

# **EXECUTIVE SUMMARY**

## **TITLE OF THE STUDY**

### **COMPREHENSIVE STUDY ON AVAILABLE SKILL, SKILL GAP AND SKILL DEVELOPMENT POTENTIALS IN THE ARUNACHAL PRADESH**

#### **I. INTRODUCTION**

Employability of the growing young population is an important factor in the economic development of a region. Skill development increases the employability of workforce which in turn contributes to further economic growth of the region. This report has been prepared by North Eastern Development Finance Corporation Ltd. (NEDFi) on the overall skill development scenario in the state of Arunachal Pradesh. The study aims to understand the characteristics of Skill Development System operational in Arunachal Pradesh, Traditional Skills of the state, Aspiration and Skill Development Needs of various categories of population of the state and the 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.

Geographically, with an area of 83,743 Sq. Km. Arunachal Pradesh is the largest among all the North - Eastern States with twenty districts. With a population of 13.84 lakhs as per the 2011 census, the state has the lowest population density in the country with 17 persons per sq kms. There are nearly 25 major tribes, some of the tribes being the Galo, Adi, Monpa, Miji, Aka, Nyishi, Apatani, Tagin, Sherdukpen, Hill Miri, Digaru Mishmi, Idu Mishmi, Khamti, Nocte, Yobin, Hrusso, Bugun, Tangsa and Wancho. Most of these tribes have an ethnic similarity derived from an original common stock.

The overall approach of the study has been a combination of extensive consultations 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 studied.

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 20 districts of Arunachal Pradesh at block levels. Approximately 7000 samples among 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-depth consultation with various stakeholders, detailed interactions with major vocational institutions in the state including ITIs, Polytechnics, Senior 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 organized. Detailed interaction with senior government officials of the state were carried out for an insight on declared policy priorities and skilling initiatives of their departments.

#### **II. EDUCATION AND EMPLOYMENT CHARACTERISTICS OF ARUNACHAL PRADESH**

Education is the foundation and employment (both wage and self employment) is the ultimate desired goal of skill development. So an attempt has been made here to understand the characteristics of the educational system of Arunachal Pradesh in terms of Literacy Rate, Gross Enrolment Ratio (GER) at various Educational

levels, School Drop-out and Repetition Rate at Various Levels, Transition Rates etc. Similarly, understanding of the employment characteristics of Arunachal Pradesh 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 Arunachal Pradesh is 66.95% as per Census 2011, which is lower than the national literacy rate of 74.04%. The literacy rate in the state is lower than the national average. However, over the years, the literacy rates in the state have shown marked improvement.

**Educational Attainment:** The educational attainment at upper primary and literate without schooling levels in Arunachal Pradesh stands better in comparison to national average. At the primary level though, the educational attainment is below the national average. In terms of highest education achieved too, Arunachal Pradesh ranks below the national average at graduate and post graduate levels.

**Gross Enrolment Ratio (GER):** The GER at various levels of education in the state of Arunachal Pradesh fares better than the national average at each level. The GER for Higher Education in Arunachal Pradesh was 26% in the year 2014-15, which is higher than the all India Higher Education GER of 23.6%.

**Drop-out Rate:** In comparison to the national average, Arunachal Pradesh lags behind at lower primary and upper primary levels. The drop-out rate stands at 10.89% and 5.59% as against the all India averages of 4.34% and 3.77% respectively. However, at the secondary level, both Arunachal Pradesh and India stands at 17.01% in 2014-15.

**Repetition Rate:** In comparison to the national average, Arunachal Pradesh fares better at all three levels. At the lower primary, upper primary and secondary levels the repetition rate stands at 0.54%, 0.43% and 2.67% as against the all India averages of 0.73%, 0.49% and 3.28% in the year 2014-15 respectively.

**Transition rate:** The transition rate in the state from primary to upper primary and secondary to higher secondary fares better than all India average. However, the transition rate from elementary to secondary level fares below the national average.

**Labour Force Participation Rate:** The Labour Force Participation rate in Arunachal Pradesh is 56.4%, which is more than the national average of 53.9%. As per the NSSO 68<sup>th</sup> Round report all other key indicators of Labour Force Participation in economy such as Worker Population Ratio, Unemployment Rate and Female Unemployment Rate are better than the national average.

**Worker Population Ratio:** As per 2011 census, the total population of the state is 13,83,727 out of which 4,78,721 (34.6%) are main workers; 1,08,936 (7.9%) are marginal workers and rest 7,96,070 (57.5%) are non workers. The percentage of total workers in Arunachal Pradesh accounts for 64.4% (53.4% main workers and 11% marginal workers) of the population (age-group 15-59) and remaining are the non workers (35.6%). Out of total population, 4,70,315 are based in rural areas and 1,17,342 are based in urban areas in the state.

**Sector-wise Employment:** The primary sector plays a significant role in the economy of the state with a majority of population being engaged in this sector, followed by secondary and tertiary sector. Though the share of tertiary sector in income generation is the highest (40.02% of the GSDP), yet it is seen that majority of the population is engaged in primary sector (68.38% of the working population).

### III. CHARACTERISTICS OF SKILL DEVELOPMENT SYSTEM OF ARUNACHAL PRADESH

The existing skill development system of Arunachal Pradesh very nearly mirrors the prevailing system in practice in other parts of the country. The exception being the unique mobilization campaign undertaken by

the state government under its flagship Job Melas initiated by the Department of Skill Development & Entrepreneurship. The skill development system of the state of Arunachal Pradesh primarily consists of TVET institutions imparting skill trainings, traditional skills, initiatives undertaken by Central and State government and its implementation status along-with financial resources available to the nodal departments engaged in skill development are discussed here.

#### **a. Technical and Vocational Education and Training (TVET) System of Arunachal Pradesh**

The TVET system of Arunachal Pradesh mainly depends on the vocational education and training provided by Industrial Training Institutes (ITIs), Polytechnics, Senior Secondary Schools providing vocational education and Private Vocational Training Providers. Characteristics of all these institutions are discussed in subsequent sections.

**Industrial Training Institutes (ITIs):** There are currently five Government ITIs imparting vocational training courses which are NCVT affiliated. The five government ITIs are located at Roing in Dibang Valley district, Dirang in West Kameng district, Balinong in Changlang district, Tabarijo in Upper Subansiri district and Yupia, in Papum Pare district. The present enrollment of all the ITIs of Arunachal Pradesh in F.Y 2015-16 is 654 against the total combined capacity of 700, which is 93.4 percent of the total enrolment capacity of the ITIs portraying a good enrolment scenario in the ITIs of Arunachal Pradesh. Apart from the five ITIs, the government of Arunachal Pradesh has planned four new ITIs at Ziro in Lower Subansiri district, Sagalee in Papum Pare district, at Kanubari in Longding district and one in the newly created Siang district. These are presently at different stages of completion.

**Polytechnics:** Currently there are six (6) Government Polytechnics in Arunachal Pradesh located at Itanagar, Namsai, Dirang, Laying, Pasighat and Roing. There is also a private polytechnic named Tomi Polytechnic located at Basar established by Tomi Polytechnic Society and promoted by Sun & Udaya Group of Institutions based in Kanyakumari. All the above polytechnics are under the Directorate of Higher & Technical Education, Arunachal Pradesh. Since the year 2008, the state government has sanctioned fourteen (14) new polytechnics to be established in various districts of the state. Out of these fourteen polytechnics, five polytechnics at Namsai, Dirang, Laying, Pasighat and Roing have already started functioning since F.Y 2014-15. The combined enrolment capacity of these polytechnics is 860 and the enrolment in these polytechnics was found to be 280 in the F.Y 2015-16, which is merely 32.5 percent of the total enrolment capacity. The remaining nine (9) polytechnics are currently at various stages of development. These nine polytechnics are proposed at Hawaii in Anjaw district, at Khonsa in Tirap district, at Chayang Tajo in East Kameng district, at Ziro in Lower Subansiri district, at Taliha in Upper Subansiri district, at Yingkiong in Upper Siang district, at Miao in Lohit district, in Dibang Valley and in Tawang. In case of the proposed polytechnics at Anjaw, Ziro, Chayang Tajo and Khonsa the civil work is almost in the completion stage and in case of Anjaw and Khonsa polytechnic the department has planned to start the academic sessions from F.Y 2017-18.

