

EXECUTIVE SUMMARY

COMPREHENSIVE STUDY ON AVAILABLE SKILL, SKILL GAP AND SKILL DEVELOPMENT POTENTIALS IN NAGALAND

I. INTRODUCTION

Employability of a growing young population is an important factor in the economic development of a region. Skill development increases the employability potential of the 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 existing in the state of Nagaland. The study aims to understand the characteristics of Skill Development System operational in Nagaland, 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 higher level in short to medium term.

Nagaland is one of the smallest states in India with an area of 16,579 sq. kms (6,401 sq.m) comprising a population of 19,78,502 (2011 census) and the population density of the state is 119 persons per sq. km. Nagaland shares boundaries with Assam to the West, Myanmar to the East, a part of Assam to the North and Manipur to the South. It is a land of pristine natural beauty abundantly blessed with flora and fauna and picturesque locations. The state is home to several major tribes having distinct heritage and culture.

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

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 11 districts of Nagaland at block level. As a part of primary interactions, a questionnaire survey was conducted among 5368 persons across seven strata viz. school students, graduate & post graduate students, vocational students, school drop-outs, vocational students trained under various skill initiatives, persons engaged in vocations and unemployed persons. In addition to this, 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 NAGALAND

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

Literacy Rates: The literacy rate of Nagaland is 79.6 %, which is higher than that of the national rate of 73%. This means out of the total population of 19,78,502 persons, 13,42,434 persons possess the ability to read and write. The male literacy stands at 82.75% and the female literacy rate at 76.11%.

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

Gross Enrolment Ratio (GER): The Gross Enrolment Ratio (GER) at the Upper Primary level and at the Primary level fares better than the national average. However, at the Secondary and the Higher Secondary level, the state is lagging behind in comparison with the national average.

Drop-out Rate: The drop-out rates at primary level, upper primary level and secondary level are quite high in comparison with the national figures. The drop-out rates in the Primary, Upper Primary and Secondary levels are 19.41%, 17.86% and 35.11% respectively.

Transition rate: The transition rate in Nagaland from Primary to Upper Primary level is less than the national average over the course of three years in between 2012-13 and 2014-15. The transition rate from Elementary to Secondary levels is 91.95% in Nagaland in F.Y 2014-15 which is marginally above the national average of 90.62%. The transition rates from Secondary to Higher Secondary level in the state stands at 81.56% in the F.Y 2014-15 surpassing the national average level of 69.04 %.

Labour Force Participation Rate: The Labour Force Participation Rate of the state stands at 67.2% as compared to the national rate of 52.4%, which indicates that Nagaland has a better position than the national average.

Worker Population Ratio: The worker population ratio was 63.5% and is greater than the national average of 50.5%.

Sector-wise Employment: In F.Y 2015-16, the share of primary sector in employment in Nagaland was 59.6% (2015-16). The share of employment in primary sector in Nagaland is more than the national average of 47.3%, which indicates the importance of the primary sector in the state's economy. It is worth mentioning that in the rural areas, 70.7% labour force is engaged in the primary sector as against 20% labour force in the urban areas. The tertiary sector employs 34.7% of the workforce which is more in comparison

with the national average of 30.2%. The urban workforce engaged in the tertiary sector is 70.4% and the rural workforce is 24.7%. It is seen that in Nagaland the employment in the secondary sector is least as only 5.7% of working population are engaged in it, whereas at the national level, 22.5% of the workforce are engaged in the secondary sector.

III. CHARACTERISTICS OF SKILL DEVELOPMENT SYSTEM OF NAGALAND

The existing skill development system of Nagaland almost mirrors the prevailing system in practice in other parts of the country. The understanding of Characteristics of Skill Development system of the state mainly depends upon the understanding of the Technical Vocational Education and Training (TVET) System, Traditional Skill Sectors, Initiatives of various Central and State Government and its implementation status along-with Financial Resources available with the key departments engaged in skill development which are discussed here.

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

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

Industrial Training Institutes (ITI): There are 8 Government Industrial Training Institutes (ITIs) in Nagaland imparting vocational training courses affiliated to the National Council for Vocational Training (NCVT) and State Council for Vocational Training (SCVT). The eight government ITIs are situated in the districts of Kohima, Dimapur, Mon, Mokokchung, Phek, Wokha, Tuensang and Zunheboto. ITI Kohima has the highest enrolment capacity of 278, Women ITI Dimapur and ITI Mon has a capacity of 100 each, ITI Mokokchung and ITI Tuensang has a capacity of 80 each, ITI Phek, ITI Wokha and ITI Zunheboto each have a capacity of 60. In F.Y 2015-2016, the total enrolment capacity of the eight (8) government ITIs was 818 and the total enrolment was 690 which is 84.34 percent of the total enrolment capacity. In addition to these eight (8) ITIs, four (4) more ITIs are coming up in the state which is presently at various stages of development. These new ITIs are located at Dimapur, Peren, Kiphire and Longleng. The ITIs at Dimapur and Peren have reached advanced stage of construction work and will soon become operational. In case of ITIs at Kiphire and Longleng, the construction work will begin soon.

In recent past, some up gradation of existing ITIs have also been undertaken under the scheme “Up-Gradation of Govt. ITIs through Public Private Partnership”. Under this scheme an Apparel Centre has been introduced at Women ITI Dimapur and the existing trades at ITI Mokokchung have been upgraded. During F.Y. 2010-11, three ITIs (ITI Tuensang, ITI Mon and ITI Wokha) and in F.Y. 2011-12, ITI Zunheboto and ITI Phek have also been upgraded under the scheme.

Interactions at the ITIs highlighted that the ITIs should develop proper industrial linkage so that the graduated students could get immediate placement in the desired trades. It would also set an example and motivate others to opt for vocational courses. Apprenticeship Training Scheme (ATS) has not been very effective and has only enrolled 40-50 candidates since its inception. Currently it provides training in Carpentry, Electrical, Diesel Mechanic and Motor Mechanic in affiliation with some local and outside

enterprises. The trainers wanted to have more autonomy in the method of teaching and planning for the system as a whole. The teachers/trainers felt that locally available enterprises lack in quality in comparison to other well established enterprises in the mainland. The institute should also tie-up with enterprises in the relative trades to improve placement opportunity for candidates. Similarly, it is also the role of the enterprises to tie with institutes in its vicinity for supply of skilled workforce and apprentices. There is a need for placement cum apprenticeship cell within each institute which can counsel trainees on successful completion of their training and help them get employed. Vocational subjects like Hospitality & Hotel Management and Tourism are in demand not only within the state but also in the other states and if more youths are trained, they can be absorbed by many multi-national companies operating in these sectors. Constraints like poor internet connectivity, scarcity of latest teaching aids, good hostel facilities separately for boys and girls are a major hindrance for smooth functioning of the institutes.

There is a need to immediately look into the utility and viability of few of the courses offered in these ITIs and accordingly restructure and revamp the course structure taking into consideration the need and interest of the local economy. In case of trades which are in demand, the enrolment capacity should be increased and the latest know-how in these trades should be provided during trainings. The courses which are not much in demand should gradually be phased out.

Polytechnics: Currently, there are three (3) Government Polytechnics in Nagaland viz. Khelhoshe Polytechnic Zunhebhoto, Government Polytechnic Kohima and Institute of Communication & Information Technology (ICIT), Mokokchung. All these three polytechnics are under the Directorate of Technical Education, Nagaland. Technical Education in the state started in the year 1972 with the establishment of the first polytechnic viz. Nagaland Polytechnic Atoizu, (Zunhebhoto district) which was later renamed as Khelhoshe Polytechnic. With a view to uplift the socio-economic condition of the women in the state, Women Polytechnic at Kohima was established in 1994, but was later made co-educational in 2002 in order to accommodate both boys and girls. These polytechnics are functioning under the Directorate of Technical Education, Government of Nagaland. Institute of Communication and Information Technology (ICIT), Mokokchung has been set up under the Third Eye Technical Education Project, assisted by the World Bank. Apart from these three (3) polytechnics, 6 (six) new Polytechnics have been sanctioned and at present are at various stages of completion. These polytechnics are in the districts of Dimapur, Peren, Phek, Wokha, Tuensang and Mon.

