vocational streams on issues regarding awareness of career options among parents, views on TVET system, and other issues of teacher/trainer of TVET system. The primary survey was designed in such a way so as to get the results at 95% Confidence Interval and 5% Margin of Error.

School Students:In order to understand the aspirations and skill development needs of school students, 918 (465 male and 453 female) students studying at secondary and higher secondary level were contacted for questionnaire survey. Out of the total respondents, 59% wanted to work in government sector while 23% wanted to become entrepreneurs highlighting the popularity of starting up their own ventures. It was observed that 85% of the respondents wanted to migrate. Many respondents (29%) expected salary between Rs. 30,001- Rs. 50,000 per month and 24% expected above Rs.50,000. It was found that parents had the most dominant influence in students' decisions with regard to their career. A significant number of students wanted to study general higher education like B.A (37%), B.Sc (15%) and B.com (11%). The remaining respondents wished to choose various courses like MBBS (10%), B.Tech (4%), LLB (2%), BBA (3%), B. Pharma (1%) and 17% wanted to pursue Vocational Education. The students who wanted to study in vocational streams were mainly interested in Agriculture & Allied Activities (4%), Apparel & Furnishing (4%), Automotive (8%), Aviation & Aerospace (18%), Beauty and Wellness (16%), Sports (3%), Media & Entertainment (13%), Tourism & Hospitality(6%), IT & ITES(5%), Construction(4%), Security(2%), Healthcare & Allied Services(3%), Capital Goods(4%), Cutting, Tailoring & Weaving (5%), Education & Training(4%) and Food processing (6%). 73% of the respondent students showed some interest in attending Skills Development Programmes for their career development. The students who wanted to study in vocational streams are mainly interested in Construction, Healthcare & Allied Services, Sports, IT & ITES, Beauty and Wellness, Tourism & Hospitality, Education & Training, Electronics.

Graduate & Post Graduate Students:To understand the aspiration and skill development needs of graduate and post graduate students, a separate questionnaire was designed. Interactions were held with 822 graduate and post graduate students (418 male and 404 female) at block level across all districts of Mizoram. It was observed that a large number of students chose government jobs (69%), 6% preferred private sector jobs whereas 19% chose Entrepreneurship. Out of the total respondents, 75% were found

ready and willing to move out of Mizoram for career development. Many respondents (42%) expected salary between Rs. 30,001-50,000. In terms of influencers in career decisions Parents were found to be the most influential (63%). In case of graduates and post-graduate students, the interested trades are IT & ITES, Agriculture & Allied Activities, Banking Financial services & Insurance, Beauty and Wellness, Tourism & Hospitality, Healthcare & Allied Services, Education & Training. It was found that majority (72%) students had awareness about the Vocational Skills Programmes being provided by the government and 67% of the respondents were interested in attending Skills Development Programmes for their career development.

Vocational Students: Interactions were held with 771 vocational students (306 male and 465 female) with a separate questionnaire designed for students studying in institutions like Polytechnics, ITIs, Secondary Schools with Vocational Stream and Private Vocational Training Providers etc. It was seen that maximum formal education for most of the students was higher secondary, followed by below secondary and graduation. The remaining had studied up to secondary level. Maximum respondents joined the training due to Interest in the trade (49%) and 38% in order to improve their chances of employment. Migration tendency was noticed among the student respondents as 79% were ready to move out of Mizoram for career growth. The salary expected was mostly between Rs. 10,000 -20,000, followed by salary below Rs.10,000 and Rs.20,000-30,000. The Vocational Students are mainly interested in trades like IT & ITES, Beauty and Wellness, Electrical Engineering, Basic Cosmetology, Civil engineering, Cutting, Tailoring & Weaving, Tourism and Hospitality. It was also observed that 95% respondents wanted to attend general skill development programmes which include Computer Knowledge, English speaking, Interview skills, Communication and Personality development etc and the residual 5% respondent students had no such aspiration.

School Dropouts: To understand the aspiration and skill development needs of school drop-outs, a separate questionnaire was designed and interactions were held with 883 school drop outs (466 male and 417 female) in Mizoram at block level. Majority of the students dropped out at the secondary level, followed by primary level and middle level. The survey revealed that majority of the respondents cited financial issues (32%) as the main reason of dropping out, followed by family issues (29%), health issues (14%), issues related to school (9%) etc. Majority of the school dropouts were unemployed (80%) and unable to earn a living and only a few were seen to be self-employed (10%) and earning their livelihood. The employed respondents were engaged either in full time (6%) or part-time (4%) jobs. Most of the employed were seen to be either engaged in some business or self-employed. The employed/self-employed were engaged as Tailor, Businessperson, Beautician, Carpenter, Driver, Retailer, IT person, Welder & Fabricator, Labour/Wage Earner, Handicrafts & Handlooms etc. It was seen that this cohort acquired the skill in trades like Beauty & Wellness, IT/ITES, Electrical, Handicraft, Weaving, Mechanic, Healthcare, Driving, Construction, Welding etc. from government and private institutes. It was seen that 78% of the respondents did not possess any vocational skills and the remaining 22% responded positively. Beauty and Wellness, Agriculture & Allied Activities, Sports, Cutting, Tailoring & Weaving, Electronics,

Tourism & Hospitality are the main trades evoking interest in this category of respondents.

Person Engaged in Vocations (PEVs): During our survey, 898 persons (458 male and 465 female) engaged in vocations were contacted at block level across the state. Many of the respondents (46%) did not pass Class X while 30% had passed Class X. Further, 21% had passed Class XII and 3% were graduates. It was found that 85% of the respondents were self-employed, 14% were regular workers whereas the remaining 1% were contractual workers. It was observed during the survey that 56% respondents were not ready to move out of Mizoram for better livelihood, while 44% were ready to migrate. With regard to the satisfaction levels, 9% were very satisfied, 40% were moderately satisfied, 48% dissatisfied and 45 were not satisfied. Further, they were asked the major difficulties encountered in pursuing occupation and lack of money appeared to be a major problem (62%), followed by lack of raw materials (14%), lack of technical skills (8%), lack of marketing options (9%) and lack of soft skills (8) etc. It may be me 55% were not interested. The trades of interest of this category of respondents are Beauty and wellness, Tailoring, Knitting, Weaving, Apparel & Furnishing, Automobile, IT & ITES, Electrician. On being asked about the expected monthly stipend if they joined a full time vocational course, taking a break from their present work, majority 36% respondents wanted to earn between Rs.5001-10000 and 36% less than Rs. 50,000. The remaining wanted to earn between Rs.10,000-Rs.30,000.

Unemployed Persons: Interactions were held with 916 unemployed persons (478 males and 438 females) at all blocks, selected randomly from the population. The samples were taken from the unemployed persons of working age group (15-59 years). The primary objective in covering the unemployed persons was to have an understanding of their aspirations, existing skills, reasons of unemployment, lack of interest or the reasons associated, etc. It was noted that 62% of samples had tried to get a job (Govt. job-32%, Private job-23% and others-7%) but could not manage to obtain a decent job. It is interesting to note that 38% respondents had never tried for a job. However, 66% of these respondents had tried to become self-employed, but they cited some difficulties in becoming self-employed which are lack of money (45%), lack of skills (32%), lack of guidance (21%) etc. The Unemployed persons are mainly interested in trades like Beauty & wellness, Agriculture & Allied, IT & ITES, Electronics, Tourism & Hospitality and Handloom & Handicrafts. More than half of the respondents (65%) wanted to pursue additional general education along with skill development programme. The rest 48% did not want to join as 35% felt that this will not be helpful for their career planning. Some other reasons quoted were non importance for career, non-availability of trade of choice, dissatisfactory quality of programme, non-requirement of skills etc.

Focus Group Discussions with Parents: The parents expressed that they needed career counselling for their children as most of them did not possess higher education and hence were unaware of the different career options available. Most of the parents did not have career plan for their children and preferred if their wards themselves made the career choice and sought the guidance of the school as well as the teachers in this regard. The parents were of the opinion that the career counselling should take place at least twice a

year to guide the children in making career choices. Most of the parents in rural areas being low in educational qualification were unaware about the different career scope available. However, the parents who were qualified were found to be aware of the vocational education being provided through various institutions in the state. The parents were of the opinion that parent-teacher meets are seldom held and whenever such meetings are held academics is mainly discussed and hardly any career counselling or guidance is provided. Most of the parents did not show any interest in vocational courses rather they focused on the general academic line to enable their child to end up with a government job. Parents possessing traditional skills manage their family at subsistence level and did not want to pass it on to their child as livelihood options. They believed that vocational courses should be designed for the school dropouts with financial constraints. The parents felt the need for awareness regarding the opportunities available as most of them were unaware of any kind of vocational courses being offered through the ITIs, Polytechnics or other institutions, one of the main reasons being their illiterate status. There were hardly any counselling centres. They felt the need for professional counselling for students regarding the available career opportunities at different level by experts in the respective field. Most of the parents were of the opinion that some traditional skills like Handloom, Handicrafts, Animal Husbandry, Agriculture needs to be given more emphasis in terms of marketing, transportation and financial assistance to them in order to help them take it up as an enterprise. Most of the parents expressed their willingness to send their children out of the state to get enrolment in technical as well as general line but found it difficult at most times owing to the expenditure involved. There was a common opinion amongst the parents that there exist very few sources of income in the districts making it difficult for them to afford the professional educational expenses of their children outside the state. Most of the income of the local population comes from government jobs and small government contracts. They opined that the vocational education helped the children to learn new vocations and earn income through it. Few parents opined that trades like Weaving, Tailoring, Animal Husbandry has shown an increasing demand over the years. Moreover, handloom and handicrafts, animal husbandry, carpentry, agriculture etc have great potential in the state and its importance should be kept in view.