**Vocational Education in Senior Secondary Schools:** Currently there are 21 Senior Secondary Schools imparting vocational education in the state in mainly two trades, viz. Information Technology and Tours & Travels with enrollment of 25 students in each trade. These 21 government higher secondary schools are

located at Ziro, Roing, Tezu, Yinkiong, Daporijo, Itanagar, Khonsa, Bomdila, Anini, Seppa Bazar, Basar, Longding, Koloriang, Tawang, Doimukh, Miao, Mechuka, Hayuliang, Pasighat, Lumla and Naharlagun. The present enrolment in vocational education in these schools is 1019.

**Private Vocational Training Providers (VTPs):** The VTPs are an important part of TVET system which organizes various kinds of training programmes through the Skill Development & Entrepreneurship Department of Government of Arunachal Pradesh. There are Private Vocational Training Providers (VTPs) from both within and outside the state providing vocational training under various skill development initiatives. The empanelled local and non local VTPs are mainly involved in skill training under the Skill Development Initiative Scheme (SDIS) and Capacity Building under the Border Area Development Programme (BADP). Till the end of FY 2015-16, 4752 persons have been trained by the Private VTPs under the Skill Development Initiative Scheme (SDIS) and 2742 persons have been trained under the Capacity Building Scheme of Border Area Development Programme.

## **b. Traditional Skills of Arunachal Pradesh**

The various traditional skills practiced in the state are Carpet Making, Bamboo & Cane Craft, Weaving, Wood Craft & Carving, Ivory & Metal Craft, Blacksmithy, Thankha Painting, Handmade paper Making and Jewellery & Bead Making. The Department of Textiles & Handicrafts is running 88 weaving and craft centers having enrolment capacity of 886. Also, there are 6 nos. of Handloom Development and Quality Dyeing Units in the state. There are 19 numbers of Emporias running in the state and 6 Show Rooms cum Sales Counters in the state. The craft centers are conducting trainings in various trades in Arunachal Pradesh with the duration of courses being 1-2 years. The courses are weaving (1 year), tailoring (1 year), knitting (1 year), cane & bamboo (1 year), carpentry (1 year), wood carving (2 years), wood turning (2 years), carpet weaving (2 years), painting (2 years), bell metal (2 years), silver smithy (2 years), black smithy (1 year), Monpa shoe making-changzom (2 years), beads & grass necklace making (1 year) etc. During the field interactions at craft centers, it was found that over the years, the enrollment in these craft centers have decreased substantially and one of the reasons behind this diminishing enrolment trend is the low rate of stipend (Rs. 550 per person per month) offered to the trainees of the craft centers. However, in May 2016 the Government has increased this stipend to Rs. 3000 per person per month which may help in bringing back the interest levels of population in opting for training in Handloom & Handicrafts. Most of the produce of handloom and handicraft especially produce of trades like weaving, carpet making, cane and bamboo, thankha painting and wood carving are consumed within Arunachal Pradesh itself, as a part of local festivals, rituals, ceremonies etc.

## **c. Initiatives of the Central Government & State Government for Skills Development in Arunachal Pradesh**

At the Central Government level, currently, apart from the nodal Ministry in Skill Development & Entrepreneurship, there are as many as 22 ministries which are working in the area of skill development in their respective domains. In the state of Arunachal Pradesh 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 under Government of Arunachal Pradesh to gain insight into the initiatives undertaken by the departments towards skill development and the findings are discussed below:

**1. Department of Skill Development & Entrepreneurship:** Presently, the department conducts skill development programmes through Industrial Training Institutes (ITI) as well as empanelled Private Vocational Training Providers from both within and outside the state. The training programmes are

conducted under CTS (Craftsmen Training Scheme), SDIS (Skill Development Initiative Scheme), Capacity Building Programme under BADP (Border Area Development Programme) Scheme and. In the FY 2015-16, the combined enrollment of all the ITIs of Arunachal Pradesh under CTS Scheme was 654 against the total combined capacity of 700. Under the SDIS, in the F.Y 2015-16, 2032 trainees enrolled against an enrolment capacity of 2177 out of which 736 trainees got gainfully placed. The Capacity Building Programme under the BADP (Border Area Development Programme) scheme started in Arunachal Pradesh from the F.Y 2015-16 and has trained 2742 youths till the end of FY 2015-

***Department of Education:*** The Education Department is implementing the skill development initiatives through its two directorates, namely – the *Directorate of Secondary Education* and the *Directorate of Higher & Technical Education*. The *Directorate of Secondary Education* has introduced *Vocationalization of School Education* through introduction of vocational courses in 21 out of the 99 Government Higher Secondary Schools in two trades, namely, Information Technology and Tours & Travels. So far, 1019 students have been enrolled under the vocational courses in the 21 schools in the state. Further, the *Directorate of Higher & Technical Education* implements diploma level courses through the six (6) Government Polytechnics and one (1) Private Polytechnic in the state. Rajiv Gandhi Polytechnic at Itanagar apart from running normal diploma level courses also runs Community Colleges Scheme. One (1) Jan Shikshan Sansthan – Oju Welfare Association was established at Naharlagun under the National Literacy Mission Authority. The Distance Vocational Education Programme is also conducted by the National Institute of Open Schooling (NIOS) through its Accredited Vocational Institutes (AVIs) where seventeen (17) students from Arunachal have enrolled in the F.Y 2012-13 in courses under Distance Vocational Education Programme.

***Department of Rural Development:*** The Department of Rural Development is implementing two schemes in order to promote skill development in the state. The two schemes are Deen Dayal Upadhaya Grameen Kaushalya Yojana (DDU-GKY) and the Rural Self Employment Training Institute (RSETI) scheme respectively. The total training target under DDU-GKY was fixed at 293 persons, out of which 293 have been trained and 151 persons have been successfully placed. The Arunachal Pradesh State Rural Livelihood Mission (ArSRLM) which is currently in its initial stage of formation will also be undertaking skill development programmes and has earmarked Rs. 6 crore for the F.Y 2016-17 towards implementation of the Mission.

***Department of Agriculture:*** The department has undertaken various initiatives in agricultural sector to implement schemes to promote skilling in agriculture through the National Food Security Mission, where farmers in Arunachal have benefitted through the cluster demonstrations and cropping system based trainings for them. In F.Y 2015-16 cropping system based demonstrations in paddy benefitted 1000 farmers and 500 farmers benefitted through the cropping system based demonstrations in pulses. Further, under Extension Activities in the F.Y 2015-16, 98 farmers have benefitted from the Farmers Trainings, 98 Exposure Visits have benefitted 36 farmers, 970 farmers have benefitted through demonstrations. Further, 18 Kisan Melas were held in the state in the F.Y 2015-16 to enhance the skills of the farmers in Arunachal Pradesh.

***Department of Horticulture:*** The department has initiated measures like training of field staff and farmers, mass awareness campaign through audio-visual aids, pamphlets, booklets, organizing horticultural fairs, exhibitions etc. The department has also established Mushroom Development Centers (MDC) at Naharlagun/Itanagar, Namsai and Rama Camp. In the F.Y 2014-15 a total of 700 farmers (including women) were trained for which Rs. 7 lakhs received was utilized and 400 farmers benefitted from the study tours/training in progressive states for which Rs. 4 lakhs was received and utilized.

***Department of Tourism:*** The efforts undertaken by the Tourism Department are mainly under two initiatives of the Government, namely – Capacity Building for Service Providers and Hunar se Rozgar Tak. Under the former scheme, a week-long Management Development Programme was organized for 10 tourism officers at Indian Institute of Tourism and Travel Management (IITTM), Gwalior in order to provide orientation about the learning process and administration of hospitality and tourism. Also, a State Level Guide Training Programme was concluded at IITTM to train the guides so that they could meet the tourist expectations in the state. The department conducts a 45 days Capacity Building Programme cum Advance course on White Water Rafting for the unemployed youths of East Kameng, Upper Subansiri and West Kameng districts. Capacity Building Training Programme for women SHGs, PRIs, NGOs and Educated Unemployed Women of Arunachal Pradesh was conducted in order to promote Home Stays, Rural Tourism and Eco-Tourism with the participation of the local community by utilizing the local resources available in the area. In the said programme, there were 43 participants, of which 20 were selected for training to Sikkim in Home Stay, Eco-Tourism and Rural Tourism. The Department has trained 1100 youths in trades such as Food Production, Food & Beverages Service, Housekeeping, Bakery & Patisseries under the Hunar Se Rozgar Tak programme, since the year 2013. A few new trades like Driving skills and Etiquette Training programmes have been introduced by the department in which 240 persons have been trained so far. Under the Hunar Se Rozgar Tak scheme, 840 persons from Arunachal were enrolled for training in food production, food & beverage services, housekeeping, bakery and driving.