The interactions with teachers and trainers at the polytechnics highlighted that in order to optimise the returns of investments on training programs, it is important to impart quality training to the candidates rather than focussing more on numbers of enrolment. It was mentioned that the concept of quality training not only includes having good trainers, infrastructure or a conducive learning environment but also it is important to customize the programs based on the interest of the candidates, emerging services or trades in the region. The teachers felt that the government needs to identify the local skill requirements, its employability, opportunity, demand parts of skill to make it more relevant. The teachers of Government Polytechnic Kohima said that they have generated large number of promising fashion designers who have taken part in a range of contest and won several awards within the state and at national level. The trainers highlighted on the importance of handholding concept in teaching to make sure that the students obtain what they need. Apart from formal education trainers are also of the view that well-tailored professional development opportunities

like seminars, workshops and conferences will help them immensely and should be held more often. 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.

As in case of ITIs, placement is an area where these polytechnics are also struggling, thereby creating the need for highly active placement cells in these polytechnics which not only network with the potential employers within the state but also tie-up with employers outside the state for placement and apprenticeship.

Vocational Education in Government Higher Secondary Schools: The Vocationalization of School Education is currently being implemented in 5 Government Higher Secondary Schools and is under the purview of the Directorate of School Education. The five (5) Government Higher Secondary Schools of the state are located in Kohima, Dimapur, Mokokchung, Mon and Tuensang. These five schools are providing training in two (2) trades viz. Information Technology (IT)/ Information Technology Enabled Services (ITES) and Travel & Tourism. The total enrolment in vocational education in these schools over the last three financial years has been 1073 students.

Interactions at few schools highlighted that the level of awareness for vocational training is considerably low among the students. There is a need to bring together young people, representatives of the public organisation, students' union, youth organizations and private & voluntary sectors, including potential employers, large, medium and small firms to raise awareness of the benefits of vocational courses. In Nagaland, there is a need to take vocational education to the remotest parts of the state and increase the skilling process which can be made possible through the existing infrastructure. They were of the opinion that existing teaching staff can be utilized as skill development trainers with adequate exposure trainings based on the area of their interest who can help in optimizing the leverage for skill training. The teachers felt that the selection of vocational subjects should be based upon local needs and requirements. Provision for vocational education in schools should focus more on the students who have consistently performed poorly in their studies and are not interested in pursuing higher education.

As the vocational courses in these Government Higher Secondary Schools is new to the state, nothing much can be said about the performance at this stage. However, if we consider the performance of the same scheme elsewhere, the result has not been encouraging. Similar study conducted by NEDFi in the state of Sikkim, which is running such type of programs for a long time, had revealed that most of the students enrolled in vocational subjects are interested in pursuing higher education after completion of secondary level. The issue of vertical mobility of students of vocational streams at school level in higher education is slowly becoming an issue as there is limited number of seats in institutions of higher education for these courses for vocational students with related streams, against large number of students passing out from vocational streams of senior secondary schools. Moreover, few of the specialized institutions which are providing training at higher levels in these streams do not give any preferential treatment to the students who have completed their senior secondary level with vocational streams. They are treated at par with students of general senior secondary students.

It is suggested here that focus should be more on providing quality general elementary and secondary education in the schools so that smart, bright individual with good cognitive skills can be developed. In fact

these are the skills which an employer looks for mainly in prospective candidates and schools are the best place to develop those skills. So, in schools instead of diverting students' attention towards narrow vocational skilling, focus should be more on improving the quality of general education and learning outcomes. In this connection, it is worth mentioning here that a study on "Skill Development in India - The Vocational Education and Training System" done by The World Bank in 2007, in clear cut and unambiguous term suggests that focus should be more on providing quality general secondary level education and not necessarily training students with narrow vocational skills.

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

Private Vocational Training Providers (VTPs): There are various organizations and institutes besides the ITIs and Polytechnics which play a pivotal role in providing trainings in various trades under schemes such as Skill Development Initiative Scheme (SDIS), Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Deen Dayal Upahyaya – Grameen Kaushal Yojana (DDU-GKY), Deendayal Antyodaya Yojana - National Urban Livelihood Mission (DAY-NULM) etc. They are the Private Vocational Training Providers (VTPs) from both within and outside the state which are imparting various vocational courses under skill initiatives of the state government. Under the Skill Development Initiative Scheme (SDIS) implemented by the Department of Labour and Employment, Skill Development & Entrepreneurship (L&E, SD & E) has trained a total of 11,621 candidates till date, out of which 3332 have been trained through the non-local VTPs and 8289 candidates by the local VTPs.

During our survey, few of the local VTPs of Nagaland were visited and various issues were highlighted through the interactions. Few of the private VTPs visited were The People Channel (TPC), Pinnacle Skills, Institute of Information and Job-Oriented Training (IIJT), Youth Net and Entrepreneurs Associates. The common issues which all these VTPs highlighted was the creation of awareness about importance of vocational education, need to promote entrepreneurs by hand-holding approach. The major difficulties which they highlighted are the implementation of the courses under NSQF and the issue of assessment and certification of the courses by third party assessors. Presently, as all the assessors are based outside the state, the VTPs are facing huge delay in certifying their trainees. So, according to them the entire system of assessment and certification needs to be simplified along with the capacity building of local institutions for assessment and certification purposes.

b. Traditional Skills of Nagaland

Nagaland is composed of several tribes having their own distinctive language and culture spread across the entire landscape. The tribes that dwell in this exotic hill state can easily be distinguished by the colourful and intricately designed costumes, jewellery and beads that they adorn. With a rich heritage of arts and crafts Nagaland occupies a distinctive place in the cultural map of India. The traditions of making handloom fabric and handicrafts reflecting the cultural mores of tribal communities have been handed down from generation to generation. The unique combination of aesthetic decoration with utilitarian adaptation, forms the core of

tribal art which still retains the cultural identity of individual tribes. While weaving, embroidery, pottery etc. are done exclusively by the womenfolk, their male counterparts have shown predominance in wood carving, blacksmithy, bamboo work etc. The present generations of Nagas have ventured into fashion designing in a big way, producing fabrics that represent the ancestral design blended with modern appeal. The Handicrafts and Handloom segment of Nagaland has huge potential for growth due to the accessibility of skilled labour and resources in abundance, as well as due to the rich cultural traditions of the communities. Most of the handloom and handicrafts industries of Nagaland are cottage or small scale industries which are mainly being managed by cooperative societies. The Nagaland Handloom and Handicrafts Development Cooperation Ltd. in Dimapur is the State owned Corporation which is accountable for endorsement and promotion of handloom and handicraft products in the State. The handicrafts and handloom products of Nagaland are well known for the beauty and intricacies of work. These products have widespread appeal and demand in the domestic as well as offshore markets. The traditional skills of the people of Nagaland are weaving, wood-carving, bamboo work, jewellery & bead making, basketry, pottery, cultivation, spinning and dyeing metal work etc. As cane and bamboo grow abundantly in the forests and hills of the State and are readily available, they are experts in basket making, exceptional woodcarvers and are well-known worldwide for their art of woodcarving.

The Department of Industries & Commerce has participated and organized exhibitions to create awareness amongst the local entrepreneurs and artisans of the state. In order to popularize different handicrafts, the state government has undertaken several activities like organizing Craft Bazaar and Expo both in the state and outside and participated in national level expos. An Apparel & Garment Making Centre was inaugurated on April 5th, 2016 at the District Industries Centre Complex, 6th Mile, Dimapur. The Apparel & Garment Making Centre (AGMC) is funded by the Union Ministry of Textiles under the North-East Region Textile Promotion Scheme (NERTPS). The Central government has also sanctioned three sericulture projects which will support silk production of Eri, Muga and Mulberry variety from rearing to marketing and is targeted to assist around 5,000 farmers.

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

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

1. Department of Labour and Employment, Skill Development & Entrepreneurship (L&E,SD&E), Nagaland

The Department of Labour and Employment, Skill Development & Entrepreneurship presently conducts skill development programmes through Industrial Training Institutes (ITIs) as well as Private Vocational Training Providers from both within and outside the state. The training programmes are conducted under Craftsmen Training Scheme (CTS) and Skill Development Initiative Scheme (SDIS). In the F.Y 2015-16, the total combined enrolment under the CTS stands at 690 as against the total combined capacity of 818. Under the

Skill Development Initiative Scheme (SDIS) implemented by the Department of Labour and Employment, Skill Development & Entrepreneurship (L&E, SD &E) has trained a total of 11,621 candidates till date, out of which 3332 have been trained through the non-local VTPs and 8289 candidates by the local VTPs.