Focus Group Discussion with Teachers/ Trainers of Industrial Training Institute: Interactions at the ITIs highlighted that in general the mindset of the youth as well as the parents is to go for higher education. Along the line at times there are a few drop-outs who after finding no other avenues go for vocational education in these ITIs. So, awareness amongst people to opt for the vocational courses provided in the ITIs at an early stage is highly required. The popular trades which are in demand in these ITIs are Electrician, Wireman, COPA, Stenography, Electronic Mechanic, Mechanic (Motor Vehicle) and Plumber. The trades which are not so popular are Mason (Building Construction), Fitter, Carpentry and Sheet Metal Worker. The locals are more interested in work related to Stone Masonry rather than Masonry (Building Construction). Apart from this, in recent times the local population has started showing interest in Bakery & Confectionery and Cutting & Sewing/Sewing Technology. Till recently Hair & Skin Care was quite popular but lately the interest in this trade has gone down among people. There is an immediate need to look into the utility and viability of few of the courses offered in

these ITIs and accordingly restructure and revamp the course structure taking into consideration the need and interest of the local economy. In case of trades which are in demand such as Electrician, Wireman, COPA, Stenography, Electronic Mechanic, Mechanic (Motor Vehicle), Plumber, Bakery & Confectionery and Cutting & Sewing/Sewing Technology, the enrolment capacity should be increased and the latest know-how in these trades should be provided during trainings. The courses which are not much in demand like Mason (Building Construction), Fitter, Carpentry and Sheet Metal Worker should gradually be phased out. This may be taken into consideration while deciding and drafting the course structure for the proposed ITIs at Champhai, Serchhip and Kolasib. With regard to skill development, most of the teachers felt that there is a need to set up ITIs at distant and far flung areas to accommodate larger section of the population from remote places considering the difficult terrains and communication drawbacks of the state. Most of the teachers were of the opinion that there should be industrial linkage with ITIs so that the successful students could get immediate placement in the desired trades. It would also set an example and motivate others to opt for vocational courses. The teachers/trainers felt the need to bring clarity in understanding of National Skill Qualification Framework (NSQF), as most of them had no knowledge about it. They felt the need to set up ITIs in convenient locations as it entails a lot of hardship on faculties as well as students.

Focus Group Discussion with Teachers/ Trainers of Polytechnics: Placement is an area where these polytechnics are also struggling because of the absence of active placement cells in these polytechnics and the dearth of industries in the state of Mizoram. The teachers opined that there should be tie-ups with potential employers within and outside the state for placement and apprenticeship. There was also a common opinion among the group that the courses under Community Colleges are being forced on the regular teachers and trainers become overburdened with this additional responsibility. So, it was suggested that new teachers/trainers be recruited for the scheme. Though the provision of placement cells is already present in these polytechnics, but during the discussion it came to light that the key post of Training & Placement Officers (TPO) is lying vacant for a long time. It is advisable that the state government immediately fills the position of TPO in these polytechnics and takes care that in the upcoming polytechnics there is a provision for a robust and active placement cell from the very beginning. The teachers felt that in order to reap the advantage of technical education provided by the polytechnics, school education needs to be improved particularly in the quality of education in science, mathematics, language and communication skills.

Focus Group Discussion with Teachers/ Trainers of Secondary and Higher Secondary Schools with Vocational Streams: The Teacher/Trainers of the Secondary and Higher Secondary Schools were of opinion that since vocational education started recently in 2015, the schools are still in the preliminary stage of understanding and implementation. They felt that career counselling is important for the students and needs to be given after the completion of the elementary level. The quality and learning outcomes in schools need to be given importance especially in case of government schools located in rural areas. They also felt that instead of introducing vocational education in schools, there is a need to strengthen the basic education system especially

up to elementary level. The teachers felt that the selection of vocational subjects should be based upon local needs and requirements. During the interactions, it came to light that the school authorities are planning to have a relook at the utility of running few vocational courses at higher secondary level, Computer Technique course being one of them. The government should focus on strengthening the existing schools in terms of infrastructure and capacities for improving the learning outcomes instead of opening up a new school. Establishment of new schools in remote areas with adequate capacities should only happen if there is sufficient requirement for it, otherwise such efforts become meaningless. Language skills and knowledge of grammar is very poor amongst the students specially those belonging to the rural areas. Due to lack of resources like good grammar books, teachers are unable to give extra effort in this subject. The quality and learning outcomes in schools need to be given importance especially in case of government schools located in rural areas.

V. SKILL REQUIREMENT TRENDS

An analysis on skill requirement trends focuses on the demand side requirements in terms of abilities and proficiencies required across different jobs and work settings in general. The approach here is to assess the skill requirements in the promising sectors and also take into account the national and global skill requirement trends so that the working population is not only ready for opportunities within the state but in case of limited or lack of opportunities in their chosen fields, they are suitably equipped to take up opportunities available anywhere in the world. In today's globalised world, skilling efforts should take into consideration the trends in skill requirement globally. This is more so when our country is not only aiming to become a global hub for supply of skilled manpower but also planning to become a world class manufacturing hub with the newly launched "Make in India" initiative. This requires deeper understanding of the skill requirements outside the state both nationally and globally, the changing pattern in the world of work and current hiring trends across major industry sectors.

a. Global Skill Requirement Trends

A study done by McKinsey Global Institute in June 2012, has predicted that globally there will be a potential shortage of 38 million to 40 million high-skills workers, a potential shortage of nearly 45 million medium-skill workers and a potential surplus of 90 million to 95 million low-skills workers by the year 2020. As a result of technological advancement and globalization that have happened around the world in the past three decades, a situation is emerging where there will be few high- skills workers available and insufficient number of jobs for medium and low skill workers. Advanced economies are at the forefront of the technological advancement in Knowledge-Intensive Manufacturing and Information Communication Technology (ICT). Advancement in these two areas has brought sweeping changes in the employment pattern not only around the advanced economies but in developing economies too.

The ILO Report on Changing Pattern in the World of Work says that adoption by advanced economies of knowledge-intensive manufacturing which is mainly based on labour saving technologies have resulted in improved productivity on one hand and

decline in manufacturing employment on the other. The upside of this is increased demand for high-skill workers, reduced demand for medium-skill workers and virtually no demand for low skill workers in manufacturing sector in advanced economies. The Report also says that, automation of manufacturing has led to a stabilization of the share of industrial employment in the global scenario, although the absolute numbers employed in these sectors continue to rise. China and its East and South-East Asian neighbours have become a new hub for manufacturing jobs, while employment in industry in most industrial countries is in steady decline. An additional feature of change in manufacturing is that it is increasingly necessary for producers wherever they are located to keep close to the technological frontiers of their industry. For developing countries, this indicates that manufacturing is unlikely to absorb much of their increased labour supply as unskilled, strongly labour-intensive, technological options become less viable on global markets. This shows that there will more demand for high skill workers and less demand for medium and low skilled workers in manufacturing sectors in developing economies too in future.

The Report further added that there is an increased demand in occupations across varied sectors of services. In industrial countries, some of the fastest growth is in business services of a managerial, technical or professional character. Also expanding are social services such as health and education, as well as hotels and catering, retail and transport. The direct effect of advancement in ICT on employment are, on one hand, creation of new jobs in producing and delivering new products and services and, on the other hand, loss of jobs in redundant technologies or in firms that fail to keep pace with innovations in ICTs. Exports of services using high-speed internet connections have given rise to sectors such as Business Process Outsourcing (BPO) and Knowledge Process Outsourcing (KPO) in developing countries like India. The services sector is growing fast in not only advanced economies but in developing economies like India and China leading to growth in employment.