***Department of Housing and Urban Poverty Alleviation:*** The Department of Urban Development & Housing has been promoting skill development in the state through the trainings conducted under the central scheme namely Support to Training & Employment Programme of the Urban Poor (STEP-UP) under Swarna Jayanti Shahari Rozgar Yojana (SJSRY), which was later restructured as Deendayal Antyodaya Yojana - National Urban Livelihood Mission (DAY -NULM). Under the National Urban Livelihood Mission a few trainings were conducted in the F.Y 2015-16 through the empanelled skill training providers wherein 217 persons have been trained.

***Department of Social Justice & Empowerment and Tribal Affairs:*** The Department of Social Justice & Empowerment and Tribal Affairs, has undertaken a few initiatives towards skill development in the state with a target of utilizing 50% of the funds towards women empowerment. In the F.Y 2014-15, a sum of Rs. 1 crore was sanctioned to the department which was utilized through various department initiatives. The Don Bosco Youth Centre at Itanagar received an amount of Rs. 50 lakhs from the department, which it utilized in conducting a 45 day-training of 500 youths from the state. The training were conducted in batches where each batch consisted of 45-50 students. The department conducted skill development trainings particularly for the women of Arunachal Pradesh under the Sarada Mission, for which the department allotted Rs. 10 lakhs. Moreover, the Sahla Women Welfare Society, Borduria received an amount of Rs. 20 lakhs particularly to conduct trainings to uplift the economic status of women. The department has earmarked a budget of Rs. 2.30 crore for the F.Y 2015-16 and the process of empanelment of the training partners has already been initiated.

***Department of Women & Child Development:*** The department has been conducting skill trainings since 2011-

12 under Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG) or SABLA. Under this scheme, skill trainings are provided in each district of the state and the responsibility of organizing the skill trainings rests on Child Development Project Officers (CDPOs), who also decide the trades and the courses in which trainings are to be conducted, based upon the skilling needs of the target group. The department conducts trainings with the help of the ITIs and the Industries department of Arunachal Pradesh and do not outsource it to the private VTPs. Funds are provided to the CDPOs who select the service providers on the

basis of the trades identified. Generally, the focus of the trainings is on courses related to weaving, craft and handloom and handicrafts etc. The annual fund provided to CDPOs is nearly 3.8 lakhs, out of which Rs. 35 thousand is earmarked for skill trainings.

**10. Department of IT and Science & Technology:** The department is mainly involved in overseeing the skill development programme for the government employees of Arunachal Pradesh, under North East Skill Enhancement programmes which focuses on skilling in the area of E-Governance and Information & Communication Technology (ICT) skills. Under Training of Trainers scheme of Department of Electronics & Information Technology (DeITY), Government of India, there are two Training of Trainers (ToT) programmes of two weeks duration each, exclusively for North East region.

**Department of Fisheries:** The department conducts short-term training to the persons engaged in fisheries, with the help of in-house experts and Krishi Vikas Kendras (KVKs) at regular intervals in all the districts of Arunachal Pradesh. The department is of the opinion that this effort is not sufficient. The department of Fisheries has implemented various schemes for development of this sector, viz. (1) Fish Seed Production and distribution to the farmers, (2) Training of Farmers, (3) Ponds/Tanks/Beels Fishery Development, (4) providing substantial subsidy to the farmers to encourage rural aquaculture among Paddy-cum-Fish culture, integrated fish farming, trout culture etc. In the year 2015-16, 53 persons were trained for capacity building training of in-house personnel and fish farmers. For these trainings, an amount of Rs. 15 lakhs was allotted in 2014-15 and Rs.8.97 lakhs in 2015-16.

**Department of Animal Husbandry & Veterinary:** The department has imparted trainings in all the districts of Arunachal Pradesh with the financial support of the Ministry of Agriculture, Department of Animal Husbandry & Veterinary, Dairy Development and Fisheries, since the last two years. The training programme is under CSS National Livestock Mission Sub-Mission skill development and technology transfer. The training is conducted for a period of three days to one week to livestock farmers for better management of livestock. In the F.Y. 2014-15, 5000 livestock farmers have been trained by utilizing the fund of Rs. 45 lakhs allotted to the department.

**Department of Labour & Employment:** The department of Labour & Employment in Arunachal Pradesh is involved in skilling the people through the various initiatives undertaken by them. In the F.Y 2016-17, the department has a plan to conduct trainings in five courses such as Self-employment Training course to registered unemployed youth, Advance Computer Training to 100 unemployed youth, Communication Skill Development Programme for unemployed youth, Entrepreneurship & Skill Development Programme (ESDP) on Motor Mechanic and Entrepreneurship Waste Management programme for registered unemployed women. A budget of Rs. 62 lakhs has been earmarked for the F.Y 2016-17 to conduct these trainings.

**Department of Textiles & Handicrafts:** In order to promote production of handloom and handicrafts products, the Department of Textiles and Handicrafts, Government of Arunachal Pradesh has undertaken various initiatives to generate income by utilizing and marketing the traditional skill sectors of Arunachal Pradesh. The department has initiated various schemes in order to promote skill development in textiles and handicrafts sector of Arunachal Pradesh, such as North East Region Textile Promotion Scheme (NERTPS), Chief Minister's Grants Loin Loom Scheme; Integrated Skill Development Scheme for Textiles & Apparel Sector, Weavers Credit Cards, Handloom Clusters etc. Under NERTPS the department is implementing two schemes, viz. Integrated Sericulture Development Project (ISDP) and Intensive Bivoltine Sericulture Development Project (IBSDP). The department is also promoting Bee-Keeping sector in the state by implementing bee-keeping project sanctioned by North East Council (NEC). The broad objective of the project is to develop 95 units of bee-keeping in various districts of Arunachal Pradesh on pilot project basis.

Further, the Chief Minister's Grants Loin Loom Scheme helps the local weavers and thereby aiming to benefit 6424 selected handloom weavers. The above scheme has been renamed as Chief Minister's Indigenous Textile Promotion Scheme with total beneficiaries' coverage of 2,333 persons. An Apparel & Garment Making Centre was established at Pasighat, Arunachal Pradesh in April, 2015 and three buildings have been constructed by NBCC, out of which one will be utilized for skilling 800 unemployed youths. Further, Weavers Credit Card scheme is being implemented in Arunachal Pradesh, which covers 1000 weavers from the state, who are paid an amount of Rs. 4200 per head as subsidy and the remaining amount is provided as bank loan to the weavers.

#### **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 Centrally Sponsored Skill Development Scheme in the state, a primary survey was conducted among the trainees who had completed their course under Skill Development Initiative Scheme (SDIS) based on the database provided by the Department of Skill Development & Entrepreneurship, Govt. of Arunachal Pradesh. Besides interacting with these trainees, interaction was also held with other stakeholders including Deputy Commissioners at district level who are responsible for mobilizing and sending the candidates from their respective districts to understand the major challenges faced in the implementation of the scheme.

The database provided by the department revealed that the short-term placement linked training provided under SDI Scheme mainly covers trades such as Spa, Beauty, Hospitality, Electrical, ICT, Retail, and Security Guard, Banking, Soft Skills, Travel & Tourism, Garment Making, Plastic Processing, Medical & Nursing and Automotive. However, large numbers of students were found trained usually in Beauty & Spa. These short-term trainings are provided by Private Vocational Training Providers, many of whom are based outside the state.

During Survey, out of total respondents only 29% were found employed, of these 49% were found employed in the Beauty & Spa Sector followed by Plastic Processing (16%), Banking (10%), Hospitality( 9%), ICT (7%) Electrical (7%) and Medical & Nursing (2%). Out of these employed trainees, 50% were found working in full time jobs whereas 26% were working in part time jobs. Average salaries of the employed persons were found around Rs.12,500/- p.m. In most of the cases, the training provider gave the information about the job vacancies and in some instances friends, family and media did. It was noticed that many students left their first job due to problems like low salary, family problems, adjustment problems etc. It was found that though the training programmes had helped them get jobs, the jobs hardly provided financial stability.

Most of the students reported that attending the training had brought positive changes in their technical skills, communication skills and personality development. 13% of the students were found employed or self-employed before attending the training programme and out of them, 72% responded that the trainings helped accelerate their income, increased business knowledge, increased technical skills etc. Of all the respondents, 67% of the respondents considered the training programme as somewhat sufficient, 13% as not sufficient and 5% as sufficient for them. When it came to practical knowledge, 82% respondents found it somewhat sufficient while 14% found it not sufficient. However, only 4% felt that they gained sufficient practical knowledge during the training. In terms of overall satisfaction with the training programme, only 1% respondents were found very satisfied, 15% satisfied, 78% neither satisfied nor dissatisfied, 5% dissatisfied and 1% very dissatisfied.