2. Department of Education, Nagaland

The Education Department is another key department in the state providing skill development courses through the polytechnics, schools and other institutions established under the department through its two directorates, viz. the *Directorate of Secondary Education* and the *Directorate of Technical Education*. The Directorate of School Education has introduced vocational courses in 5 Government Higher Secondary Schools with two trades i.e. Information Technology (IT)/ Information Technology Enabled Services (ITES) and Tours & Travels. About, 1073 students have been enrolled so far under the vocational courses in the 5 schools i.e. GHSS Kohima, GHSS Dimapur, GHSS Mokokchung, GHSS Mon and GHSS Tuensang. Further, the Directorate of Technical Education apart from running the regular diploma courses in the existing three (3) polytechnics of the state also implements the Community Development through Polytechnics Scheme (CDTP) and Community College Scheme. The trades in which trainings are imparted in these polytechnics are *Drawing & Painting, Beauty Culture, Mobile Repairing, Carpentry, Jute Products, Mushroom Cultivation, Cutting & Tailoring, Artificial Flower Making, Catering, Electrical House Wiring, Baking/Cake & Dessert, Computer Basic, PC Maintenance, Fashion Design and Software Development*. Over the last five years, a total of 1581 persons have been enrolled and trained by the Government Polytechnic Kohima alone under Community Development through Polytechnics scheme.

The Jan Shikshan Sansthan (JSS) Nagaland was established at Duncan Bosti, Dimapur under the National Literacy Mission Authority, in order to support the Voluntary Agencies for Adult Education & Skill Development. The Tribal Women Welfare Society (TWWS) functions as the JSS and is a registered leading voluntary organization working with people for their socio-economic empowerment and livelihood development by implementing multifarious developmental activities. As per the National Literacy Mission Authority report, JSS Dimapur currently offers 10 courses with 1900 beneficiaries since its inception, majority of which belongs to the age group of 15-35 years.

3. Department of Rural Development, Nagaland

The Rural Development department is another key department working towards skill development for the rural masses in the state. The main programmes under which the department implements skill trainings are Deen Dayal Upadhaya Grameen Kaushal Yojana (DDU-GKY) and Rural Self Employment Training Institute (RSETI). The Department is implementing Rural Self Employment Training Institute (RSETI) scheme through the Nagaland State Rural Livelihood Mission through the RSETI at Jalukie in Peren District. During the F.Y 2014-15, the institute conducted 15 batches of training for 180 rural youths of Peren district which included vermi-compost making, mushroom cultivation, poultry, maintenance of plant nursery, hand embroidery, dairy farming, weaving etc. During the F.Y 2015-16, the institute conducted 19 batches of training for 575 rural youths of Peren district in dairy farming, piggery training, dress designing for women, mushroom cultivation, sweet making, hand embroidery, plant nursery management, vermi-compost, poultry management, waste management, rubber tapping and weaving. During the F.Y 2015-16, the institute conducted 19 batches of training for 575 rural youths of Peren district in dairy farming, piggery training,

dress designing for women, mushroom cultivation, sweet making, hand embroidery, plant nursery management, vermi-compost, poultry management, waste management, rubber tapping and weaving. The Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) is yet to become operational in Nagaland and will be functioning under the Nagaland State Rural Livelihoods Mission (NSRLM).

4. Department of Agriculture, Nagaland

The Agriculture department is conducting skill development trainings as a part of Extension services provided to farmers in the form of Farmers Field Schools, Agri-Clinics and Agri-Business Centers and Farm Schools through institutions such as Krishi Vigyan Kendras (KVKs). The department has undertaken initiatives in agricultural sector like the National Food Security Mission where the farmers have benefitted through the cluster demonstrations and cropping system based trainings. As per the departmental data, number of farmers that were trained through cluster demonstrations in F.Y 2014-2015 was 9185, in F.Y 2015-2016 was 15994 and in F.Y 2016-2017 it was 10695 farmers respectively. Further in F.Y 2016-17 a total of 104 farm schools have been setup sector wise viz. Agriculture - 28, Horticulture - 39, Sericulture - 9, Fisheries - 8, VETY & A.H - 11, Soil and Water Conservation - 4 and others (Land Resources, Irrigation and Flood Control & Cooperation) - 5 respectively. Also, the department has three training institutions under it viz. Integrated Extension Training Centre (IETC) Madziphema, State Agricultural Research Station (SARS) Mokokchung, and State Agricultural Management and Extension Training Institute (SAMETI) Medziphema offering courses in Agriculture Extension Training Course (AET) and Post Graduate Diploma in Agricultural Extension Management (PGDAEM) etc. Several agriculture and allied training programs have been implemented under Agri-Clinics and Agri-Business Centers (AC&ABC) scheme in the state. As per National AC&ABC database, the number of trained candidates under AC&ABC scheme in the state of Nagaland in 2016 was 184. Out of the 11 districts, Nagaland has established KVK centres in 8 districts, viz. KVK Kohima (Dept. of Agriculture), KVK Dimapur (ICAR, Jharnapani), KVK Mon (Dept. of Agriculture), KVK Mokokchung (Dept. of Agriculture), KVK Tuensang (Dept. of Agriculture), KVK Zunheboto (Nagaland University, Lumami), KVK Wokha (ICAR, Jharnapani), KVK Peren (NRCM, Jharnapani).

5. Department of Horticulture, Nagaland

Horticulture is an important sector for the state which has huge economic potential that needs to be exploited for employment generation for various categories of population. The department of Horticulture has initiated various efforts for the skill development; one such initiative is envisaging the setting up of three Centres of Excellence at Phek, Tuensang and Dimapur with the aim of creating facilities and infrastructure for hi-tech horticulture, imparting technical knowhow to the farmers thereby generating revenue for the state. An amount of Rs. 650.00 lakhs have been earmarked for the purpose of imparting training to farmers, entrepreneurs and staff and demonstrative farms for farmers. The department, has also earmarked an amount of Rs. 83.57 lakhs to develop human resources, where training and exposure visits as well as study tours for supervisors, entrepreneurs, farmers and field functionaries has been envisaged both within and outside the state as well as abroad. Further, under the Rashtriya Krishi Vikas Yojana (RKVY), during F.Y. 2014-15, the department was allotted an amount of Rs. 322 lakhs for training and other purposes. For F.Y. 2015-16, an amount of Rs. 425 lakhs has been earmarked wherein; an expenditure of Rs. 60 lakhs has been incurred so far in creation of farmers' hostel at Hortiscape, Kisama and Farmers' training hall at State Horticulture Nursery, Dimapur.

Under the Mission on Integrated Development of Horticulture (MIDH) in F.Y. 2015-16 under MIDH, there was an effort to bring an integrated approach towards the development of the horticulture sector to keep up with the fund allocation of Rs. 3,833.33 lakhs while trying to meet the aspirations of the farmers in the state. However, till date, only Rs. 2,725.00 lakhs has been released by the Central Ministry. It is also worth mentioning that, out of the fund released, the state government released only Rs. 250.00 lakhs out of which Rs. 100.00 lakhs, Rs. 50.00 lakhs and Rs. 46.00 lakhs were utilised for area expansion of vegetables, payment of committed liabilities under horticulture mechanization and procurement of planting materials for temperate fruits (apple and kiwi). Simultaneously, works are on for up-gradation of the existing Tissue Culture Lab at State Horticulture Nursery for an amount of Rs. 16.50 lakhs while the remaining amount of Rs. 37.50 lakhs has been earmarked for the establishment of Front Line Demonstration for Gooseberry and Tree Beans in the private sector.

6. Department of Tourism, Nagaland

The two flagship schemes of the Ministry of Tourism, Government of India, viz. Hunar Se Rozgar Tak Initiative and Scheme of Capacity Building for Service Providers is not being implemented in the state of Nagaland. However, the department had organised motivational training for tourism stakeholders and entrepreneurs in 2010 under the State Program. The department also facilitated training for unemployed youth in Travel/Tourism/Hospitality & Hotel Management and other related programs for 1 year residential training courses at M/S Ashok Institute of Hospitality & Tourism Management under India Tourism Development Corporation (ITDC) at Bengaluru, Mysore and New Delhi under the sponsorship of Ministry of DONER in the years 2011 and 2013. In order to create employable skills amongst the unemployed youth of the economically weaker sections of the society, the Department has trained 366 youths so far, of which, 40 have been placed in F.Y. 2011-12 and 30 in F.Y. 2013-14. The department has also constructed an Institute of Hotel Management in Dimapur but in the absence of further funding it is unable to run the institute.

7. Department of Social Welfare, Nagaland

The department of Social Welfare has benefitted 25,568 adolescent girls under Kishori Shakti Yojana (KSY) scheme which was taken up in 8 districts under which trainings such as *cutting and tailoring, flower making, knitting and embroidery* were implemented besides personal hygiene and sanitation programmes. Under Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG) which was implemented in 3 districts, of which 18,775 adolescent girls were said to be benefitted from the scheme till date. Support to Training and Employment Programme for Women (STEP) under Ministry of Women and Child Development is also being implemented in the state for mobilisation, improvement of skills, creating backward and forward linkages, support services, credit access, education, awareness creation and gender sensitization, etc. Till date, the department has trained 713 beneficiaries in trades such as *mushroom, dairy, piggery, goat farming and poultry farming*.