It is very important to have an understanding of jobs having global demand so that the youths can train themselves with employable skills and institutions skill providing training can align their courses with the global demand. Prominent among global industries which are facing acute manpower shortages currently are Construction, Oil & Gas and Petrochemical Refineries, Energy, Engineering, Hospitality, Manufacturing, Information & Communication Technology (ICT) and Mining.

b. Effect of Innovation on New Evolving Skill Sets

An ILO Report on Changing Pattern in the World of Work says that the process of innovation and diffusion of new information and communication technologies (ICTs) that took off in the 1990s constitutes a radical transformation of the means of production, distribution and exchange. It has already profoundly affected international trade and investment, the movement of capital and labour, and many work processes and products. It has also accelerated the shift towards services and their outsourcing internationally. In turn, these factors have fed back into the further development of ICTs in a continuing circle of incremental innovations built on the breakthrough of the miniaturization of electronic circuits. The report further says that the rapid spread, ongoing development and

pervasiveness of this flow of innovation is driving a massive reconfiguration of world production and distribution, as well as the management systems of enterprises and public agencies with major consequences for employment patterns.

These developments along with the growing importance of sustainable development and shift to a low carbon economy are bringing significant and rapid changes in labour markets and skill needs. These innovations have necessitated familiarization of young workers with new kind of skills so that they stay relevant in the rapidly changing economy. The new skill sets which have become critical for performance in today's innovation led economies can be broadly classified as STEM (Science, Technology, Engineering, Mathematics) skills, Learning & Innovation skills, Life & Career skills, Information Media & Technology skills and Green skills.

As the name suggests, STEM skills involve skilling in science, technology, engineering and mathematics. Learning and Innovation skills involve creativity and innovation skill, critical thinking and problem thinking skill, communication and collaboration skills. Life and Career skills consist of skills such as flexibility, adaptability, initiative and self-direction, social and cross cultural skills, productivity and accountability, leadership and responsibility etc. Information, Media and Technology skills involve information literacy, media literacy and ICT (Information Communication Technology) literacy etc. Green skills are increasingly gaining importance as the economy of the world is slowly but surely moving in the direction of low carbon economy. Green economy has got its own set of unique skill requirements. Green skills are the specific skills required to adapt products, services or operations to meet adjustments, requirements or regulations designed to stand further climate change or adapt to the impact it is already having. In case of Mizoram, which has targeted to become a fully organic state by the year 2015 and has already taken various initiatives in the past to make the state a green state, new evolving green skills are of considerable importance.

A recent report published by The Institute for the Future (IFTF) has taken a deeper look at the skills which is available at present, mapped them against the various trends that are impacting the work place and identified certain skills that we will be needed for moving forward. The key skills and capabilities which are going to be in great demand in the next few years are Sense making, Social Intelligence, Novel & Adaptive Thinking, Cross-Cultural Competencies, Computational Thinking, New Media Literacy, Transdisciplinarity, Design Mindset, Cognitive Load Management and Virtual Collaboration.

c. National Skill Requirement Trends

The McKinsey Global Institute Study referred to earlier has forecasted a GDP growth rate of 7.4% per year up to 2030 (Compared with 6.6% from 1990 to 2010), and annual productivity growth of 5.9%, up from 5.0% in the past two decades. This implies that, India will see workers moveout of agriculture at a faster rate and will create 160 million new jobs in manufacturing and services. Services are projected to contribute 73% of the incremental value in the Indian Economy and 79% of the net new non-farm jobs in the next decade. Retail and wholesale trade and knowledge-intensive service sectors such as

finance, real estate, health and social services are projected to generate 28 million jobs in the next decade, up from 20 million in the past decade. India is also likely to add 15 million jobs in manufacturing in the next decade which is nearly double the 8 million created in the past decade. This figure may further increase with Government of India's newly launched "Make in India" campaign. With this level of service sector and manufacturing job growth, the low skill jobs is likely to decline from 74% of employment in 2010 to 62% by 2020.

In the recent publication of India Skill Report 2017, it is seen that Retail, e-commerce, BFSI (Banking, Financial Services & Insurance), Pharma, Telecom are the leading sectors with an increase of over 20% in the hiring numbers in the coming year. It is followed by the sectors like BPO/KPO/ITES, core sectors, whose hiring numbers are expected to have an increase of more than 10%. Sectors like FMCG, Hospitality, and Software & IT have direct correlation with the growth that companies in these sectors are targeting.

Domain wise hiring mix of individual industry sectors in India Skill Report 2017 shows that in sectors such as BFSI; BPO, KPO & ITES, Hospitality, there seems to be a clear focus on hiring candidates from general degree courses who can be trained to meet the business needs. Candidates from ITI have been hired mostly for Engineering and Automobiles, Telecom & Allied. Diploma background candidates are going to have more hiring opportunities in Engineering & Automotive, Hospitality and Pharmaceuticals & Healthcare. In case of Engineers, the percentage in overall hiring will be more for sectors such as Telecom & Allied, Core Sector (Oil & Gas, Power, Steel, Minerals etc.), Software & IT, Other Manufacturing (not including FMCG, CD, Automotive & Engineering) and Engineering & Automotive. Candidates of management background are hired almost across all the sectors. Contrary to that the percentages of Vocational Graduates in overall hiring across all the sectors have been found low except hospitality and BFSI.

With regards to the skills preference of employers when looking for prospective employees, the India Skills Report study gave many useful insights. The choices given to them were Domain Expertise, Adaptability, Interpersonal Skills & Learning Agility, Integrity & Values and Result Orientation, Numerical & Logical Ability, Communication and Cultural Fitment. Interestingly, most of the employers across industries choose both Domain expertise Integrity & Values. This is followed by interpersonal skills & learning ability. It can be mentioned that preferences differ for some industry sectors. For e.g. majority of employers from BPO/KPO/ITES sectors chose Interpersonal skills & learning orientation. Hospitality employers look for cultural fitment first. For rest of the sectors Integrity and values along with domain expertise have been chosen as the most important trait.

d. Skill Requirement Needs of Mizoram

In order to give impetus to the local economy of a region, it is important to understand the skill development needs of the region. Also, to create opportunities for local wage and self-employment, it's necessary to understand the Potential Sectors Capable of Developing Enterprise and Employment Generation and the Skill Development

Requirements. During the primary survey of this study, an effort was made to understand the Potential Sectors Capable of Developing Enterprise and Employment Generation and the Skill Development Requirements for each district of the state. The findings are given below:

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
1	Aizawl	<ol style="list-style-type: none"> 1. Agriculture 2. Animal Husbandry 3. Horticulture 4. Floriculture 5. Forest based industry 6. Handloom & Handicrafts 7. Tourism & Hospitality 8. Sericulture 9. Beauty and Wellness 10. Food processing 11. Fashion and Apparel 12. Construction 13. IT & ITES 	<ol style="list-style-type: none"> 1. Skill upgradation is required in piggery, goat farming, sheep rearing and poultry. 2. Skill development is required in case of breeding & artificial insemination, meat processing, fodder cultivation and poultry feed manufacturing 3. Skill development is essential in Tourism as it has huge potential in the district and skill upgradation is required in the areas of tour operator, tour guide, mountaineering, caving, trekking, paragliding, angling, bird watching etc. 4. Skill development is required in hotel management and hospitality in the area of cooking & culinary, fast food outlets, restaurants, front desk services, housekeeping, bartender, maintenance etc. 5. Skills need to be developed immobile repairing, electrician, motor mechanic, plumber, welder, fitter, turner, bricklayer, leather worker, painting, computer, carpentry, masonry, knitting, tailoring, steel fabrication etc. 6. Skill development is required for beauty and wellness industry in the area of beauty parlour, gymnasium, yoga etc. 7. Skill development is required in the area of

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>healthcare sector in the area of nursing, laboratory technician, medical equipment technician, dietician, pharmacy etc.</p> <p>8. Skilling is required in scientific mushroom production and vermi-compost making.</p> <p>9. Skill development is required in dairy and dairy based products</p> <p>10. Skill upgradation is required in scientific cultivation and management of fruits like plum, peach, pear, jackfruit, mango, litchi, lemon, oranges, papaya, banana, pineapple and areca nut.</p> <p>11. Skill upgradation is required for scientific cultivation and management of spices and condiments such as chillies, ginger, turmeric, garlic, black pepper and bay leaf</p> <p>12. Skill upgradation is required for cultivation and processing of oil palm and bee keeping</p> <p>13. Skill development is required in the area of scientific cultivation and marketing of rose, anthurium, gladiolus and orchids</p> <p>14. Skill upgradation is required for forest based industry in the area of cane & bamboo, tans & dye, oil, gums, resins, aromatic & medicinal plants, fibre & flosses, plywood and broom making</p> <p>15. Skill upgradation is required for organic cultivation by using bio fertilizer and bio pesticides.</p> <p>16. Skill upgradation is required for scientific grape cultivation and processing</p>