The interaction with the stakeholders also highlighted few important issues related to these short-term placement linked trainings. It is being 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. Short-term course is especially not sufficient for placement in Banking & Financial Sector. Pay package and Working Environment in many cases are not attractive for the youth for placement outside the state. It was seen that most of the trainees are getting enrolled in Beauty & Spa Sector as Private Vocational Training Providers (VTP), most of who are based outside the state, are interested in enrolling for this sector. Many stakeholders' across the state feels that such placement is a sensitive issue. Utmost care should be taken with trainees opting for Beauty & Spa Sector. Preferably only mature trainees should be encouraged in this sector. 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 to their home-towns citing improper placements, low salary, and irregular payment as reasons of return. There is a 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 Arunachal Pradesh has created institutions such as *State Skill Development Mission, State Steering Committee, Arunachal Pradesh Skill Development Society, District Skill Development & Employment Generation Implementation Committee and the Department of Skill Development & Entrepreneurship*. The efforts of this institutional framework has only been limited to the implementation of the CTS, SDIS and BADP schemes, which are being implemented by the department of Skill Development & Entrepreneurship through the ITIs and private VTPs. The skill development schemes implemented by the other thirteen (13) 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. 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 Arunachal Pradesh, the Department of Skill Development & Entrepreneurship may spearhead the efforts of bringing various state departments under the State Skill Development Mission. The other governance related issues which needs to be addressed in the state are: (1) Effective Planning of Skill Development Schemes, (2) Adequate Availability of Skilled Teachers/Trainers for Skill Development Trainings, (3) Strengthening & Effective Utilization of Existing TVET institutions, (4) Regulatory and Quality Control Body for Skill Development at the State Level, (5) Creation of Labour Market Intelligence System (LMIS).

#### **f. Quality Assurance System**

A closer look at the Skill Development system of the state of Arunachal Pradesh reveals that at present at the state level there is no single quality control and quality assurance system in place to take care of the quality related issues of all the skill development schemes being implemented in the state. Though in case of few institutions such as polytechnics and ITIs, there exists some quality control mechanism by virtue of their affiliations to AICTE and NCVT respectively, the other entities are dependent on their understanding of the issues and resources at their disposal in providing vocational education and training. 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 in shifting emphasis to outcome based learning - both in the general and vocational space. There is a need for a state specific Quality Assurance System. The framework suggested here for a quality assurance system 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 Arunachal Pradesh**

The major institutions constituting the bulk of the Technical and Vocational Education and Training (TVET) system in Arunachal Pradesh is under Skill Development & Entrepreneurship and Education Department of Government of Arunachal Pradesh. The schemes such as CTS, being implemented through the ITIs and SDIS and BADP being implemented through the private VTPs are funded by the department of Skill Development & Entrepreneurship. The department of Education through its Directorate of School Education and Higher & Technical Education provides funds for Vocationalization of Secondary Education scheme and Polytechnics respectively. In this section, an effort has been made to get an idea about the amount of fund received by these nodal departments and other departments involved in imparting skill trainings and their subsequent utilization for last 3 financial years so as to ascertain the quantum of expenditure incurred by the key departments of Government of Arunachal Pradesh in the area of skill development.

The CTS under which 5 ITIs in the state are functioning have seen substantial increase in fund allocation over the years. The ITIs received a fund of Rs. 798.19 lakhs in the F.Y 2012-13 which has increased to Rs. 1480.22 lakhs in the F.Y 2014-15. The SDIS started in the year 2011-12 with a small funding of Rs. 40.07 lakhs followed by a funding of 135.75 lakhs in 2012-13. It was in the year 2013-14 that the maximum funding was received which was Rs. 1259.00 lakhs which again decreased to 122.00 lakhs in the year 2014-15. The funding for BADP began in 2014-15 with an amount of Rs. 329.78 lakhs.

In case of schemes under the Education department, there is a marked decrease in the fund allotted for the Vocationalization of Secondary Education scheme. In the year 2013-14, the funding under the scheme was Rs. 139 lakhs, which reduced to almost half to Rs. 70.37 lakhs in the year 2014-15. In case of polytechnics, the funding figures can be obtained only for the components related to the strengthening and establishment of the new polytechnics in the state. In the year 2012-13, an amount of Rs. 1347.40 lakhs was sanctioned, out of which 37.40 lakhs was for the strengthening of Rajiv Gandhi Polytechnic and the rest was for establishment of new polytechnics at Laying, Namsai, Dirang, Pasighat and Roing. In the year 2013-14 an amount of Rs. 150.40 lakhs was allotted for strengthening of the polytechnics. In the year 2014-15, on account of strengthening of the polytechnics an amount of Rs.162.43 was allotted, while Rs. 760.45 lakhs was allocated for establishment of the polytechnics.

The Department of Textiles & Handicrafts received a funding of Rs.79 lakhs in the F.Y 2012-13. This increased to Rs.117 lakhs in F.Y 2013-14 and in F.Y 2014-15 the funding decreased to Rs.56 lakhs. Similarly, in case of Department of Urban Development & Housing, the funding increased to Rs. 130.2 lakhs in F.Y 2013-14 from Rs. 41.84 lakhs in F.Y 2012-13, which again decreased to Rs.16.70 lakhs in F.Y 2014-15. The Department of Fisheries has seen a sustained increase in its funding pattern. From a funding of Rs.8.2 lakhs in F.Y 2012-13, its funding nearly doubled to Rs.15 lakhs in F.Y 2014-15. The Department of Animal Husbandry & Veterinary had a funding of Rs. 45 lakhs in the year 2014-15. The Department of Social Justice & Empowerment & Tribal Affairs was allotted with a fund of Rs.100 lakhs in the F.Y 2014-15, which increased to Rs.230 lakhs in the F.Y 2015-16. Labour & Employment Department has earmarked a fund of Rs 62 lakhs for the F.Y 2016-17.

If we consider the funding figures of TVET system and the above-mentioned departments, the total fund received in the F.Y 2014-15 on account of skill development is Rs.2397.50 lakhs and the total expenditure incurred in the F.Y 2014-15 was Rs.2984.80 lakhs. The unutilized funds for the SDIS in the previous financial years was utilized in the F.Y 2014-15, which makes the funds utilized figures greater than the fund allotted figures. However, this is an approximate figure as information related to various schemes for skill development could not be provided by other departments. Out of the composition of total expenditure of Rs.2756.10 lakhs for TVET system, we find that the highest share of expenditure is for the CTS scheme under which the ITIs operate, which forms 54 % of the total expenditure. This is followed by SDIS scheme which forms 31% of the total expenditure and 7% under the BADP Capacity Building Training Programme. The Polytechnics form 6% of the total expenditure (on strengthening and establishment) on TVET system, while the Vocationalization of Secondary Education forms 2% of the total expenditure in the state.

#### **IV. ASPIRATIONS AND SKILL DEVELOPMENT NEEDS**

As a part of the study, in order to assess the Aspiration and Skill Development Needs of various categories of population in the state, a detailed primary survey was undertaken among approx. 7000 people spread across various categories in all the 20 districts of the state at the block level. These categories are: (i) School Students (ii) Graduate & Post Graduate Students (iii) Vocational Students (iv) School Dropouts (v) Persons engaged in Vocations & (vi) Unemployed Persons. Focus Group Discussions were also held with Parents of

Students and Teachers and Trainers of Institutions like ITIs, Polytechnics, Secondary Schools with Vocational Streams and Colleges with degree courses 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 with 5% margin of Error.

**School Students:** The samples consisted of school students studying at the secondary level and higher secondary level. Out of the total respondents, 53% wanted to work in government sector, 17% in the private sector and 5% interested in Entrepreneurship. Income expectation of majority of respondents (60%) was between Rs. 20,000-Rs.50,000 per month. It was found that Parents had a dominant influence in students' decision making process regarding their career development. A significant number of respondents wanted to study general higher education in various fields while 14% were interested in vocational education. The students who wanted to study in vocational streams were mainly interested in Tourism & Hospitality (33%), Electrician (14%), Handloom & Handicrafts (13%), Health & Allied Sector (8%), Media & Entertainment (8%), Computer & IT (7%), Cosmetology (6%), Sports (6%), and Automobile (4%) etc. Majority (78%) of the students showed interest in attending Skills Development Programmes, usually in short duration courses for 6 months or one year. Most of the respondents (63%) wanted to migrate for career opportunities.