The Nagaland State Social Welfare Board has undertaken the Condensed Course of Education (C.C) for Women scheme for women of 15 years and above which aim to attain social and economic empowerment of women, school dropouts and failed candidates in completing their education. Another scheme, i.e. Integrated Scheme for Women Empowerment (ISWE), seeks to empower economically and socially weak women

through vocational training by creating awareness and mobilising them. Further, there are Vocational Training Programmes undertaken by the Nagaland State Social Welfare Board to empower economically weaker and needy women of 15 years and above where the minimum qualification varies according to the trade.

8. Department of Information Technology & Communication, Nagaland

The Department of Information Technology & Communication also conducts skill development training in the field of Information Technology. The National Institute of Electronics & Information Technology (NIELIT), Kohima and its Rural extension centre at Chuchuyimlang, Mokokchung undertakes various Courses and training programmes in the IT sector such as *O Level, A Level, CHMO Level, CHMA Level, DCSE, MAT-O, BCA, CCC, PCAM, Multimedia, ITES, Graphics & Designing, Audio & Video editing, Tally, DCAN, Mobile Repairing, Diploma in Bio Medical Instrumentation and Maintenance, Repairing & Maintenance of Electronics Consumer Product, Internet Security & Cyber Law*. Some other programs that are currently running includes Cyber forensic training to law enforcing agency in Nagaland and other North Eastern States, Medical Electronics for improving the skill sets of Lab Technician within the state, National Literacy Mission etc. As per F.Y 2015-2016 departmental data, the total enrolment constituted 2230 trainees.

9. Department of Fisheries, Nagaland

The department conducts various fisheries related skill development programmes under the State and Central Plan such as hands on training, on-site demonstration, study tours etc. Various training programmes like Integrated Fish farming, Fish and Fish Seed Production, Ornamental fish culture have been taken up by National Fisheries Development Board (NFDB) and Rashtriya Krishi Vikyas Yojana (RKVY). Currently, there are 5 Training Centers and 6 Demonstration Fish farms in Nagaland located at Wokha, Dimapur, Mokokchung, Phek, Thizama and Mon. The enrolment in the F.Y 2013-14 under National Fisheries Development Board (NFDB) was 330 while the enrolment in Fisheries Extension and Training Centre in F.Y 2015-16 was 275. Trainings on value added Fish Products, Prospects of Aquaculture and Fisheries, Recent trends of Technologies on Aquaculture are some of the skill trainings provided currently by the department. An amount of Rs. 499.21 lakhs was allotted in F.Y 2014-15 and Rs. 9.49 lakhs in F.Y 2015-16.

10. Department of Sericulture, Nagaland

The Sericulture department has undertaken various initiatives such as the Integrated Sericulture Development Project (ISDP) and Intensive Bivoltive Sericulture Development Project (IBSDP) under North Eastern Region Textile Promotion Scheme (NERTPS), National Bank for Agriculture and Rural Development (NABARD), Catalytic Development Programme and Rashtriya Krishi Vikas Yojana have been going on under the department. The training centres are Common Facility Centre at Kiyeto, Centre of Excellence, Dhansiripar; Reeling & Twisting Unit, Signal Angami Village, Dimapur; Eri Seed Grainage, Dhansiripar and in all district headquarters. Currently, the department is providing skill training in social mobilization of women sericulturists, management of silkworm host plantation, disease management of plants and silkworm, training on silk spinning, weaving, natural dyeing etc. Under Post Cocoon Technology, Induction training programme for in-service personnel's etc. are conducted by the Department and the

Centre of Silk Board. The State Sericulture Farmer's Training Centre (under construction) at Dhansiripar, Dimapur was established under Special Plan Assistance (SPA) with an estimated amount of Rs. 424 lakhs during the F.Y. 2012-13 and is expected to be completed by F.Y. 2016-17. On completion, the centre would become a full-fledged Training Centre and is expected to train around 600 farmers annually. As per F.Y 2015-16 data, a total of 1168 beneficiaries have been enrolled under several trades.

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 various skilling initiatives based on the database provided by the Department of Skill Development & Entrepreneurship, Govt. of Nagaland. Apart from interacting with these trainees, interactions were also held with other stakeholders to understand the major challenges faced in the implementation of the scheme. A total of 162 graduated trainees were contacted for this purpose. The average age of the respondents was 26 years of which 56% were males and 44% females.

The database of trainees revealed that the short-term placement linked trainings were provided in trades such as ICT (Information and Communication Technology) followed by Security Guard, Hospitality, Soft Skills, Hardware & Networking, Beautician and Banking & Accountancy etc. Majority of them were trained in ICT, followed by Security Guard and Hospitality. 90% of the respondents enrolled themselves for trainings having course duration of 6 months or less. During the survey, out of total respondents, 45% respondents were found employed, 33% self-employed and the remaining persons still looking for a job. Trainees were found employed mainly in Banking & Accountancy followed by Beautician, ICT and Hospitality. Out of the unemployed persons, 20% respondents had previously worked but due to reasons like low salary, family issues, health issues, they left their previous job and were looking for a new job.

Most of the students reported that attending the training had brought positive impact in their technical skills, communication skills and personality development. Only 9% of the students were employed or self-employed before attending the training programme and stated that the trainings helped in improving technical skills. Of all the trained respondents, 53% of the respondents considered the training programme as somewhat sufficient, 41% as sufficient and 6% as not sufficient for them. When it came to practical knowledge, 55% respondents found it somewhat sufficient while 41% found it sufficient and 4% felt that it was not sufficient for gaining practical knowledge.

During the interactions, it came to light that the duration of training currently in practice is not sufficient in case of most of the trades. The duration of the trainings which include on-the-job training should not be less than 6 months and if possible should be extended to 1 year in case of few courses. Pay package and Working Environment in many cases are not attractive for the youth for placement outside the state. It was also seen that many VTPs were not following up with recruitment post-training and majority of the candidates who were placed are returning back to their home-towns citing improper placements, low salary and irregular payment as reasons for return. There is the need to fix the accountability of Private VTPs by supervising and regulating the activities of the VTPs and their placements. Also, trainings should be organized locally instead of sending candidates outside the state for short term training.

e. Governance Model

In order to govern various skill development initiatives in the state, the government of Nagaland has created institutions such as *Nagaland Skill Development Initiative Society (NSDIS)*, *Department of Labour and Employment, Skill Development & Entrepreneurship (L&E, SD&E)* and the *State Council of Vocational Training (SCVT)*. However, the efforts of this institutional framework has only been limited to the implementation of the CTS and SDIS which are being implemented by the Department of Labour and Employment, Skill Development & Entrepreneurship through the ITIs and private VTPs. The skill development schemes implemented by the other eleven (11) departments are not currently part of this institutional structure. The need of the hour is to create a State Skill Development Mission which integrates the efforts of various state departments in achieving the skill development targets for the state. Though the integration of so many schemes under one umbrella is a challenging task, but not impossible, e.g. the state of Uttar Pradesh has achieved considerable success in combining the efforts of various state departments in achieving the skill development target for the state. In case of the state of Nagaland, the Department of Labour and Employment, Skill Development & Entrepreneurship (L&E, SD&E) may spearhead in bringing the efforts of various state departments under the proposed State Skill Development Mission. The other governance related issues which needs to be addressed in the state are: Need for a Dedicated Department for Skill Development, Effective Planning of Skill Development Schemes, Adequate Availability of Skilled Teachers/Trainers for Skill Development Trainings, Strengthening & Effective Utilization of Existing TVET Institutions, Strengthening of the Regulatory and Quality Control Body for Skill Development at the State Level, Developing a Labour Market Intelligence System (LMIS).

f. Quality Assurance System

A closer look at the Skill Development system of the state of Nagaland reveals that there exists no single quality control mechanism to regulate the skill development schemes being implemented in the state in its totality. Though, in case of few institutions such as polytechnics and ITIs, there exists some quality control mechanism by virtue of their affiliations to All India Council for Technical Education (AICTE), National Council on Vocational Training (NCVT). The state has also taken up the initiative to ensure quality control and quality assurance system by formation of State Council for Vocational Training (SCVT), but its scope is mainly limited to the vocational training provided by the ITIs and does not include training provided by various other departments and institutions. In view of this, the State Council for Vocational Training needs to broaden its scope.