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>17. Skill development is required for commercial cultivation of Mustard, Cabbage, Radish, Carrot, Tomato, Potato and Pulses</p> <p>18. Skill upgradation is required in food processing sectors in the area of drying, grading, sorting, packaging, refrigeration and marketing of value added products</p> <p>19. Skill upgradation is required for processed food products like squash, jam, jelly, pickle, dry fruits and wine.</p> <p>20. Skill upgradation is required for scientific cultivation and management of tea and coffee</p> <p>21. Skill development is required for scientific management of fruits and floral nursery through different propagation techniques like budding, layering, grafting, cutting etc.</p> <p>22. Skill upgradation is required in case of rearing and reeling of silkworms</p> <p>23. Skill upgradation is required in fashion and apparel sector in the area of spinning, fabric manufacturing, fabric processing, garmenting, merchandising, graphic designing and marketing</p> <p>24. Skill development is required for IT & ITES sector in the area of computer skill, programming skill, logical and analytical skill, software architecture, database management, customer service, client management, communication skill, product development, team management, legal transaction, IP advisory and filing, project management etc.</p>

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
2.	Champhai	<ol style="list-style-type: none"> 1. Agriculture 2. Animal Husbandry 3. Horticulture 4. Floriculture 5. Forest based industry 6. Handloom & Handicrafts 7. Tourism & Hospitality 8. Sericulture 9. Beauty and Wellness 10. Food processing 11. Fashion and Apparel 12. Construction 	<ol style="list-style-type: none"> 1. Skill upgradation is required in food processing sectors in the area of drying, grading, sorting, packaging, refrigeration and marketing of value added products 2. Skill upgradation is required for processed food products like squash, jam, jelly, pickle, dry fruits and wine. 3. Skill upgradation is required for scientific cultivation and management of tea and coffee 4. Skill development is required for scientific management of fruits and floral nursery through different propagation techniques like budding, layering, grafting, cutting etc. 5. Skill upgradation is required in case of rearing and reeling of silkworms 6. Skill upgradation is required in fashion and apparel sector in the area of spinning, fabric manufacturing, fabric processing, garmenting, merchandising, graphic designing and marketing 7. Champhai has a salubrious climate and a number of tourist attractions. A picturesque spot here is the Champhai valley known as "The Rice bowl of Mizoram" located towards the base of the town. The famous Rihdil Lake

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>is only about 50 kms away from the town of Champhai. A storehouse of ancient relics, monuments and memorials connected with legends and folklores, Champhai has a background of rich heritage. Hence, skill upgradation is required in the areas of tour operator, tour guide, mountaineering, caving, trekking, paragliding, angling, bird watching etc.</p> <p>8. Skill development is required in hotel management and hospitality in the area of cooking & culinary, fast food outlets, restaurants, front desk services, housekeeping, bartender, maintenance etc.</p> <p>9. Skills need to be developed immobile repairing, electrician, motor mechanic, plumber, welder, fitter, turner, bricklayer, leather worker, painting, computer, carpentry, masonry, knitting, tailoring, steel fabrication etc.</p> <p>10. Skill upgradation is required in piggery, goat farming, sheep rearing and poultry.</p> <p>11. Skill development is required in case of breeding & artificial insemination, meat processing, fodder cultivation and poultry feed manufacturing</p> <p>12. Skill development is required for beauty and wellness industry in the area of beauty parlour, gymnasium, yoga etc.</p> <p>13. Skill development is required in the area of healthcare sector in the area of nursing,</p>

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>laboratory technician, medical equipment technician, dietician, pharmacy etc.</p> <p>14. Skilling is required in scientific mushroom production and vermi-compost making.</p> <p>15. Skill development is required in dairy and dairy based products</p> <p>16. Skill development is required for commercial cultivation of Mustard, Cabbage, Radish, Carrot, Tomato, Potato and Pulses</p> <p>17. Skill upgradation is required in scientific cultivation and management of fruits like plum, peach, pear, jackfruit, mango, litchi, lemon, oranges, papaya, banana, pineapple and areca nut.</p> <p>18. Skill upgradation is required for scientific cultivation and management of spices and condiments such as chillies, ginger, turmeric, garlic, black pepper and bay leaf</p> <p>19. Skill upgradation is required for cultivation and processing of oil palm and bee keeping</p> <p>20. Skill development is required in the area of scientific cultivation and marketing of rose, anthurium, gladiolus and orchids</p> <p>21. Skill upgradation is required for forest based industry in the area of cane & bamboo, tans & dye, oil, gums, resins, aromatic & medicinal plants, fibre & flosses, plywood and broom making</p>

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
3.	Mamit	<ol style="list-style-type: none"> 1. Agriculture 2. Animal Husbandry 3. Horticulture 4. Floriculture 5. Handloom & Handicrafts 6. Sericulture 7. Food processing 	<ol style="list-style-type: none"> 1. Skilling is required in scientific mushroom production and vermi-compost making. 2. Skill development is required in dairy and dairy based products 3. New design intervention along with marketing skills is required particularly in case of cane and bamboo products. 4. Skill upgradation is required in scientific cultivation and management of fruits like plum, peach, pear, jackfruit, mango, litchi, lemon, oranges, papaya, banana, pineapple and areca nut. 5. Skill upgradation is required for scientific cultivation and management of spices and condiments such as chillies, ginger, turmeric, garlic, black pepper and bay leaf 6. Skill upgradation is required for cultivation and processing of oil palm and bee keeping 7. Skill upgradation is required in piggery, goat farming, sheep rearing and poultry. 8. Skill development is required in the area of scientific cultivation and marketing of rose, anthurium, gladiolus and orchids 9. Skill upgradation is required for scientific grape cultivation and processing 10. Skill development is required for commercial cultivation of Mustard, Cabbage, Radish, Carrot, Tomato, Potato and Pulses 11. Skill upgradation is required in food processing sectors in the area of drying,

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>grading, sorting, packaging, refrigeration and marketing of value added products</p> <p>12. Skill development is required for scientific management of fruits and floral nursery through different propagation techniques like budding, layering, grafting, cutting etc.</p> <p>13. Skill upgradation is required in case of rearing and reeling of silkworms</p>
4.	Serchhip	<ol style="list-style-type: none"> 1. Agriculture 2. Animal Husbandry 3. Horticulture 4. Floriculture 5. Forest based industry 6. Handloom & Handicrafts 7. Tourism & Hospitality 8. Sericulture 9. Food processing 10. Construction 	<ol style="list-style-type: none"> 1. Major tourist attractions include Vantawng waterfall which is the highest waterfall in Mizoram and lies close to the town of Thenzawl and the Tawi Wildlife Sanctuary which lies on the Northern part of the District. Hence, skill upgradation is required in the areas of tour operator, tour guide, mountaineering, caving, trekking, paragliding, angling, bird watching etc. 2. Skill development is required in hotel management and hospitality in the area of cooking & culinary, fast food outlets, restaurants, front desk services, housekeeping,

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>bartender, maintenance etc.</p> <p>3. Skills need to be developed immobile repairing, electrician, motor mechanic, plumber, welder, fitter, turner, bricklayer, leather worker, painting, computer, carpentry, masonry, knitting, tailoring, steel fabrication etc.</p> <p>4. Skill upgradation is required in piggery, goat farming, sheep rearing and poultry.</p> <p>5. Skill development is required in case of breeding & artificial insemination, meat processing, fodder cultivation and poultry feed manufacturing</p> <p>6. Skilling is required in scientific mushroom production and vermi-compost making.</p> <p>7. Skill development is required in dairy and dairy based products</p> <p>8. Skill upgradation is required in scientific cultivation and management of fruits like plum, peach, pear, jackfruit, mango, litchi, lemon, oranges, papaya, banana, pineapple and areca nut.</p> <p>9. Skill upgradation is required for scientific cultivation and management of spices and condiments such as chillies, ginger, turmeric, garlic, black pepper and bay leaf</p> <p>10. Skill upgradation is required for cultivation and processing of oil palm and bee keeping</p> <p>11. Skill development is required in the area of scientific cultivation and marketing of rose, anthurium, gladiolus and orchids</p>

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>12. Skill upgradation is required for forest based industry in the area of cane & bamboo, tans & dye, oil, gums, resins, aromatic & medicinal plants, fibre & flosses, plywood and broom making</p> <p>13. Skill upgradation is required for scientific grape cultivation and processing</p> <p>14. Skill development is required for commercial cultivation of Mustard, Cabbage, Radish, Carrot, Tomato, Potato and Pulses</p> <p>15. Skill upgradation is required in food processing sectors in the area of drying, grading, sorting, packaging, refrigeration and marketing of value added products</p> <p>16. Skill upgradation is required in case of rearing and reeling of silkworms</p>
5.	Kolasib	<ol style="list-style-type: none"> 1. Agriculture 2. Animal Husbandry 3. Horticulture 4. Floriculture 5. Forest based industry 6. Handloom & Handicrafts 7. Sericulture 8. Food processing 	<ol style="list-style-type: none"> 1. Skill upgradation is required for forest based industry in the area of cane & bamboo, tans & dye, oil, gums, resins, aromatic & medicinal plants, fibre & flosses, plywood and broom making 2. Skill development is required for commercial cultivation of Mustard, Cabbage, Radish, Carrot, Tomato, Potato and Pulses 3. Skill upgradation is required in food processing sectors in the area of drying, grading, sorting, packaging, refrigeration and marketing of value added products 4. Skill upgradation is required for processed food products like squash, jam, jelly, pickle, dry fruits and wine.