**Graduate & Post Graduate Students:** It was observed that a large number of Graduate and Post Graduate students wanted to go for government jobs (83%), followed by 6% who wanted to work in the private sector and 6% were interested in Entrepreneurship. Income expectation of majority of respondents (76%) was between Rs. 20,000-40,000 per month. Parents were found to be the most dominant influence (63%) in career development. Out of the total respondents, 65% were seen to be ready to move out of Arunachal Pradesh for career development. Most of the respondents wanted to join the education sector followed by banking/finance and defence, health and allied sector, hospitality agriculture, construction, tourism etc. It was found that 71% of the respondents were interested in attending Skills Development Programmes for their career development.

**Vocational Students:** It was observed that 49% of the respondents joined the course due to interest in the trade, whereas 32% joined the course as they believed it had high chance of employment. Income expectation was between Rs. 11,000-Rs.30,000 for 65% respondents and Rs. 31,000-Rs.50,000 for 21% respondents. 84% respondents were satisfied with the quality of training provided by the vocational institutions and migration tendency was noticed among the student respondents as 66% were ready to move out of Arunachal Pradesh for career growth. Majority of the students (62%) were unaware of the Apprentice Scheme of the government.

**School Dropouts:** Most of the respondents (55%) were secondary level drop outs, 35% were drop outs from middle level and 10% were primary level dropouts. The survey revealed that majority of the sampled respondents cited financial issue (34%), followed by family issue (26%), issues related to school (13%) etc. as reasons for dropping out of school. It was noticed that a huge number of the school dropouts are unemployed (76%), 16% have managed to be self-employed and 2% were employed full time and 3% part-time. It was seen that most of the school dropouts (80%) did not possess any Vocational Skills.

**Person engaged in vocations (PEV):** Of all respondents, half of the respondents (50%) did not pass Class X while 20% had passed Class X, 18% had passed Class XII, 11% were graduates and remaining 1% were post graduates. In case of these respondents, majority (61%) were not keen to migrate to other places. For the respondents who were self-employed, lack of finance and lack of marketing were the major hindrances. In terms of the wage employed respondents, lack of technical skills and lack of soft skills were the major hindrances.

**Unemployed Persons:** It was observed that Majority of the respondents wanted to get a job in the government sector (60%). The remaining respondents were keen on becoming self-employed. However, the hindrances in gaining self-employment were lack of finance (64%), lack of skills (17%) and lack of guidance (15%).

**Focus Group Discussions with Parents:** 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 in many of the cases. The inclination of the parents tilted more towards formal education up to the graduate or postgraduate level and they wanted their children to acquire any kind of government jobs as they felt it gives one stability and security.

There is a difference of opinion regarding the children practicing the traditional skills handed down in their family, where few parents wanted their children to practice them and a few others do not wish their children to practice it. A large number of parents seemed positive towards technical education and appreciated and acknowledged the importance attached to it, as these courses help the children to learn vocations and earn income.

**Focus Group Discussion with Teachers/ Trainers of Industrial Training Institute (ITI):** The teachers felt that due to lack of industries in the state there is very less employment opportunity for the ITI graduates. 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. Few of the ITIs are also conducting courses under SDI Scheme but they are facing problems with the third party Assessment and Compulsory Placement System under the scheme. In SDI Scheme, the assessment and certification is done by outside assessment agencies who are taking too long to assess and certify the candidates. The teachers/trainers felt that either a minimum time period should be specified for the outside agency to assess and certify or it should be done by an assessment body within the institute. ITIs are also facing constraint due to the 70% compulsory placement clause under the scheme

**Focus Group Discussion with Teachers/ Trainers of Polytechnics:** 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. The newly established polytechnics are still in the recruitment phase as a result of which the required number of teachers, trainers, laboratory assistants etc. is currently not available in these institutes. They faced many problems in the training programmes due to the issues associated with telephone and internet connectivity.

**Focus Group Discussion with Teachers/ Trainers of Secondary Schools with Vocational Streams:** Since vocational education has started recently in the year 2015 in only two subjects namely IT and Tourism, the schools are still in the preliminary stage of understanding and implementing this scheme. 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 and inter-district transfer of teachers is required. The teachers felt that the selection of vocational subjects should be based upon local needs and requirements.

## **V. SKILL REQUIREMENT TRENDS**

The 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 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 upshot 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 suggests 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 ILO 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 skill 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 (ITC) 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 and 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 skill consist of skill 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.

A recent report published by The Institute for the Future (ITF) 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, Trendsdisciplnarity, Design Mindset, Cognitive Load Management and Virtual Collaboration.

## **c. National Skill Requirement Trends**

The McKinsey Global Institute Study referred 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 move workers out 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 2016, it is seen that Retail, e-commerce, BFSI, 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, who's 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.

Coming to the hiring mix, the India Skill Report 2016 says that employers' do not plan to make any major changes in the way they hire. Engineers are followed by general graduates, who will see a drop in hiring as compared to last year. Contrary to this, hiring of vocational education candidates will increase though the difference is not that significant. For core sectors, the hiring of general graduates might decrease while it will increase for engineers. In consumer durable and hospitality sectors, the percentage of vocational graduate hires in the overall hiring mix will double in comparison to last year. But hospitality sector will reduce the intake of diploma graduates. The BFSI (Banking, Financial Services & Insurance) sector forecasts a drop in hiring of ITI & Diploma candidates and plans to hire more candidates from management. Searches on domain wise hiring trend across domains in India Skill Report 2016 suggests that engineers and graduates are the domains from which the industry is going to hire more and more employees in the near future.

Domain wise hiring mix of individual industry sectors in India Skill Report 2016 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 usually 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 percentage of Vocational Graduates in overall hiring across all the sectors have been found low except hospitality and BFSI (Banking, Financial Services & Insurance).

The overall trend for preferred age group shows a clear preference towards young candidates; with about 80% employers inclined to hire candidates of age 30 years and below. Such preference for the young workforce by most industry sectors is a good indication for a country like India. In case of skills desired by employers as scrutinized in India Skill Report 2016, employers across 11 sectors were queried about the single most important skill they look for in a prospective employee. 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 Arunachal Pradesh**

In order to give impetus to the local economy of a region, it is important to understand the skill development needs of the region. In view of this, based on extensive discussions and deliberations across the state with Heads of the various Government Departments, Heads of Various Institutions, Deputy Commissioners, Community Leaders and the Industry Representatives, an effort has been made here to understand the skill requirement needs of the state. The issues and points which came to light have important implications for future of Skill Development in the state and are discussed below:

Skill Development Planning should be attached to the broader master plan for development of the state. It has been observed in the case of agriculture and allied sectors, that various schemes of govt. are targeting the same section of farmers which at the end are creating confusion and ultimately leading to duplicities. Currently the Master Plan for the state of Arunachal Pradesh is being prepared and micro level planning is required to be done for the state and skill development needs to be linked to that planning. As Agriculture and Horticulture holds good potential for the state, more guidance and mentoring is needed in these areas. Also, intervention is required to improve the quality of seedlings in such agro activities. Skilling in preservation techniques is required as most of the produced items are perishable. Expertise in grading is needed. Cash crops should be encouraged and the gestation period should be minimized. Dairy Farming and Vermicompost is also required in many districts. The practice of Off-season Farming system should also be introduced in the state, so as to utilize the land throughout the year and earn income. Introduction of new varieties of crops in the state and the related training is needed to make the farmers well prepared. Paddy, Maize, Millets, Mustard, Ground nuts, Black Gram (Urad), Green Gram (Moong), Rajma Potatoes, Soybeans, Pulses are such agricultural crops which can be grown abundantly in the state creating the urgent need for skilling in these areas of production in which enterprises can be developed. Extensive training is required to be given to farmers on the scientific techniques of growing different types of Horticulture items. Training in Post harvest techniques such as Marketing and Processing, Grading etc. is required. A scientific marketing system of horticulture products should be developed and processing industries should be established as preservation techniques are important as most of the produced items are perishable. Kiwis, Apples, Oranges, Ginger, Large Cardamom, Grapes are such horticultural crops which can be grown abundantly in the state, thus generating the urgent need for skilling in these areas of production in which enterprises can be developed. The region is also favourable for cultivation of products like Tea, Rubber, Mushrooms, Flowers, Medicinal Plants and Honey.