Over the last few years, the central government has been working hard towards creation of a single quality assurance framework through steps such as development and implementation of National Skill Qualification Framework (NSQF), creation of Sector Skill Councils (SSC) which helps in creating National Occupational Standards (NOS) for different sectors bringing the much needed industry perspective into the skill training standards. These initiatives of central government aimed at developing a quality assurance framework is expected to help shifting emphasis to outcome based learning - both in the general and vocational space. In spite of these developments at national level, 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.

In order to achieve the TQM approach, there is a need to establish a comprehensive quality management system (QMS) which takes into account the issue of Quality Control and Quality Assurance as the most important part of the skill development efforts put in by the various stakeholders of the skill eco-system. 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 dependant 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 Nagaland

The major institutions and skill development schemes constituting the bulk of TVET system in Nagaland mainly comes under the department of Labour and Employment, Skill Development & Entrepreneurship (L & E, SD & E) and Education Department of Nagaland. The schemes such as CTS, being implemented through the ITIs and SDIS being implemented through the private and the government VTPs are funded by the department of Labour and Employment, Skill Development & Entrepreneurship (L & E, SD & E). The department of Education through its Directorate of School Education and Directorate of Higher and Technical Education provides funds for Vocationalization of Secondary Education and Community

Development through Polytechnics schemes respectively. An effort has been made here to get an idea about the approximate amount of funds received by TVET system and their subsequent utilization so as to ascertain the quantum of expenditure being incurred on TVET system of Nagaland.

The CTS under which 8 ITIs in the state are functioning have seen substantial increase in fund allocation over the years. The ITIs received a fund of Rs. 812.21 lakhs in the F.Y. 2013-14 which increased to Rs.1045.39 lakhs in the F.Y. 2014-15 and Rs. 1053.86 lakhs in F.Y 2015-16. In the F.Y 2016-17 the funds received for implementation of CTS scheme was Rs.1010.92 lakhs. In case of schemes under the Education department, in the F.Y. 2015-16, Rs. 44.75 lakhs were allotted out of which Rs. 17.50 lakhs was utilised by the Higher Secondary Schools for Vocationalization of School Education scheme in the state. In case of the Vocationalization of School Education scheme under the Education Department, the fund which was allotted in the F.Y 2013-14 was utilized in the F.Y 2014-15.

The Department of Tourism received a funding of Rs. 6 lakhs in F.Y. 2010-11 and in the F. Y. 2011-12 and 2013-14, funds were received and sponsored by the Ministry of DONER. In the case of the Department of Fisheries, Rs. 152.66 lakhs were allotted in the F.Y. 2013-14 which increased substantially to Rs. 559.21 lakhs in 2014-15 and decreased to Rs. 24.49 lakhs in the F.Y 2015-16. The Department of Horticulture was allotted Rs. 155.66 lakhs in F.Y 2014-15 which reduced to Rs. 41.80 lakhs in F.Y. 2015-16. The Department of Sericulture was allotted Rs. 199.92 lakhs in the F.Y. 2015-16. In the absence of funding details not being provided by many department (including key schemes like SDIs and Polytechnics), it would be inappropriate to give any consolidated figure for overall funding for skill development in the state of Nagaland.

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 in all the 11 districts of the state at 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 and Higher Secondary Schools with vocational streams on issues regarding awareness of career options among parents, views on TVET system, and other issues of teacher/trainer of TVET system. The primary survey was designed in such a way so as to get the results at 95% Confidence Interval and 5% Margin of Error.

School Students: In order to understand the aspirations and skill development needs of school students, 867 students (446 male and 421 female) studying at secondary and higher secondary level were contacted for questionnaire survey. The respondents consisted of school students studying at the secondary and higher secondary level. Out of the total respondents, 85% wanted to work in government sector, 3% in private sector and 3% were interested in entrepreneurship. It was observed that 57% wanted to migrate to other places for better career opportunities. Many respondents (32%) expected income between Rs. 20,001- Rs. 30,000 per month and 23% expected between Rs.10,000 – Rs.20,000 per month. It was found that Parents serve as a major influence in their children's career development as agreed by 63% of the respondents. A significant number of students wanted to study general higher education like B.A, B.Sc and B.com. The remaining respondents wished to choose various courses like MBBS, B. Tech, LLB, BBA, B. Pharma and

only 11% wanted to pursue Vocational Education. The students who wanted to study in vocational streams were mainly interested in Healthcare (21%), Electronics (12%), Sports (9%), Tourism & Hospitality (8%), Media and Entertainment (8%), BFSI (7%), Beauty and Wellness (6%), Agriculture (6%), Automotive (6%), Security (6%), Aviation (3%), IT-ITES (3%), Handloom & Handicraft (3%), Gems & jewellery (1%) etc. 63% of the respondent students showed some interest in attending Skills Development Programmes for their career development. The school students were mainly interested in trades such as Health and Allied Sector, Banking & Finance, Defence, Tourism & Hospitality and Teaching.

Graduate & Post Graduate Students: To understand the aspiration and skill development needs of graduate and post graduate students, a separate questionnaire was designed. Interactions were held with 876 graduate and post graduate students (466 male and 410 female) at block level in Nagaland. A large number of Graduate and Post Graduate students wanted to go for government jobs (70%), 7% preferred private sector jobs whereas 10% were interested in Entrepreneurship. Out of the total respondents, 48% were seen to be ready and willing to move out of Nagaland for career development. Income expectations of majority of the respondents (65%) were between Rs. 10,000-30,000 per month. In terms of influencers in career decisions, parents were found to have the most dominant influencer (52%). In case of graduates and post-graduate students, the interested trades are Education & Training, Banking & Financial Services & Insurance, Security, Tourism & Hospitality, Agriculture, and Healthcare. It was found that many students (61%) had awareness about the Vocational Skills Programmes being provided by the government and 57% of the respondents were interested in attending Skills Development Programmes for their career development.

Vocational Students: Interactions were held with a separate questionnaire with 867 vocational students (437 male and 430 female) studying in institutions like ITIs, Polytechnics, Senior Secondary Schools with Vocational Stream and Private Vocational Training Providers etc. Majority of vocational student respondents joined the training due to interest in the trade (57%) and 30% in order to improve chances of employment. Migration tendency was noticed among the respondents as 56% were ready to move out of Nagaland for career growth. The salary expected by majority of respondents was mainly between Rs. 10,000 -20,000 per month. The Vocational Students were mainly interested in trades like IT & ITES, Knitting, Tailoring & Weaving, Engineering, Automobile, Hospitality, and Banking. It was also observed that 86% respondents wanted to attend general skill development programme which includes Computer Knowledge, English speaking, Interview skills, Communication and Personality development etc and 16% respondents had no such aspiration.

School Dropouts: To understand the aspiration and skill development needs of school drop-outs, a separate questionnaire was designed and interactions were held with 871 school drop outs (449 male and 422 female) in Nagaland at all blocks. Majority of the school drop-out respondents were found dropped out at middle level (61%) followed by secondary level (31%) and primary level (8%). The survey revealed that majority of the respondents cited financial issues (31%) as the main reason of dropping out, followed by family issues (21%), health issues (14%), issues related to school (13%) etc. Majority of the school dropouts were found unemployed (83%) and unable to earn a living and only a few were seen to be self-employed (11%) and earning their livelihood. The employed/self-employed school dropouts were found engaged in vocations such as Beautician, Carpenter, Driver, Mechanic, Retailer, Weaver, Knitter and Tailor. It was seen that 80% of the respondents did not possess any vocational skills and the remaining 20% responded affirmatively and agreed

to possess some kind of skill. The trades in which school drop-out respondents showed interest for skill development are Designing, Beauty and Wellness, Handloom & Handicrafts, IT & ITES, Automobile, Mechanic.

Person Engaged in Vocations (PEVs): During our survey, 861 persons (452 male and 409 female) engaged in vocations were contacted covering all the blocks of the state. It was found that 68% of the Persons Engaged in Vocations respondents were self-employed, 13% were regular workers whereas residual 19% were contractual workers. It was observed during the survey that 69% respondents were not ready to move out of Nagaland for better livelihood, while 31% were ready to migrate. With regard to the satisfaction levels with the present occupation, 12% were very satisfied, 23% were moderately satisfied, 13% dissatisfied and 52% were satisfied. Further, they were asked about the major difficulties encountered in pursuing occupation and lack of money appeared to be a major problem (36%), followed by lack of raw materials (3%), lack of technical skills (20%), lack of marketing options (30%) and lack of soft skills (9%) etc. It may be mentioned that less than half of the respondents (41%) wanted to join further skill development and the remaining 59% were not interested. The trades in which PEV category displayed interest for skill development are IT & ITES, Banking & Accountancy, Mechanics, Beauty & Wellness, Retail Management. On being asked about the expected monthly stipend if they joined a full time vocational course, taking a break from their present work, 28% respondents wanted to earn between Rs. 10,000-Rs. 20,000 and 19% between Rs.5000-Rs.10,000. The remaining wanted to earn above Rs.20,000.