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>5. Skill upgradation is required in piggery, goat farming, sheep rearing and poultry.</p> <p>6. Skill upgradation is required for cultivation and processing of oil palm and bee keeping</p> <p>7. Skill development is required in the area of scientific cultivation and marketing of rose, anthurium, gladiolus and orchids</p> <p>8. Skilling is required in scientific mushroom production and vermi-compost making.</p> <p>9. Skill development is required in dairy and dairy based products</p> <p>10. Skill upgradation is required in scientific cultivation and management of fruits like plum, peach, pear, jackfruit, mango, litchi, lemon, oranges, papaya, banana, pineapple and areca nut.</p> <p>11. Skill upgradation is required for scientific cultivation and management of spices and condiments such as chillies, ginger, turmeric, garlic, black pepper and bay leaf</p> <p>12. Skill upgradation is required in case of rearing and reeling of silkworms</p>
6.	Lunglei	<p>1. Agriculture</p> <p>2. Animal Husbandry</p> <p>3. Horticulture</p> <p>4. Floriculture</p> <p>5. Forest based industry</p> <p>6. Handloom & Handicrafts</p> <p>7. Tourism &</p>	<p>1. Skill upgradation is required for scientific cultivation and management of spices and condiments such as chillies, ginger, turmeric, garlic, black pepper and bay leaf</p> <p>2. Skilling is required in scientific mushroom production and vermi-compost making.</p> <p>3. Skill development is required in dairy and dairy based products</p> <p>4. Skill upgradation is required in scientific</p>

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
		<p>Hospitality</p> <p>8. Sericulture</p> <p>9. Beauty and Wellness</p> <p>10. Food processing</p> <p>11. Fashion and Apparel</p> <p>12. Construction</p>	<p>cultivation and management of fruits like plum, peach, pear, jackfruit, mango, litchi, lemon, oranges, papaya, banana, pineapple and areca nut.</p> <p>5. Skill upgradation is required for processed food products like squash, jam, jelly, pickle, dry fruits and wine.</p> <p>6. Skill upgradation is required for cultivation and processing of oil palm and bee keeping</p> <p>7. Skill upgradation is required in piggery, goat farming, sheep rearing and poultry.</p> <p>8. Skill development is required in case of breeding & artificial insemination, meat processing, fodder cultivation and poultry feed manufacturing</p> <p>9. Skill upgradation is required in the areas of tour operator, tour guide, mountaineering, caving, trekking, paragliding, angling, bird watching etc.</p> <p>10. Skill development is required in hotel management and hospitality in the area of cooking & culinary, fast food outlets, restaurants, front desk services, housekeeping, bartender, maintenance etc.</p> <p>11. Skills need to be developed immobile repairing, electrician, motor mechanic, plumber, welder, fitter, turner, bricklayer, leather worker, painting, computer, carpentry, masonry, knitting, tailoring, steel fabrication etc.</p> <p>12. Skill development is required for beauty and</p>

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>wellness industry in the area of beauty parlour, gymnasium, yoga etc.</p> <p>13. Skill development is required in the area of healthcare sector in the area of nursing, laboratory technician, medical equipment technician, dietician, pharmacy etc.</p> <p>14. Skill development is required in the area of scientific cultivation and marketing of rose, anthurium, gladiolus and orchids</p> <p>15. Skill upgradation is required for forest based industry in the area of cane & bamboo, tans & dye, oil, gums, resins, aromatic & medicinal plants, fibre & flosses, plywood and broom making</p> <p>16. Skill upgradation is required for scientific grape cultivation and processing</p> <p>17. Skill development is required for commercial cultivation of Mustard, Cabbage, Radish, Carrot, Tomato, Potato and Pulses</p> <p>18. Skill upgradation is required in food processing sectors in the area of drying, grading, sorting, packaging, refrigeration and marketing of value added products</p> <p>19. Skill development is required for scientific management of fruits and floral nursery through different propagation techniques like budding, layering, grafting, cutting etc.</p> <p>20. Skill upgradation is required in case of rearing and reeling of silkworms</p> <p>21. Skill upgradation is required in fashion and apparel sector in the area of spinning, fabric</p>

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			manufacturing, fabric processing, garmenting, merchandising, graphic designing and marketing
7.	Lawngtlai	<ol style="list-style-type: none"> 1. Agriculture 2. Animal Husbandry 3. Horticulture 4. Floriculture 5. Forest based industry 6. Handloom & Handicrafts 7. Sericulture 8. Food processing 9. Construction 	<ol style="list-style-type: none"> 1. Skill upgradation is required in piggery, goat farming, sheep rearing and poultry. 2. Skill development is required in case of breeding & artificial insemination, meat processing, fodder cultivation and poultry feed manufacturing 3. Skill development is required in the area of cooking & culinary, fast food outlets, restaurant etc. 4. Skills need to be developed in mobile repairing, electrician, motor mechanic, plumber, welder, fitter, turner, bricklayer, leather worker, painting, computer, carpentry, masonry, knitting, tailoring, steel fabrication etc. 5. Skilling is required in scientific mushroom production and vermi-compost making. 6. Skill development is required in dairy and dairy based products 7. Skill upgradation is required in scientific cultivation and management of fruits like plum, peach, pear, jackfruit, mango, litchi, lemon, oranges, papaya, banana, pineapple and areca nut. 8. Skill upgradation is required for scientific cultivation and management of spices and condiments such as chillies, ginger, turmeric, garlic, black pepper and bay leaf

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>9. Skill upgradation is required for cultivation and processing of oil palm and bee keeping</p> <p>10. Skill development is required in the area of scientific cultivation and marketing of rose, anthurium, gladiolus and orchids</p> <p>11. Skill upgradation is required for forest based industry in the area of cane & bamboo, tans & dye, oil, gums, resins, aromatic & medicinal plants, fibre & flosses, plywood and broom making</p> <p>12. Skill upgradation is required for scientific grape cultivation and processing</p> <p>13. Skill development is required for commercial cultivation of Mustard, Cabbage, Radish, Carrot, Tomato, Potato and Pulses</p> <p>14. Skill upgradation is required in food processing sectors in the area of drying, grading, sorting, packaging, refrigeration and marketing of value added products</p> <p>15. Skill upgradation is required for processed food products like squash, jam, jelly, pickle, dry fruits and wine.</p> <p>16. Skill development is required for scientific management of fruits and floral nursery through different propagation techniques like budding, layering, grafting, cutting etc.</p> <p>17. Skill upgradation is required in case of rearing and reeling of silkworms</p>
8.	Saiha	<p>1. Agriculture</p> <p>2. Animal Husbandry</p> <p>3. Horticulture</p>	<p>1. Skill upgradation is required for scientific cultivation and management of spices and condiments such as chillies, ginger, turmeric,</p>

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
		<p>4. Floriculture</p> <p>5. Forest based industry</p> <p>6. Handloom & Handicrafts</p> <p>7. Tourism & Hospitality</p> <p>8. Sericulture</p> <p>9. Food processing</p>	<p>garlic, black pepper and bay leaf</p> <p>2. Skill upgradation is required in case of rearing and reeling of silkworms</p> <p>3. Skill upgradation is required for cultivation and processing of oil palm and bee keeping</p> <p>4. Skill development is required in the area of scientific cultivation and marketing of rose, anthurium, gladiolus and orchids</p> <p>5. Skilling is required in scientific mushroom production and vermi-compost making</p> <p>6. Skill development is required in dairy and dairy based products</p> <p>7. Skill upgradation is required in piggery, goat farming, sheep rearing and poultry.</p> <p>8. Skill development is required in case of breeding & artificial insemination, meat processing, fodder cultivation and poultry feed manufacturing</p> <p>9. Skill upgradation is required in scientific cultivation and management of fruits like plum, peach, pear, jackfruit, mango, litchi, lemon, oranges, papaya, banana, pineapple and areca nut.</p> <p>10. Skill upgradation is required for forest based industry in the area of cane & bamboo, tans & dye, oil, gums, resins, aromatic & medicinal plants, fibre & flosses, plywood and broom making</p> <p>11. Skill upgradation is required for scientific grape cultivation and processing</p> <p>12. Skill development is required for commercial</p>

Sl No.	District	Potential Sectors Capable of Developing Enterprise and Employment Generation	Skill Development Requirements
			<p>cultivation of Mustard, Cabbage, Radish, Carrot, Tomato, Potato and Pulses</p> <p>13. Skill upgradation is required for processed food products like squash, jam, jelly, pickle, dry fruits and wine.</p> <p>14. Skill development is required for scientific management of fruits and floral nursery through different propagation techniques like budding, layering, grafting, cutting etc.</p>

e. Sectors of Economy/Industries in which Mizoram can intensify its Skilling Effort

In order to identify the sectors of economy in which Mizoram should intensify its skilling effort, it is important to understand the major economic activities in which people of Mizoram are engaged presently as well as the key areas of economic activities identified by the state as a matter of policy priority, along with the aspiration of youth in terms of preferred area in which they desire to be skilled.