Scope for Palm-oil Cultivation, Horti-farming, Organic Farming, Organic Production of Tea, Rubber, Palm Oil, Pulses, etc. should be enhanced and the state should concentrate in marketing such organic produce. Skill Development in Mushroom cultivation and Ginger and Turmeric processing is required. Skill Development for improved productivity in Oil Farm Plantation and Bee Keeping is also required as it has ample scope for generating livelihoods in the state. The farmers of the state are showing interest in Large Cardamom and Kiwi which can be grown in abundance, so skilling in this area is required for full commercial exploitation of Large Cardamom and Kiwi along with improvement in the provision for seedling. New trends in the plantation of horticultural crops are also needed as more and more villagers are

engaging in their cultivation. Further, there is a need for awareness relating to the know-how in these areas. As drying system is expensive there is need to introduce low cost dryer for these products. Floriculture has very good scope in Arunachal as the weather is congenial having the required climatic conditions to produce all kind of flowers throughout the year. As the people do not have adequate knowledge in this sector, training interventions such as training to progressive farmers, exposure visits to other states, engaging resource persons from within the government itself, training in how to make flower bouquets, training in value addition etc is the need of the hour.

Livestock plays an important role in economy of the state. Dairy, Piggery and Goat farming have vast scope in the state and introduction of scientific management in these areas is required along with the selection of the type of breed for rearing. Production of Milk, Eggs and Wool are the promising areas which needs more involvement of the state to generate income. Fisheries sector is also quite promising and the state department conducts short-term training to the persons engaged in fisheries, with the help of in-house experts and Krishi Vikas Kendra's (KVKs) at regular intervals in all the districts of Arunachal Pradesh. The department is of the opinion that this effort is not sufficient. The department of Fisheries has implemented various schemes for development of this sector, viz. (1) Fish Seed production and distribution to the farmers, (2) Training of Farmers,

(3) Ponds/Tanks/Beels Fishery Development, (4) providing substantial subsidy to the farmers to encourage rural aquaculture among Paddy-cum-Fish culture, integrated fish farming, trout culture etc. The areas in which skilling is required to be imparted are (1) Quality seed production and its management, (2) Ornamental Fish Culture including its breeding and management, (3) Culture of indigenous fishes, (4) Integration of fisheries with Eco-Tourism, (5) Trouts Hatchery Management relevant to the core regions of Tawang, Bomdila etc. (6) Hatchery Management for warm water fishes (7) Entrepreneurial Training Programmes in Fisheries for Progressive Farmers.

Traditional skills such as Cane and Bamboo, Weaving, Tailoring and Knitting, Carpentry, Thangka painting, Carpet making are widely practiced in the state. Efforts need to be made to market these products and bring it to the global markets. Rearing of Endi (Eri), Muga, Mulberry, Tassar needs to be enhanced and renewed efforts should be made to motivate the weavers. Rearing of silkworm is also gaining popularity and these techniques should be made popular globally as very few places in the world have such time tested rearing practices today. Weaving, Knitting, Tailoring and Cane and Bamboo products needs to be taken to a higher level by introducing new techniques in these areas by bringing in modern technologies of production. Design intervention along with modern facilities is required to make handloom and handicrafts products export worthy. Financial & Marketing support is required for handloom and handicraft products, as the products require huge capital investment. The people of the state are not so proficient in English and Computer skills, thereby creating a need for developing skills in these areas and bring them at par with the national standards. Computer Training should be provided to all the students in school and not few selective students, as knowledge of computers is highly important for all people. Due to cash flow issues with the traditional sector, many people are moving towards construction activities as it fetches immediate money. There is dearth of fabricators in the state, so there should be focus on training the unemployed youth in welding and generate employment opportunities for them. Fabrication units in the remote areas of the districts can help boost the economy of the areas. Power Projects and Road Projects are expected to throw lot of opportunities for employment in the state as the people can be employed in such construction projects. Wood Based industries such as saw mills, veneer production, ply making, hand-made paper can be established in various districts.

Activities like Mountaineering, Rafting and Trekking and Home stay skills are required, as this area has immense potential to make it a major Tourist destination of North-East. Skilling in the areas of Home stay, Tour Guide, Trekking, Culinary, Kayaking, Rafting, Paragliding, Jungle trek, Angling, Bird Watching, Medicinal plants etc. is needed as this will attract tourists from around the globe. Skills need to be developed among the local people in Rafting, Mountaineering and Aero sports and make these adrenaline rush inducing adventure sports an important source to earn income in the state.

There are various Infrastructure bottlenecks like poor road infrastructure, poor net connectivity, lack of cold storage facilities, limited industries which is creating a hindrance to skill development in the state. Investment in good infrastructure is of vital importance. Hydropower sector has the potential of creating jobs but progress on these projects is very slow. Opening of Sadiya Bridge and Power Grid connectivity is going to improve the situation in eastern Arunachal and give a boost to tourism. Industries are facing issues such as locational disadvantage, raw material issues and distance from the market areas. Linkage between Skill Development Institutes and Industry is virtually non-existent in the state which is one of the reasons for unemployment problem. Though some industrial tie-ups have taken place in case of ITIs, but are yet to achieve large scale employment of the ITI graduates in those enterprises. In order to give a fillip to the local economy of the areas where skilling intervention is needed as per the industry are: Food Processing, Winery, Cold Storage, Grading Skills, Marketing of Products and services, rubber, construction and Eco Tourism and Adventure Tourism. The need of the hour is the identification of people who really want to excel in these areas and provide them with training so that they may develop high end skills in these areas. Border trade with Myanmar & China will throw up new opportunities if the 'Still Well' road is opened up and cross border trade is established. Issues of skill development of existing industries should also be given focus in order to scale up their operations. Persons from exiting industries should be given specialised training in consultation with industrial bodies along with frequent exposure trips of the entrepreneur to the successful enterprises of neighbouring countries such as Bhutan, Nepal, and Bangladesh which have similar geo-climatic conditions as the North East.

The state needs to concentrate more on basic education with increasing focus on subjects like Science, Mathematics and Technology. More focus should be on long term high value skills and to skill people for livelihood generation. General Graduates needs to be provided skill training as per their interest and followed by the support for wage or self employment. Awareness & Counseling is required for youngsters in making choices of the trades they wish to practice. There is a need to create institutions in the state which can provide training in these areas. Long term quality courses by local training institutions are required in order to skill the youth of the state. There should be focus not only on developing lower level skills but also higher level skills (skill trainings for graduates & above) as well. This will help enhance potential employability in higher level skills for the people of the state. The people of the state are hesitant to move out as they are mainly interested in government jobs as it is the main employer in the state. Even if they get placed outside the state, they usually return stating home sickness as the major reason. Some youngsters want to start their own entrepreneurship ventures, but have no idea of the process, technical know-how and formalities for its establishment. Training and Counselling in such areas is required. Also, many are not aware about the government schemes related to self employment or wage employment as most of the times it is not in public domain. Awareness about these issues should be initiated by the government.

In order to create opportunities for local wage and self-employment, it's important to understand the potential sectors capable of developing enterprise and generating employment and thereby intensify skill development in these sectors. With these objectives in mind, during the study across all the 20 districts of Arunachal Pradesh, an effort was made to understand the major potential sectors capable of developing enterprise and generating employment. The findings are listed in the following pages.