Unemployed Persons: Interactions were held with 864 unemployed persons (463 males and 401 females) selected randomly from the population. The respondents were taken from the unemployed persons of working age group (15-59 years). It was observed that 66% of respondents tried to get a job (Govt. job-55%, Private job-9% and others-2%) but could not manage to obtain a decent job. It was found that 34% respondents had never tried for a job. However, 20% respondents had tried to become self-employed, but they highlighted some difficulties in becoming self-employed which are lack of money (65%), lack of skills (13%), lack of guidance (20%) etc. The trades of interest of this category are IT & ITES, Handicrafts & Handloom, Carpentry, Electronics, Aviation & Hospitality, Cutting, Knitting, and Weaving.

Focus Group Discussions with Parents: The parents were seen to be highly involved in the life of their wards and took active part in parent-teacher meets and were keen for the overall betterment of the children. Many of the parents were found unaware of vocational education and its importance. Awareness of parents' part is necessary so that they can better understand the importance of vocational education. Parents were of the view that it is the duty of the teachers or the schools/colleges to give career guidance or create awareness on career opportunities available. 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. They felt the need for professional counselling for students regarding the available career opportunities at different level by experts in the respective field. Parents were in favour of sending their children outside the state for further education. Majority of the parents expressed preference for government/public sector jobs over private jobs as high degree of value is given for stability in one's job which eventually lessens individual's degree of risk in his/her career. Parents were of the view to improve quality of education and at the same time teachers need to undergo refresher training courses/programs to upgrade their skills exploring new methodologies and different approaches to teachings. Parents were of the

opinion that the schools/colleges focus too much on academics and less on extracurricular activities, focus on which will help not only in intellectual development but also emotional, moral and personality development of the students which is an integral part. There was a common opinion amongst the parents that there exist very few sources of income in the districts making it difficult for them to afford the professional educational expenses. Only few parents wanted their children to practice the traditional skills passed down over generations. This opinion was dependent mainly upon the area in which they live, the demand towards the traditional skills and the interest of the children towards those skills.

Focus Group Discussion with Teachers/ Trainers of Industrial Training Institutes (ITIs): The teachers/trainers felt there is a need to review the trades offered in ITIs as few trades have become outdated and do not match up with the demand of the potential employers. The institute should also tie up with enterprises in the relative trades to improve placement opportunity for candidates. Similarly, it is also the role of the enterprises to tie-up with institutes in its vicinity for supply of skilled workforce and apprentices. There is a need for placement cum apprenticeship cell within each institute which can counsel trainees on successful completion of their training and help them get employed. Vocational subjects like Hospitality and Hotel Management and Tourism are in demand not only within the state but also in the other states and if more youths are trained, they can be absorbed by many companies operating in these sectors. The trainers wanted to have more autonomy in the method of teaching and planning for the system as a whole. Constraints like poor internet connectivity, scarcity of latest teaching aids, good hostel facilities separately for boys and girls are a major hindrance for smooth functioning of the institutes. Apprenticeship Training Scheme (ATS) has not been very effective and has only enrolled 40-50 candidates since its inception. Currently it provides trainings in Carpentry, Electrical, Diesel Mechanic and Motor Mechanic in affiliation with some local and outside enterprises. Most of the teachers were of the opinion that there should be industrial linkage with ITIs so that the graduated students could get immediate placement in the desired trades. It would also set an example and motivate others to opt for vocational courses.

Focus Group Discussion with Teachers/ Trainers of Polytechnics: The trainers are of the view that in order to optimise the returns of investments on training programs, it is important to impart quality training to the candidates rather than focussing more on numbers of enrolment. It was mentioned that the concept of quality training not only includes having good trainers, infrastructure or a conducive learning environment but also it is important to customize the programs based on the interest of the candidates, emerging services or trades in the region. The teachers felt that the government needs to identify the local skill requirements, its employability, opportunity, demand parts of skill to make it more relevant. Placement is an area where these polytechnics are also struggling because of the absence of active placement cells in these polytechnics and the dearth of industries in the state. The teachers of Government Polytechnic Kohima said that they have generated large number of promising fashion designers who have taken part in a range of contest and won several awards within the state and at national level. The trainers highlighted on the importance of handholding concept in teaching to make sure that the students obtain what they need. Apart from formal education trainers are also of the view that well-tailored professional development opportunities like seminars, workshops and conferences will help them immensely and should be held more often. The teachers felt that in order to reap the advantage of technical education provided by the polytechnics, school education needs to be improved particularly in the quality of education in science, mathematics, language and communication skills.

Focus Group Discussion with Teachers/ Trainers of Government Higher Secondary Schools with Vocational Streams: The level of awareness for vocational training is considerably low among the students. There is a need to bring together young people, representatives of the public organisation, students' union, youth organizations and private & voluntary sectors, including potential employers, large, medium and small firms to raise awareness of the benefits of vocational courses. In Nagaland, there is a need to take vocational educational to the remotest parts of the state and increase the skilling process which can be made possible through the existing infrastructure. They were of the opinion that existing teaching staff can be utilized as skill development trainers with adequate exposure trainings based on the area of their interest who can help in optimizing the leverage for skill training. The teachers felt that the selection of vocational subjects should be based upon local needs and requirements. Provision for vocational education in schools should focus more on the students who have consistently performed poorly in their studies and are not interested in pursuing higher education.

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 (ICT) and Mining.

b. Effect of Innovation on New Evolving Skill Sets

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

These developments along with the growing importance of sustainable development and shift to a low carbon economy are bringing significant and rapid changes in labour markets and skill needs. These innovations have necessitated familiarization of young workers with new kind of skills so that they stay relevant in the rapidly changing economy. The new skill sets which have become critical for performance in

today's innovation led economies can be broadly classified as STEM (Science, Technology, Engineering and Mathematics) skills, Learning & Innovation skills, Life & Career skills, Information Media & Technology skills and Green skills.

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, Trends disciplinarily, 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 2017, it is mentioned that the growth of overall hiring intent has been decreasing every year in general. It is seen that Telecom and allied and Core Sector are the leading sectors with an increase of over 10% in the hiring numbers in the coming year. It is followed by sectors like BFSI, BPO, KPO & ITES, Engineering and Automotive, Hospitality, Internet Businesses and Software, Hardware & IT, who's hiring numbers are expected to increase by 5-10%. Other sectors like FMCG,

Manufacturing, Pharma & Healthcare and Others & Diversified are the sectors whose hiring numbers are expected to increase by 0-5%.

Domain wise hiring mix of individual industry sectors in India Skill Report 2017 shows that in sectors such as BFSI, BPO, KPO & ITES, Hospitality, there seems to be a clear focus on hiring candidates from general degree courses who can be trained to meet the business needs. Candidates from ITI have been hired mainly 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).

With regards to the skills preference of employers when looking for prospective employees, the India Skills Report study gave much useful insight. Apart from the domain expertise, this year, employers were given options like Numerical & Logical ability, Communication, Cultural fitment, Integrity & Values, Result Orientation, Adaptability, Interpersonal skill and Learning agility. On asked to rate the most important skills they preferred, the top 4 skills chosen by the larger segment of employers (almost 60%) were domain expertise, communication skills, integrity & values and learning agility. It is worth mentioning that preferences differ for some industry sectors. For instance, majority of employers from BPO/KPO/IPES sectors chose communication, Core sector, Engineering & Auto, Pharma & Healthcare and Telecom employers chose domain expertise. For the rest of the sectors, Integrity& values along with Domain expertise or Learning agility have been chosen as the most important trait.

d. Skill Requirement Needs of Nagaland

In order to give impetus to the local economy of a region, it is important to understand the skill development needs of the region. Also, to create opportunities for local wage and self-employment, it's necessary to understand the Potential Sectors Capable of Developing Enterprise and Employment Generation and the Skill Development Requirements. During the primary survey of this study, an effort was made to understand the Potential Sectors Capable of Developing Enterprise and Employment Generation and the Skill Development Requirements for each district of the state. The findings are given below:

Districts	Potential Sectors capable of Developing Enterprise and Employment Generation	Skill Development Requirements
Kohima	<ol style="list-style-type: none"> 1. Agriculture 2. Horticulture 3. Animal Husbandry 4. Handloom & Handicrafts 5. Tourism 6. Food processing 	<ol style="list-style-type: none"> 1. Tourism has great potential in the district which requires skill development in the areas like Tour operator, tour guide, hotel management and hospitality. 2. Since most of the people of this district are engaged

Districts	Potential Sectors capable of Developing Enterprise and Employment Generation	Skill Development Requirements
	7. Floriculture	<p>in agriculture and horticulture so skilling in better techniques for planting, harvesting, storing, preserving and marketing of agri and horti produce is required. Commercialization of crops like Millet, Maize, Yam, Pumpkin and Cucumber is required.</p> <ol style="list-style-type: none"> 3. Skilling in Floriculture sector is required. 4. Skills need to be developed in Bakery and Confectionary, Fast Food outlets and Restaurant, Mobile Repairing, Electrician, Motor Mechanic, Computer, Electrician, Knitting, Tailoring etc. 5. Skill development in Animal Husbandry area is required and scientific techniques should be built up in rearing of cattle, pigs, poultry, production of milk and milk products, etc. 6. Value addition and customization of bamboo craft is required along with creation of better market linkage. 7. Tailoring and Knitting skills needs to be developed through design intervention 8. Skilling in trades like Cobbler, Barber and Masonry have been identified as the skills which have immense demand in the district. 9. Traditional skills like, bamboo craft, basket making, tool making, Scientific Terrace cultivation requires up gradation.
Dimapur	<ol style="list-style-type: none"> 1. Agriculture 2. Horticulture 3. Animal Husbandry 4. Food processing 5. Tourism 6. Handloom & Handicrafts 7. Floriculture 	<ol style="list-style-type: none"> 1. As agriculture and horticulture occupies an important place in the district, so skill up gradation in commercialization of crops like pineapple, banana, soya bean, wheat, maize, cardamom, cinnamon, sugarcane, papaya, ginger and spices &

Districts	Potential Sectors capable of Developing Enterprise and Employment Generation	Skill Development Requirements
	8. Forest based industry	<p>condiments is required and skilling in better techniques in producing, harvesting and storage needs to be developed.</p> <ol style="list-style-type: none"> 2. Skill development in Animal Husbandry area is required and scientific techniques should be built up in pig and poultry farming. 3. Skilling in terms of Ice cream making, brick making, bakery etc. is required and manufacturing units need to be established. 4. Skills which need to be developed in the district are plumbing, electrician, automobile and mobile repairing. 5. Skilling in Tourism along with hotel management and hospitality needs to be developed. 6. Skilling in Floriculture sector is required.
Mokokchung	<ol style="list-style-type: none"> 1. Agriculture 2. Horticulture 3. Animal Husbandry & Veterinary 4. Handloom & Handicrafts 5. Food processing 6. Floriculture 7. Forest-based industries 8. Tourism 	<ol style="list-style-type: none"> 1. Horticulture needs to be developed in the district through skilling in commercialization of temperate fruits like pear, plum, peach, passion fruits, banana, papaya, Pumpkin, Broccoli and also skills need to be developed in production of value added products. 2. Skilling in Floriculture sector is required. 3. Skill development in Animal Husbandry area is required and scientific techniques should be developed in rearing of cattle, poultry and pigs. 4. Skill development in the area of masonry, plumbing, electrician, automobile, fabrication and mobile repairing, Beauty & Spa needs to be done. 5. Skilling in Forest-based industries is required as large amount of forest produce may be utilized to

Districts	Potential Sectors capable of Developing Enterprise and Employment Generation	Skill Development Requirements
		<p>generate income.</p> <p>6. Tourism has great potential in the district which requires skill development in the areas like Tour operator, tour guide, hotel management and hospitality.</p>
Kiphire	<ol style="list-style-type: none"> 1. Agriculture 2. Horticulture 3. Animal Husbandry 4. Handloom & Handicrafts 5. Forest based industry 6. Tourism 	<ol style="list-style-type: none"> 1. Skilling in Commercialization and value addition of crops like orange, mango, potato, Soybean, Guava, Banana, jackfruit and pineapple, spices & condiments is required. 2. Skilling in Animal Husbandry such as poultry and piggery practices needs to be done. 3. Skills need to be developed in carpentry, fabrication, mineral based industry. 4. Apiculture has immense scope and skills need to be developed in bee-keeping through scientific techniques of extraction and preservation. 5. Skilling in forest-based industries need to be developed as forest produce may be utilized to generate income. 6. Skilling is needed in mineral based industry. 7. Tourism has great potential in the district which requires skill development in the areas like Tour operator, tour guide, hotel management and hospitality.
Longleng	<ol style="list-style-type: none"> 1.Agriculture 2.Horticulture 3.Animal Husbandry 4.Handloom& handicrafts 5.Sericulture 6. Tourism 	<ol style="list-style-type: none"> 1. Skill development to impart better techniques for planting, harvesting, storing, preserving and marketing of agri produce such as cherry, plum, gooseberry, sweet orange, lemon, papaya, pineapple, passion fruits, walnut and cucumber is required.

Districts	Potential Sectors capable of Developing Enterprise and Employment Generation	Skill Development Requirements
		<ol style="list-style-type: none"> 2. Skilling towards commercialization of vegetables like potatoes, garlic, onion, cabbage, pumpkin, squash, bean, ginger, coriander and maize is required. Skill development in these areas along with marketing support and good transportation facilities are required. 3. Skill needs to develop in Poultry, Piggery etc. and scientific techniques should be used in the animal farms. 4. Skilling in Fruits and Vegetable Processing and Preservation techniques needs to be developed. 5. Skill Development in the area of Tailoring, embroidering, weaving, traditional bag making, knitting, sewing, Pottery is required. 6. Skill up gradation in bamboo based products like Basket, Mat, Table, Chair, Carpet along with Wood carving is needed. 7. Skill development is required in Bakery and Confectionary, Coffee Cafeteria, Hotels & Hospitality, Retailing, Automobile works, Repairing of machinery & equipment. 8. Traditional skills in Weaving, Wood Carving, Bag Making, Shawl making, jackets etc has huge potential for income generation, thereby creating the need for upgradation of skills in terms of marketing linkage and financial support. 9. Tourism has great potential in the district which requires skill development in the areas like Tour operator, tour guide, hotel management and hospitality is required.

Districts	Potential Sectors capable of Developing Enterprise and Employment Generation	Skill Development Requirements
Mon	1.Agriculture 2.Horticulture 3.Animal husbandry 4.Handloom & Handicrafts 5.Sericulture 6.Tourism 7.Construction	<ol style="list-style-type: none"> 1. Skilling in terms of agriculture and horticulture produce like commercialization and value addition of tapioca, beans, soybeans, maize, black gram, potato, cardamom and spices is essential. 2. Skilling in Animal Husbandry skills in Poultry, Piggery, Goat Farming and Dairy needs to be enhanced 3. Skills need to be developed in Rearing of silkworm, Weaving & Embroidery, Bamboo furniture, Basket making & Mat making, Carpentry, Masonry and Fabrication. 4. Tourism has potential and skills related to this sector needs to be developed.
Peren	1.Agriculture 2.Horticulture 3.Animal Husbandry 4.Handloom& Handicrafts 5.Construction 6.Sericulture 7. Tourism	<ol style="list-style-type: none"> 1. Agriculture and Horticulture is widely practiced and skilling in commercialization of Cole crops like Cabbage, Maize Cauliflower, King Chillies, Chillies, Oranges, Lemon, Pineapple, Papaya and Chow Chow is required. 2. Skill development in the areas like Mobile repairing, motor workshop, Carpentry and Steel fabrication is required in the district. 3. Skilling is required in silk rearing and weaving and scientific techniques may be incorporated. 4. Skilling in forest and mineral based industries is required. 5. Up gradation of skills is required in Traditional skills like salt production, poultry, weaving. 6. Tourism has great potential in the district which requires skill development in the areas like tour operator, tour guide, hotel management and