Sl No	Economy/Industry Sectors	Skill Development Requirements
1	Agriculture & Allied Sectors such as Horticulture, Animal Husbandry, Floriculture and Sericulture	<p>Agriculture and Horticulture: Skilling is required in Scientific Techniques of growing different Agri-Horti Crops like Harvesting Skills and Post Harvest Techniques such as Grading, Preservation, Processing & Marketing, etc. for crops such as Passion fruits, Dragon fruits, Strawberry, Kiwi, Mandarin and Elephant apple along with other traditional fruits like Plum, Peach, Pear, Jackfruit, Guava, Mango, Litchi, Lemon, Orange, Papaya, Banana, Pineapple and Areca nut. Upgradation of skills is needed for scientific cultivation of Spices and Condiments such as Chillies, Ginger, Turmeric, Garlic, Black pepper and Bay leaf. Skill Development in <i>Floriculture, Palm-oil Cultivation, Ginger & Turmeric Processing and Bee Keeping</i> is needed as it has ample scope for generating livelihood in the state. Upgradation of existing skills for organic cultivation especially for the use of bio-fertilizer and bio-pesticide. New skill sets of cultivation, harvest, post-harvest management, farm mechanization and transportation etc. Ginger is an important forex earner for India.</p>

Despite low yields, a ginger surplus state like Mizoram has potential to develop processing industries for ginger which can be used in confectionary, medicinal extracts or beverages. High ginger consumption in China and South East Asia offers another avenue to be explored. Mizoram also produces grapes mainly in the off-season, which has higher productivity than the national average as well as that of Maharashtra, which is the main grape production belt. Presently, the localshave started extensive cultivation of oil palm, medicinal and aromatic plants. All agri-horticultural output of Mizoram is of very high value in national as well as the international markets. There exists immense potential for the production of Food products like squash, jam, jelly, fruit bars, fruit pulp, dried fruits. Vegetable products like dried vegetable canned vegetable, mixed pickle, tapioca, potato chips, sago and starch and spice products like spice oils and spice oleoresin. The tea produced in Mizoram has a distinct touch of quality and flavor similar to tea grown in high altitudes like the Nilgiris and Darjeeling. Biate has the largest area under tea, followed by Ngopa, Khawdungsei, NEBualpui, Pawlrang, and Thungvel. There exists is a scope for setting up a mini tea processing plant at Biate in collaboration with the local cooperatives. Coffee plantation can play an important role in the state of Mizoram. A very low gestation period of two years and the simple on farm processing of the produce are the favorable factors for large-scale cultivation in the state. Since coffee based cropping system promises higher economic return for the farmers on a permanent basis, the government of Mizoram has proposed to establish coffee plantations in an area of 10,000 hectares over a period of 10 years. Skills related to organic farming, Skills of transplantation, grafting, integrated pest management, organic certification, nutrient management with on-farm and off-farm biological inputs, EM technology, construction of rural compost and vermin-compost units.

Animal Husbandry plays an important role in the state economy and *Dairy, Piggery and Goat Farming* have vast scope in the state. Skill Development is needed for scientific management of this sector so that the production of milk, eggs, wool, etc, can be increased and in turn livelihood opportunities can be created within the state. Skill Development is needed in the areas of Dairy farming, Piggery, Goat farming, Poultry, Sheep rearing, Animal anatomy skills, breeding and artificial insemination skill, butchering skill, poultry farming activities including brooding arrangements, feeding skill like nutritious diet etc. Skill Development is needed in the areas of meat processing and dairy product development.

Floriculture: Mizoram grows 11% of India's flowers. Aizawl, Lunglei and Kolasib are flower belts particularly well suited to heavily promote Rose, Anthurium, Gladiolus – which fetch good

premium in both domestic and export markets. Floriculture which was traditionally been a hobby has been taken up in a commercial scale with the help of Technology Mission which was introduced recently. Considerable plot of land has been put under cultivation of high value of exotic flowers such as anthurium, bird of paradise, leather leave fern, orchids and roses etc. Mizoram has a wide spectrum of orchids growing from the lower elevations to the high hills. The Orchids grown in the high hills fetch a good price in the market at Delhi and Calcutta. More than 200 varieties of Orchids have been identified in Mizoram till now. In view of the right agro-climatic conditions prevailing in Mizoram, there is an immense potential of growing Orchids for large-scale commercial purposes. Various skills on different propagation techniques like grafting, air layering, budding and cutting are required for developing rootstock nursery.

Sericulture: Mizoram is one of the most promising states for development of Sericulture in North East India where all four varieties of silk producing food plants are grown and silkworms are reared for silk production. Identification of sericulture potential with remote sensing and geographical information system in six of the eight districts in Mizoram has found that 1439 Sq. km are suitable for mulberry cultivation. The state government is working towards bringing maximum families under sericulture farming and silkworm rearing. The government of Mizoram has opened one research & training institute at Aizawl (Zemabawk) which provides training & certification courses in sericulture.

<p>2 Food and Meat Processing Sector</p>	<p>The agro climatic condition of Mizoram is very suitable for agricultural and horticultural crops and a strong and effective food processing sector would play a significant role in employment generation. There is an immediate need to develop the entrepreneurial skills of prospective entrepreneurs in Food Processing Sector through specially designed entrepreneurship skill development courses related to processing of Fruits (jammaking, jelly, pickles, juices, etc.), Spices (Ginger, Turmeric, Black pepper, etc.), wine brewing, processing of medicinal plants like Aloe Vera by providing sufficient financial assistance for start-up business in Food Processing Sector. Animal Husbandry and Meat Processing have a huge potential as people of Mizoram are mainly non-vegetarian. At present, scientific processing of Poultry/Piggery and other meat products is lacking in the State. Therefore, there is potential for setting up modern abattoirs and other processing units in the State and for this, skill development in these areas is the need of the hour. Along with the Entrepreneurial Skill Development, Skills need to be developed at all workmen levels in the areas of Procurement, Production, Drying, Grading, Sorting, Packaging & Refrigeration, Packaging and marketing of wine, Fruits & Vegetables, Oilseeds & Food Grain Milling, Spices, Bread & Bakery, Meat & Poultry, etc.</p>
<p>3 Fashion and Apparel Sector</p>	<p>The state of Mizoram has a unique and rich traditional textile heritage, which needs to be meticulously preserved by the present generation. Fashion apparel and designing have always been quite popular amongst the Mizo youth. The traditional ‘puanchei’ and ‘puan’ are still worn by the people of the state with various modifications keeping in tune with the present fashion. Lately, the people of the state (particularly women) have been fusing traditional spinning and weaves with modern technology. Therefore, the need of the hour is proper technical impetus, skilling and channelizing the people of the state. This sector could become a viable entrepreneurial avenue for the educated and interested youth of the state. The Union Government has undertaken a Rs. 1,038 crore scheme, i.e the North East Regional Textile Promotion Scheme (NERTPS) in the north east to boost the textile exports, increase jobs and reduce migration. The North East Regions’ first Apparel and Garment Making Centre was established in Luangmual, Aizawl in 2015 and. The Ministry of Textiles intends to take the cultural heritage of the state beyond boundaries and give it an international recognition through technology up gradation, marketing linkage and design inputs. The Chief Minister of Mizoram recently inaugurated Integrated Muga Silk Development Project (IMSDP) initiated by the State Sericulture department under the North East Region Textiles Promotion Scheme (NERTPS). The state will soon become one of the major producers of muga. The traditional practice of weaving in loom is practiced by</p>

most of the people of the region and should be continued by adopting few modifications like adopting latest know-how and better marketing linkage and commercialization. The key skills needed for this sector to flourish in the state are *Spinning, Fabric Manufacturing, Fabric Processing, Garmenting and Merchandising*. With regard to Fabric Manufacturing knowledge regarding yarn count, latest trend and market demand and communication skills is required. In terms of Fabric Processing the skills required are shearing, singeing, de-sizing, scouring, bleaching, dyeing etc. In terms of Garment Making the skills required are cutting, stitching and assembling of the garments. Few ancillary skills are also required to develop in line with this sector viz. *sewing skills, creativity and imaginative skills, good fashion sense, computer knowledge (CAD, Corel Draw, Illustrator, Photoshop etc.), business and marketing skills and the understanding the health and safety standards* connected with working under this sector. The state should tap the potential youth of the state and create a platform for *fashion designer, fashion illustrator, fashion buyer, pattern maker, custom designer, fashion merchandiser, fashion event co-coordinator, fashion stylist, faculty for institutes, fashion choreographer, fashion photographer, fashion journalist and boutique business*. The Indian government plans to set up ready-made garment manufacturing units in each of the eight northeastern states to boost the textile industry in and export of ready-made garments from the region, which would also boost local employment, particularly for women. The government-run National Building Constructions Corporation would set up the units in Assam, Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Mizoram, Sikkim and Tripura. Mizoram has been sanctioned six projects across sericulture, handloom and apparel and garmenting with a total project cost of Rs. 114.82 crore with the Central Government's share being Rs. 102.90 crore.