<b>Districts</b>	<b>Potential Sectors Capable of Developing Enterprise and Generating Employment</b>
<b>Tawang</b>	Tourism , Horticulture, Food Processing, Dairy Products, Handicrafts (Carpet Making Traditional Paper Making) , Construction
<b>West Kameng</b>	Tourism , Horticulture, Food Processing, Dairy Products, Handicrafts (Carpet Making , Wood Carving), Minerals, Construction
<b>East Kameng</b>	Agriculture ,Horticulture, Forest related industries like Furniture Making Unit, Bamboo and Cane based industries, Agro-based industries, Tea Garden, Construction
<b>Papum Pare</b>	Hotels, Hospitals, Education, IT related Institutes, Fabrication, Tourism, Construction, Stone Crusher , Tea Garden, Handloom & Handicrafts, Construction
<b>Kurung Kumey &amp; Kra Daadi</b>	Agriculture, Horticulture, Forest based Industries, Bamboo and Cane based industries, Medicinal Plants, Large Cardamom, Handloom & Handicrafts, Construction
<b>Lower Subansiri</b>	Travel & Tourism, Food Processing, Forest based Industries (Saw Mills, Furniture), Weaving, Knitting, Education Institutes , Handloom & Handicrafts,Construction
<b>Upper Subansiri</b>	Agriculture/Horticulture based Enterprises, Tourism Forest based Industries (Saw Mill, Furniture Making Units), Handloom & Handicrafts, Construction
<b>West Siang</b>	Agriculture/Horticulture based Enterprises ,Tourism, Weaving, IT related Institutes, Handloom & Handicrafts, Construction
<b>East Siang/Siang</b>	Agriculture based Enterprises, Tourism, Weaving, Tea Garden, Forest based Industries (Saw Mills, Furniture), IT related Institutes,Mineral(Limestone), Handloom & Handicrafts, Construction
<b>Upper Siang</b>	Agriculture/Horticulture based Enterprises, Forest based Industries (Saw Mills), Medicinal Plants, Bamboo and Cane based industries, Tourism, Handloom & Handicraft (Weaving) , Construction
<b>Dibang Valley/ Lower Dibang Valley</b>	Agriculture/Horticulture based Enterprises (specially Ginger), Tea Garden, Weaving, , Handloom & Handicrafts, Tourism, Construction
<b>Lohit,Anjaw &amp;Namsai</b>	Agriculture/Horticulture based Enterprises Tea Garden, Forest based Industries (Saw Mills, , Veneer, Ply), Stone Crusher , Weaving, Medicinal Plants, Tourism, Mineral (Limestone), Handloom & Handicrafts, Construction
<b>Changlang</b>	Agriculture/Horticulture based Enterprises, Tea Garden, Mineral based Industry, Forest based Industries (Saw Mills, Veneer, Ply, Handloom & Handicrafts (Wood Carving) , Construction
<b>Tirap &amp; Longding</b>	Agriculture/Horticulture based Enterprises, Tea Garden, Forest based Industries (Saw Mills, Veneer, Ply), Petroleum, Handloom & Handicrafts, Construction

#### **e. Sectors of Economy/Industries in which Arunachal Pradesh Needs to Intensify its Skilling Effort**

In order to identify the sectors of economy in which Arunachal Pradesh should intensify its skilling effort, it is important to understand the major economic activities in which people of Arunachal Pradesh are presently engaged in. This coupled with 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, are indicators of the areas in

which they want to be skilled.

Sl. No.	Economy/Industry Sectors	Skill Development Requirements
1	<p><b>Agriculture &amp; Allied Sectors such as Horticulture, Animal Husbandry &amp; Fisheries</b></p>	<p>Skilling in Scientific Techniques of growing different Agri-Horti Crops,Harvesting Skills and Post Harvest Techniques such as Grading, Preservation,Processing &amp; Marketing, etc. for <b>Horticulture Crops</b> such as Kiwi,Apples,Oranges, Ginger, Large Cardamom, Grapes, etc.and for <b>Agriculture Crops</b> like Paddy, Maize, Miilet, Musturd, Ground Nut, Black Gram (Urad), Green-Gram (Moong), Rajma, Potatoes, Soyabeans, Pulses etc. Cash Crops like Tea,Rubber, Mushrooms, Flowers and Medicinal Plants. Skill Development in <i>Floriculture, Palm-oil Cultivation, Ginger &amp; Turmeric Processing and Bee Keeping</i> is needed as it has ample scope for generating livelihood in the state.</p> <p>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.</p> <p>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 vermicompost units, Skills related to Mushroom Development such as Mushroom Production Technology and Spawn Production Technology <b>Animal Husbandry</b> plays an important role in the state economy and <i>Dairy,Piggery and Goat Farming</i> have vast scope in the state. Skill Development is needed for scientific management of this sector so that the production of milk, eggs, wools, 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 and Goat and poultry farming, sheep rearing, Animal anatomy skills,breeding and artificial insemination skill, butchering skill, poultry farming activities including brooding feeding skill arrangements,like nutritious diet etc.</p> <p>In <b>Fisheries</b> Sector, the Skill Development is required in the areas of Quality Seed production &amp; its Management, Ornamental Fish Culture including its breeding &amp; Management, Culture of indigenous fishes, Trouts Hatchery Management relevant to the core regions of Tawang, Bomdila etc., Hatchery Management for warm water fishes and Entrepreneurial Training Programs in Fisheries for Progressive Farmers.</p>

2	<b>Food Processing</b>	<p>The agro climatic condition of Arunachal Pradesh 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 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 (Kiwi, Orange, Apple, etc.), Spices (Large Cardamom, Ginger, Turmeric, etc.), Meat &amp; Poultry, Aerated Beverages, Alcoholic Beverages and by providing sufficient financial assistance for start-up business in Food Processing Sector.</p> <p>Along with the Entrepreneurial Skill Development, Skills needs to be developed at all workmen levels in the areas of Procurement, Production, Packaging &amp; Refrigeration, Testing &amp; Quality Control of Dairy Products, Fruits &amp; Vegetables, Oilseeds &amp; Food Grain Milling, Spices, Bread &amp; Bakery, Snacks, Meat &amp; Poultry, Fish Products, Aerated Beverages, Alcoholic Beverages, etc.</p>
3	<b>Forest based Industries</b>	<p>Arunachal Pradesh 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 Canes, Tans and Dyes, Oil, Gums and Resins, Aromatic &amp; Medicinal Plants/Herbs, Fibres and Flosses, etc. The Timber and Cane and Bamboo industry of Arunachal Pradesh is already quite evolved. Many of the industries in the state are based on forest products such as timber, veneer and plywood and Cane &amp; Bamboo Furniture.</p> <p>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 Bamboos and Canes, Tans and Dyes, Oil, Gums and Resins, Aromatic &amp; Medicinal Plants/Herbs, Fibres and Flosses by devising skill development courses in the areas of Procurement, Production, Processing, Testing &amp; Quality Control of various non-timber based forest produce available in the state.</p>
4	<b>Handloom &amp; Handicrafts</b>	<p>Traditional Handloom and Handicrafts sector plays a big role in the local economy of the state. Most of the produce of handloom and handicrafts especially produce of trades like weaving, carpet making, Cane &amp; Bamboo, Thankha Painting and Wood carving find a ready market within Arunachal as a part of their local festivals, rituals, ceremonies etc. Skill Development in Weaving, Carpet Making, Cane &amp; Bamboo, Thankha Painting and Wood Carving, which have good commercial potential not only within Arunachal but also outside, should be promoted in a big manner. This can be achieved by providing advanced training to trainers 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 Endi (Eri), Muga, Mulberry, Tassar, is another area which needs to be given adequate attention as it has immense possibility of rural livelihood generation if addressed correctly.</p>

5	<p><b>Tourism &amp; Hospitality Information Technology &amp; Information Technology enabled Services (IT &amp; ITES)</b></p>	<p>Tourism &amp; Hospitality is an important sector not only within the state but is also witnessing excellent growth worldwide. In terms of aspiration of various categories of population such as School Students, Graduate &amp; 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 &amp; Hospitality at various levels (both for self &amp; wage employment) as per international standards so that the trainees are not only prepared to work within the state but also ready to grab opportunities worldwide.</p> <p>The State has excellent tourism potential in Eco-Tourism, Adventure Tourism and Wildlife Tourism. In view of this, skill development is needed in Mountaineering, Rafting and Trekking, Home Stay, Tour Guide, Kayaking, Paragliding, Jungle Trek, Angling, Bird Watching. Apart from this, skilling needs to be done in different job roles of Hotel &amp; Restaurant, Food Services and Travel Agents &amp; Tour Operators such as Food &amp; Beverage Services, Cooking, Travel Counselling, Front Desk Services, Driving, Housekeeping, Bartender, Restaurant Manager, Maintenance etc.</p> <p>IT &amp; ITES industry is an ever-growing sector with latest advanced processes, innovation and product development that require a human resource with specialized skills development of foundation and specialization courses across industry verticals like BPO, IT Services, Engineering Services; Software Products etc. In case of Arunachal Pradesh, considerable interests were shown for Skilling in IT &amp; ITES sector by various categories of population in the aspiration study conducted as part of this study.</p> <p>In view this, there is a need to design skill development courses in IT &amp; ITES at various level (both for self &amp; 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.</p> <p>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 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.</p>
7	<p><b>Banking, Financial Services and Insurance (BFSI)</b></p>	<p>BFSI Sector is another sector which is having decent employment potential.</p> <p>The projected manpower requirement of the BFSI labour force in the country by 2022 is 8.5 million. In case of Arunachal Pradesh, considerable interests were shown for Skilling in BFSI sector by school &amp; College students and Educated unemployed.</p> <p>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.</p>

8	<b>Education &amp; Training</b>	<p>As the State of Arunachal Pradesh is still underserved in Education &amp; Training Sector, this 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 oneself to work anywhere in the world. In case of Arunachal Pradesh, considerable interest was shown for Skilling in Education &amp; Training Sector by school &amp; College students and Educated unemployed.</p> <p>Skill Development is required in the areas of Teaching &amp; 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>
9	<b>Health &amp; Allied</b>	<p>In case of Health &amp; Allied Sector too, the state of Arunachal Pradesh is underserved which creates employment in both public and private sector within the state. In addition to this there is a huge demand for Health &amp; Allied Sector Workers worldwide. So Skilling in these areas will not only prepare oneself 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. In case of Arunachal Pradesh, considerable interests were shown for Skilling in Health &amp; Allied Sector by school &amp; College students and Educated unemployed.</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.</p>
10	<b>Construction</b>	<p>Construction is another sector which has good prospects of generating employment within the state considering the hydro-power, roads and other 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.</p>

## VI. Strategic Reforms Roadmap for Skill Development Sector in Arunachal Pradesh

The complete exercise of understanding the Characteristic of Skill Development System operational in the state of Arunachal Pradesh, 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 Arunachal Pradesh 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 frame.