4 **Tourism and Hospitality Sector**

With its abundant scenic beauty and a soothing climate, the state has tremendous scope for developing tourism related industries. There are various development avenues in tourism and related sectors such as Cultural, adventure and wildlife, eco tourism, etc, amusement parks, other leisure & entertainment units (including sports), health farms, Hotels & Lodges, Travel Agencies, tour operators, and tourist transport services, convention/ seminar Centers.

Tourism & Hospitality is an important sector not only within the state but also witnessing excellent growth worldwide. In terms of aspiration of various categories of population such as School Students, Graduate & Vocational Students, Post Graduate Students, School Dropouts and Unemployed Persons too this sector figures prominently in the list of sectors in which they want to get skilled. In view this, there is a need to design skill development courses in Tourism & Hospitality at various level (both for self & wage employment) as per international standards so that the trainees are not only prepared to work within the state but also ready to grab the opportunities worldwide.

In view of this, skill development is needed in Mountaineering, Caving, Home Stay, Tour Guide, Trekking, Paragliding, Angling and Bird Watching. Skilling needs to be done in different job roles of Hotel & Restaurant, Food Services and Travel Agents & Tour Operators such as Food & Beverage Services, Cooking, Travel Counseling, Front Desk Services, Driving, Housekeeping, Bartender, Restaurant Manager, Maintenance etc.

5 **Information Technology & Information Technology Enabled Services (IT& ITES) Sector**

The high literacy rate prevalent in the state facilitates the IT industry and Mizoram has recognized IT as the fastest and the most advanced vehicle of change for all round progress and development of the state. A separate IT policy has been announced to encourage investment in this sector. Accordingly, the government is promoting widespread propagation of IT in the state through a well-defined policy framework for encouraging IT in the fields of e-governance, empowerment of the people and the society, education, industry, health, rural development, agriculture and tourism. The state strongly believes that this will help them achieve the goal of becoming strong and prosperous. IT enabled services is the most suitable area for Mizoram. Therefore, IT enabled services is considered one of the main thrust area for socio-economic development of Mizoram State. Therefore, the government of Mizoram should endeavor to establish Call Centres, Medical Transcription, Website Services and Back-office operations.

The Government of Mizoram has endeavored to establish 'Software Technology Park' in the premises of hi-tech complex with the objective of promoting export of computer software from Mizoram. It mainly aims at the development and export of Software and Software Services through Technology assessments, market analysis, marketing segmentation, marketing support etc. This STP may be established with a joint effort of the Government of Mizoram and Department of IT, Government of India. In view of this, there is a need to design skill development courses in IT & ITES at various level (both for self & wage employment) especially for educated unemployed and students as per international standards so that the trainees are not only prepared to work or create opportunities within the state but also ready to grab the opportunities worldwide.

Skill Development is required in the areas of Computer Skills, Programming Skills, Logical and Analytical Skill, Software Architecture, Database Management, Customer Service, Client Management, Communication Skill, Product Development, Enquiry Handling, Soft skills, team management, accent understanding, process flow understanding, IP advisory and filing, understanding patents, legal transcription, process specialist, project management, information security/quality compliance.

6 Forest/Bamboo based Industries Sector

Mizoram is rich in forest resources and there is a good potential for forest based industries in the state in the areas of Timber, Bamboos and Cane, Tans and Dyes, Oil, Gums and Resins, Aromatic & Medicinal Plants/Herbs, Fibres and Flosses, etc. Mizoram has abundant natural bamboo resources which covers around 31% (about 6446 Sq.km) of its geographical area and as many as 35 species of bamboo have been identified in the state of which *Melocannabaccifera* (mautak) contributes about 77% of the total bamboo coverage. The extent of bamboo bearing area in the forests of the state is 9,245 sq. km. As such, promoting forest / bamboo based industry and manufacturing activities would definitely provide comparative advantage in the State. There exists huge potential of earning revenue through exports of bamboo products. The Mizoram government invites private investors and FDI for setting up industrial units for making bamboo chips, bamboo mat ply, toothpicks, bamboo blinds, chopsticks, incense sticks, either in joint venture with the Mizoram Bamboo Development Agency or with the local entrepreneurs. A separate bamboo policy has been announced for the development of bamboo sector.

Many of the industries in the state are based on forest products such

as timber, veneer and plywood and cane & bamboo Furniture. In view of this there exists immense scope of skill development in the area of value addition to the minor forest produce available in the state such as Bamboo and Cane, Tans and Dyes, Oil, Gums and Resins, Aromatic & Medicinal Plants/Herbs, Fibres and Flosses by devising skill development courses in the areas of Procurement, Production, Processing, Testing & Quality Control of various non-timber based forest produce available in the state.

A host of high value medicinal plants are available in Mizoram. In fact the socio-economic life of the rural people of Mizoram depends on their ambient vegetation from where they derive their entire material requirement, including herbal medicines. Development of herbal and medicinal plants for setting up processing units in Mizoram should be a very tenable investment.

7 **Handloom and Handicrafts**

Mizoram has highly gifted skilled handloom and handicrafts artisans. Mizoram has not dwindled into trite imitations nor lost their traditional splendour. Mizoram is now all set to carve a niche for itself in the international markets in handloom and handicrafts. Cane and bamboo are remarkable natural materials found abundantly in the state. Its popularity is due to special features such as pliability and linear strength which have been used to advantage by craftsmen in many creative ways. The original garment of the Mizos is known as puan. The Mizos have certain unique patterns and motifs that have come down through the ages. Traditional Handloom and Handicrafts sector plays a big role in the local economy of the state. Weaving and Cane & Bamboo have good commercial potential not only within Mizoram but also outside.

There is a need to provide advanced training to practitioners of these trades, introducing new tools, methods and techniques and providing marketing and financing support to the existing entrepreneurs for scaling up their operations and also to potential entrepreneurs to start up new ventures in these trades. Skill Development in the Rearing of Eri, Muga and Mulberry is another area which needs to be given adequate attention as it has immense possibility of rural livelihood generation if done properly.

8	Banking, Financial Services and Insurance (BFSI) Sector	BFSI Sector is another sector which is having decent employment potential. The projected manpower requirement of the BFSI labour force in the country by 2022 is 8.5 million. In view of this Skill Development is suggested in retail banking, documentation and legal procedures, regulatory affairs, understanding of standard operating procedures, computer skills, accounting skills, communication skills, customer management, asset liability management, risk management product development, business analysis, marketing and selling skills, claims management, portfolio management, credit appraisal.
9	Education & Training	<p>Education sector presents an opportunity to educated youth of the state for both self as well as wage employment within the state. Moreover, Skilling in this sector will prepare them for working anywhere in the world. The sector is looking after the skills needed for curriculum review and revision, preparation of syllabus, in-service training of teacher, research and development. This sector presents an opportunity to educated youth of the state for self as well as wage employment within the state. Skilling in this sector will prepare oneself for working anywhere in the world. Wage as well as self-employment opportunities may also be created in terms of Sports and Music sector which has immense potential in the state. Skilling may be done to create teachers/mentors in these sectors who can skill the potential youth. Sports and Music may be included in the curricula in schools and colleges.</p> <p>Skill upgradation is needed in sectors like Teaching & Training skill, Communication skill, Soft skills, Research and training, Curriculum development, Presentation skills, Logical and analytical skill, Adaptability skills, Organizational skills, Technological skills, Pedagogic skills, Educational consulting skills, Assessment ability of different levels of students etc.</p>
10	Health & Allied Sector	<p>In case of Health & Allied Sector too, the state of Mizoram has wide range of skills areas which creates employment in both public and private sector within the state. So skilling in these areas will not only prepare one for employment within the state but in case of less or lack of opportunities within the state, one can try for employment anywhere in the world depending upon his/her capability.</p> <p>Skill Development can be initiated for Nursing, Medical Lab Technician, Medical Equipment Technician, Pharmacy Assistant, Dietician Assistant, Dental Assistant, Radiology, Dental Assistant, Operation Theatre Assistant etc. Health & Allied Sector has wide range of skill areas which creates employment in both public and private sectors. This sector could become a viable entrepreneurial</p>

avenue for the educated youths of the state. Skill development can be initiated in Nursing, Anesthesia Technician, Physiotherapist, Blood Bank Technician, Cardiac Care Technician, Dental Assistant, Diabetes Educator, Dialysis Assistant, Histo-technician, Medical Equipment technician, Medical laboratory technician, Operating Theatre Technician, Pharmacy Assistant, Phlebotomy technician, Radiology technician, Vision Technician and Refractionist etc.