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



*Strengthening the Governance Framework currently governing the Skill Development Ecosystem of the State*

*Improving the Effectiveness and Utilization of Existing Technical Vocational Education & Training (TVET) Institutions*

*Making Provisions for providing Specialised Skill Development Training in Identified Sectors and Domains Relevant to the State*

*Making General Education Provided in Schools an Integral Part of Skill Development Efforts by Improving the Quality and Learning Outcomes of School Education*

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

*Improving Linkages between Industry and Institutions providing Skill Development Training,*

*Strengthening the Handloom and Handicrafts Sector*

*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 strategies suggested for achieving these goals are discussed in details in the following sections:

Strategic Goals	Strategies Suggested for Achieving the Goals
	<b>1.1</b> Introducing <b>Right Amount of Centralization</b> for Governance of Skill Development Schemes in the State

<p><b>1. STRENGTHENING THE GOVERNANCE FRAMEWORK GOVERNING THE SKILL DEVELOPMENT ECOSYSTEM</b></p>	<p><b>Comprehensive Planning</b> for Skill Development activities in the state</p> <p><b>1.2</b> Which takes care of duplicities, redundancies and inefficiencies present in the Skill Development Ecosystem by adopting bottom-up approach which takes care of the real skilling requirements of the state at grass root level.</p> <p><b>1.3</b> Formulation of <b>State Specific Comprehensive Skill Development Policy.</b></p> <p>Adequate <b>Organizational Structure, Staffing and Capacity</b></p> <p><b>1.4 Building of Department of Skill Development &amp; Entrepreneurship</b> to enable it to work as a full -fledged Mission Directorate directly attached to the State Skill Development Mission.</p> <p><b>1.5</b> Creation of <b>State Council for Skill Development</b>, an Advisory &amp; Regulatory body to look into the regulatory and quality aspect of various issues facing Skill Development Ecosystem.</p> <p><b>1.6</b> Development of a <b>Skill Development -Quality Assurance Framework (SD-QAF).</b></p> <p><b>1.7</b> Creation of a <b>Labor Market Intelligence System (LMIS).</b></p> <p><b>1.8</b> Creation of a <b>State Skill Development Fund.</b></p> <p><b>1.9</b> <b>Concurrent Monitoring &amp; Evaluation</b> of Skill Development Efforts.</p>
<p><b>2. IMPROVING THE EFFECTIVENESS AND UTILIZATION OF EXISTING TECHNICAL VOCATIONAL EDUCATION &amp; TRAINING INSTITUTIONS (TVET)</b></p>	<p><b>2.1 Restructuring &amp; Up gradation of ITIs and Polytechnics</b> as per the Skill Requirement Needs of the State.</p> <p><b>2.2 Better Utilization of ITIs and Polytechnics</b> which apart from training for formal sector should also be providing training to informal sector as per the need of the community.</p> <p><b>2.3</b> Better Utilization of <b>Craft Centers as Rural Skill Development Centers</b></p> <p><b>2.4 Capacity Building of Teachers and Trainers</b> of Public &amp; Private Training Providers.</p>

Strategic Goals	Strategies Suggested for Achieving the Goals
<p><b>3. MAKING PROVISIONS FOR PROVIDING SPECIALISED SKILL DEVELOPMENT TRAINING IN IDENTIFIED SECTORS AND DOMAINS RELEVANT TO THE STATE</b></p>	<p><b>3.1 Intensify skilling efforts in the identified sectors relevant to the state such as Agriculture &amp; Allied, Food Processing, Forest based industries, Handloom &amp; Handicrafts, Tourism &amp; Hospitality, Information Technology &amp; Information Technology Enabled Services Banking, Financial Services &amp; Insurance, Education &amp; Training, Health &amp; Allied Construction</b></p> <p>Apart from above Sectors, the domains in which skill development is required in the state of Arunachal Pradesh for gainful self and wage employment within the state are <b>Bakery and Confectionary, Cooking, Fast Foods Outlets, Automobile Works, Repairing of Machinery &amp; Equipment, Stone Crushing, Steel Fabrication, Mobile Repairing, Beauty &amp; Wellness, Knitting &amp; Tailoring, Automobile Mechanic, Carpentry, Electrician, Plumber, Mason, Painting, Fashion Designing, Welding, etc.</b></p> <p><b>3.2 Provision for Specialized Skill Development Training for Entrepreneurship</b> in the sectors which are relevant to the state.</p> <p><b>3.3 Provisions for Specialized Skill Development Training for Enterprises working in Informal Sector</b> and Strengthening of In-house training capabilities of enterprises.</p> <p><b>3.4 Provisions for High-End Skill Development Training for Educated Unemployed Youth.</b></p>
<p><b>4. MAKING GENERAL EDUCATION PROVIDED IN SCHOOLS AN INTEGRAL PART OF SKILL DEVELOPMENT EFFORTS BY IMPROVING THE QUALITY AND LEARNING OUTCOMES OF SCHOOL EDUCATION</b></p>	<p><b>4.1 Create partnership with Specialized Institutions for improving the learning outcomes in schools</b> especially up to elementary level.</p> <p><b>4.2 Introducing Special Classes in Schools on New Skills Set</b> such as <b>STEM</b> (Science, Technology, Engineering and Mathematics) skills, <b>Learning &amp; Innovation Skills, Life &amp; Career Skills, Information Technology Skills and Green Skills</b> with the help of Specialized Institutions</p>

Strategic Goals	Strategies Suggested for Achieving the Goals
<p><b>5. CREATING A ROBUST ECOSYSTEM OF CREDIBLE PRIVATE VOCATIONAL TRAINING PROVIDERS (VTP) TO SUPPORT SKILLING INITIATIVES OF THE STATE GOVERNMENT</b></p>	<p><b>5.1 Capacity Building of Credible Private Vocational Training Providers (VTPs)</b> 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><b>5.2 Identifying Credible Private Vocational Training Institutions located outside the state</b> 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><b>6. IMPROVING LINKAGES BETWEEN INDUSTRY AND INSTITUTIONS PROVIDING SKILL DEVELOPMENT TRAINING</b></p>	<p>Awareness and Implementation of the Amended <b>6.1 Apprenticeship Act 2014</b> in Letter and Spirit</p> <p>Provide <b>Autonomy , Resources and Incentives to 6.2 Institutions</b> for developing Industrial Linkages</p>
<p><b>7. STRENGTHENING THE HANDLOOM AND HANDICRAFTS SECTOR</b></p>	<p>Improvement in <b>infrastructural facilities</b> of the craft <b>7.1 centers</b></p> <p>Establishing <b>Centre of Excellence for Handloom &amp; 7.2 Handicrafts at 4 distinct geographical locations</b> in the state and integrate these facilities with Tourism</p> <p>Facilitating <b>Technical, Marketing, Sales &amp; Distribution 7.3 Skills and Financial Support</b> to the traditional Skill Sectors of the state</p>
<p><b>8. MAKING EXTENSIVE PROVISIONS FOR CAREER COUNSELLING AND INFORMATION DISEMINATION</b></p>	<p>Making <b>Provisions for Extensive Career Counselling</b> to <b>8.1</b> different category of Population as per their need for information</p> <p>Setting up of Information Infrastructure for <b>disseminating 8.2 information to all on a robust online platform</b></p>