- 11 **Construction Sector** Construction is another sector which has good prospects of generating employment within the state considering the various infrastructure projects undertaken by the state. Skill Development is required in Supervision Skills, skills required for Foreman and Crane operators, Electrical Skills, Welding skills, Bar Bending Skills, Skills required for Mason, Plumbing Skills, Carpentry skills, Surveying Skills, Quality Control, Testing Skills, Safety Skills, Painting Skills, Construction Equipment Operating Skills, Machine Experts Turner, etc.

VI. STRATEGIC REFORMS ROADMAP FOR SKILL DEVELOPMENT SECTOR IN MIZORAM

The complete exercise of understanding the Characteristic of Skill Development System operational in the state of Mizoram, Aspiration and Skill Development Needs of Various Categories of Population of the State and the Global, National and Local Skill Requirement Trends in recent years in the study as documented in previous sections is aimed at developing a comprehensive understanding on the existing skill development scenario in the state of Mizoram and to identify the ways in which the gains made in the state in the area of skill development can be consolidated further and taken to the next best possible level in short to medium term i.e, within 1 to 5 Years time horizon.

The key aspects that have emerged through the study and which have been taken as Strategic Goals for Reforms in Skill Development Sector in the State of Mizoram are:

- 1. Strengthening the Governance Framework currently governing the Skill Development Ecosystem of the State*
- 2. Improving the Effectiveness and Utilization of existing Technical Vocational Education & Training (TVET) Institutions,*
- 3. Making Provisions for providing Specialised Skill Development Training in Identified Sectors and Domains Relevant to the State*
- 4. Making General Education Provided in Schools an Integral Part of Skill Development Efforts by Improving the Quality and Learning Outcomes of School Education*

5. Creating a Robust Ecosystem of Credible Private Vocational Training Providers (VTPs) to Support Skilling Initiatives of the State Government

6. Improving Linkages between Industry and Institutions providing Skill Development Training,

7. Strengthening the Handloom and Handicrafts Sector

8. Making Extensive Provisions for Career Counselling and Information Dissemination.

These Strategic Goals can be achieved by implementing specific strategies targeted to achieve these goals. The suggested strategies along with their rational and implementation approach are discussed in details in the following sections.

Strategic Goals	Strategies Suggested for achieving the Goals
<p>1. STRENGTHENING THE GOVERNANCE FRAMEWORK GOVERNING THE SKILL DEVELOPMENT ECOSYSTEM</p>	<p>1.1 Improving the Functioning of ‘State Skill Development Mission (SSDM)’ and ‘Mizoram Skill Development Co-ordination Board (MSDCB)’</p> <p>1.2 Formulation of a State Specific Skill Development Policy</p> <p>1.3 Creation of a dedicated Department of Skill Development & Entrepreneurship(SD&E)</p> <p>1.4 Adequate Staffing and Capacity Building of the proposed Department of Skill Development & Entrepreneurship to enable it to work as full fledged Mission Directorate directly attached to the State Skill Development Mission</p> <p>1.5 Introducing Right Amount of Centralization for Governance of Skill Development Schemes in the State</p> <p>1.6 Comprehensive Planning for Skill Development activities in the state which takes care of duplicities, redundancies and inefficiencies present in the Skill Development Ecosystem of the state</p> <p>1.7 Creation of State Council for Skill Development, a Regulatory & Quality Control cum Quality Assurance Body to look into the regulatory and quality aspect of various issues facing Skill Development Ecosystem</p> <p>1.8 Creation of a Labour Market Intelligence System (LMIS)</p> <p>1.9 Creation of a State Skill Development Fund and</p> <p>1.10 Introducing Concurrent Monitoring & Evaluation of Skill</p>

Strategic Goals	Strategies Suggested for achieving the Goals
	Development Efforts.
2. IMPROVING THE EFFECTIVENESS AND UTILIZATION OF EXISTING TECHNICAL VOCATIONAL EDUCATION & TRAINING SYSTEM (TVET) INSTITUTIONS	<p>2.1 Restructuring & Up gradation of ITIs and Polytechnics as per the Skill Requirement Needs of the state</p> <p>2.2 Better Utilization of ITIs and Polytechnics which apart from training for formal sector should also be providing training to informal sector as per the need of the community</p> <p>2.3 Capacity Building of Teachers/Trainers of TVET Institutions</p>

Strategic Goals	Strategies Suggested for achieving the Goals
<p>3. MAKING PROVISIONS FOR PROVIDING SPECIALISED SKILL DEVELOPMENT TRAINING IN IDENTIFIED SECTORS AND DOMAINS RELEVANT TO THE STATE</p>	<p>3.1 Intensifying Skilling Efforts in Identified Sectors Relevant to the State such as</p> <ul style="list-style-type: none"> • Agriculture & Allied • Food & Meat Processing • Fashion and Apparel • Forest/Bamboo Based Industries • Handloom & Handicrafts • Tourism & Hospitality • Information Technology & Information Technology Enabled Services • Banking, Financial Services and Insurance • Education & Training • Health & Allied • Construction <p>Apart from the above Sectors, the domains in which skill development is required in the state of Mizoram for gainful self as well as wage employment are Weaving, Automobile works, Basic Computer literacy, DTP Operator, Repairing of Machinery & Equipment, Carpentry, Stone Masonry, Tailoring, Automobile Repairing, Candle making, Beauty and Wellness, Driving, Tinsmithy, Steel fabrication, Furniture making, Shoe making, Electrician, Cosmetology and Plumbing.</p> <p>3.2 Specialized Skill Development Training for Entrepreneurship in the sectors which are relevant to the state</p> <p>3.3 Provisions for Specialized Skill Development Training for enterprises working in Informal sector and Strengthening of In-house training capabilities of enterprises</p> <p>3.4 Provisions for High-End Skill Development Training for Educated Unemployed Youth.</p>

Strategic Goals	Strategies Suggested for achieving the Goals
<p>4. MAKING GENERAL EDUCATION PROVIDED IN SCHOOLS AN INTEGRAL PART OF SKILL DEVELOPMENT EFFORTS BY IMPROVING THE QUALITY AND LEARNING OUTCOMES OF SCHOOL EDUCATION</p>	<p>4.1 Create Partnership with Specialized Institutions for Improving the learning outcomes in schools especially up to the elementary level.</p> <p>4.2 Introducing Special Classes in Schools on New Skills Set such as STEM (Science, Technology, Engineering and Mathematics) skills, Learning & Innovation Skills, Life & Career, Information Technology Skills and Green Skills with the help of Specialized Institution.</p>
<p>5. CREATING A ROBUST ECOSYSTEM OF CREDIBLE PRIVATE VOCATIONAL TRAINING PROVIDERS TO SUPPORT SKILLING INITIATIVES OF THE STATE GOVERNMENT</p>	<p>5.1 Capacity Building of Credible Private Vocational Training Providers (VTPs) based within the State for providing Skill Development Training in Certain Sectors and Domains which are important from the point of view of Creating Livelihood Opportunities within the State based on Local needs and demands</p> <p>5.2 Identifying Credible Private Vocational Training Providers (VTPs) based outside the state and inviting them to set up the State of Art Training Facilities in the Identified Sectors to provide High-End Skill Development Training Programmes.</p>
<p>6. IMPROVING LINKAGES BETWEEN INDUSTRY AND INSTITUTIONS PROVIDING SKILL DEVELOPMENT TRAINING</p>	<p>6.1 Awareness and Implementation of the Amended Apprenticeship Act 2014 in letter and spirit</p> <p>6.2 Providing Autonomy & Resources and Incentives to Institutions for developing Industrial Linkages.</p>

Strategic Goals	Strategies Suggested for achieving the Goals
<p>7. STRENGTHENING THE HANDLOOM AND HANDICRAFTS SECTOR</p>	<p>7.1 Creation of a dedicated Department for Handloom and Handicrafts</p> <p>7.2 Establishing Craft Centers in Each District of the State and integrate these facilities with Tourism</p> <p>7.3 Facilitating Technical, Marketing, Sales & Distribution Skills and Financial Support to the traditional Skill Sectors of the state.</p>
<p>8. MAKING EXTENSIVE PROVISIONS FOR CAREER COUNSELLING AND INFORMATION DISEMINATION</p>	<p>8.1 Making Provisions for Extensive Career Counseling to different category of Population as per their need for information</p> <p>8.2 Setting up of Information Infrastructure for disseminating information to all on a robust online platform</p>