Districts	Potential Sectors capable of Developing Enterprise and Employment Generation	Skill Development Requirements
		hospitality.
Phek	<ol style="list-style-type: none"> 1. Agriculture 2. Horticulture 3. Animal Husbandry 4. Handloom & Handicrafts 5. Food processing 6. Forest based industry 7. Tourism 	<ol style="list-style-type: none"> 1. Agriculture and Horticulture is practiced widely in the state and skilling in better techniques in harvesting, storage and marketing should be developed of the produce is required. 2. Skill development in Animal Husbandry area is required and scientific techniques should be incorporated in rearing of cattle, pigs, poultry etc. 3. Skill development is required in Sewing, Cutting, Knitting, Carpentry, Electrician & Motor repairing. 4. Skilling is required in Commercialization in Weaving, Handicrafts products etc. 5. Skilling is required in forest-based industries need as huge chunk of forest produce may be utilized for income generation. 6. Skills in mineral based industry need to be developed. 7. Up gradation of skills in Traditional skills like Basket making, wood craft, bamboo and cane make products, leaf cup making, Shawl making, bee-keeping and milk products is required. 8. Tourism has great potential in the district and skill development in the areas like Tour operator, tour guide, hotel management and hospitality is required.
Tuensang	<ol style="list-style-type: none"> 1. Agriculture 2. Horticulture 3. Handloom & Handicrafts 4. Tourism 5. Animal Husbandry 	<ol style="list-style-type: none"> 1. Since most of the people of this district are engaged in agriculture and horticulture so skilling in better techniques for planting, harvesting, storing, preserving and marketing of agri and horti produce is required. Commercialization of pineapple,

Districts	Potential Sectors capable of Developing Enterprise and Employment Generation	Skill Development Requirements
	<p>6. Food processing</p> <p>7. Sericulture</p> <p>8. Forest based industry</p>	<p>jackfruits, papaya, king chillies and tapioca is required.</p> <p>2. Skilling is required in scientific rearing of pigs, poultry and ducks is essential</p> <p>3. Skill needs to be developed through design intervention and better technology in silk rearing, weaving, cane and bamboo.</p> <p>4. Skilling is needed in food processing.</p> <p>5. Skill Development in the area of carpentry, fabrication & masonry is required.</p> <p>6. Tourism has huge potential in the district and Skill development in this sector is required to attract tourists from all over the globe.</p> <p>7. Skilling in Forest-based industries need to be developed as huge chunk of forest produce may be utilized for income generation.</p> <p>8. Skilling is required in mineral based industry.</p>
Wokha	<p>1.Agriculture</p> <p>2.Horticulture</p> <p>3.Animal husbandry</p> <p>4.Handloom & Handicrafts</p> <p>5. Food Processing</p> <p>6. Floriculture</p> <p>7. Tourism</p>	<p>1. Farmers need to be provided with Skills in marketing along with harvesting and storage skills so that their Agriculture and Horticulture produce can be marketed better. Various agri and horti produce like Orange, passion fruits, Offseason vegetables etc. may be cultivated to generate income.</p> <p>2. Skills need to develop in Carpentry, Bee keeping, Mobile Repairing, Electrician, Motor Mechanic, Computer, Electrician, Rubber plantation.</p> <p>3. Skill development is required in food processing.</p> <p>4. Skilling is required in Floriculture sector.</p> <p>5. Tourism has huge potential in the district and Skill</p>

Districts	Potential Sectors capable of Developing Enterprise and Employment Generation	Skill Development Requirements
		development in this sector is required to attract tourists from all over the globe.
Zunheboto	1.Agriculture 2.Horticulture 3.Animal Husbandry 4.Sericulture 5.Handloom& Handicrafts 6.Service sector 7. Construction sector 8. Tourism	<ol style="list-style-type: none"> 1. Skilling is required in the traditional skills in making basket, daos, weaving and spinning. The natural resources like bamboo, cane cotton has to be harnessed properly and the plantation should be encouraged. 2. Skilling in commercialization and value addition of banana, pineapple, Jackfruit, papaya, king chillies and spices is required. Off season cultivation of Cole crops like broccoli, cabbage, cauliflower also needs skills to be developed. 3. Skills in Animal Husbandry in scientific rearing of poultry, pigs and ducks is required. 4. Skilling in scientific rearing techniques in rearing of eri and mulberry silkworm is needed. 5. Skilling is essential in Weaving and Embroidery in terms of design and better technology. 6. Skills need to be developed in Carpentry, Masonry and Fabrication. 7. Tourism has huge potential in the district and Skill development in this sector is required to attract tourists from all over the globe.

e. Sectors of Economy in which the state of Nagaland needs to intensify its Skilling Effort

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

Table 5.1 Identified Sectors for Nagaland

Sl. No.	Economy/Industry Sectors	Skill Development Requirements
1	<p>Agriculture & Allied Sectors such as Horticulture, Animal Husbandry, Sericulture and Floriculture</p>	<p>Agriculture and Horticulture: New skill sets are required for scientific cultivation as well as preservation, processing and development of value added products in case of ginger, turmeric, Chilies (Naga King Chilly) and garlic. The state is famous for production of organic vegetables like Cabbage, Cauliflower, Potato, Pumpkin, Colocasia, Tapioca, Cucumber etc. The state is also popular in production of quality fruits like Passion fruit, Pineapple, Orange, Banana, Papaya, Guava, Jack fruit, Tree tomato, Chowchow, Gooseberry, Cardamom, Peach, Wild apple, Plum etc. Skills on pest management, disease management, weed management, water management, soil health management, mechanization, land use and marketing of produce is needed for entrepreneurship development.</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.</p> <p>Animal Husbandry: It plays an important role in the state economy and sectors like Poultry, Dairy, Piggery, Goat Farming and Duckery have vast scope in the state. Up gradation of Skills are required in the allied activities like Artificial Insemination, Poultry feed production, Fodder management, Breeding and Seed production, Dairy product development and Vaccination, Animal anatomy skills, breeding and artificial insemination skill, butchering skill, poultry farming activities including brooding arrangements, feeding skill like nutritious diet etc. Skill Development is needed in the areas of meat processing and dairy product development.</p> <p>Sericulture: The agro-climatic condition is very favorable for the development of Sericulture in the State. Mulberry, Muga, Eri, Oak-tussar silk are widely cultivated in Nagaland. The department of Sericulture, Govt. of Nagaland has set up district sericulture offices and sericulture demonstration farms as well as spinning units in all the 11 districts of the State to popularize sericulture in rural areas, generates employment opportunities, introduce and impart latest technologies on sericulture, support marketing of sericulture products and promote silk exports from Nagaland.</p> <p>Floriculture: There is high demand for flowers within the state for various rituals and occasions. Favourable climatic and geographical conditions in the state offer tremendous scope for floriculture. Many species of orchids are available in Nagaland,</p>

	<p>which has tremendous commercial potential. There is scope to grow exotic and new varieties of orchids through tissue. The state govt. began promoting floriculture a few years back across four districts, which has currently spread to other districts. This has promoted cultivation of flowers by various educated Naga women under the Horticulture Technology Mission (HTM). Exotic and hybrid varieties of flowers are also being developed in Nagaland. Various skills on different propagation techniques like grafting, air layering, budding and cutting are required for developing rootstock nursery. The state is also home to the tallest Rhododendron tree in the world. Floriculture can be taken up as a viable industry in the State. Based on accessibility and agro-climatic conditions, Kohima, Mokokchung, Wokha and Dimapur districts have commercial potential for floriculture.</p>
<p>2 Tourism, Travel & Hospitality Sector</p>	<p>Nagaland with its rich historical, cultural and panoramic landscape is a traveler’s paradise. Over the years with the promotion and up-scaling of the activity of the Hornbill Festival in December, it has become a mega tourism event in the State. It not only generates employment but also serves to preserve and protect the cultural heritage of the State. Pleasant climate, green hills, criss-crossing rivers, interspersed lakes, vibrant culture, colourful handicrafts and weaving and numerous festivals make Nagaland a popular tourist destination. Ministry of Tourism, Government of India has included 12 villages in Nagaland under the rural tourism scheme in order to promote traditional rural art, craft, textile and culture. The preferred tourist destinations in the state are Kohima, Dimapur, Mokokchung, Longleng, Wokha, Kiphire, Zunheboto, Phek, Peren, Mon and Tuensang. Creation of tourist complexes, eco-tourism, adventure tourism, ethnic culture tourism, health farms, hotels, convention centres, tourist travel services etc are various avenues for investment in the sector.</p> <p>In view of this, skill development is needed in Mountaineering, Caving, Home Stay, Tour Guide, Trekking, Paragliding, Angling and Bird Watching. Skilling needs to be done in different job roles of Hotel & Restaurant, Food Services and Travel Agents & Tour Operators such as Food & Beverage Services, Cooking, Travel Counseling, Front Desk Services, Driving, Housekeeping, Bartender, Restaurant Manager, Maintenance etc.</p>

3	Information Technology & Information Technology Enabled Services (IT& ITES) Sector	<p>IT & 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 Product development etc. Nagaland's IT policy aims to increase the use of IT in the industrial and government sectors. With a high literacy rate, affordable cost, strong English-speaking population, improved telecommunications connectivity and favorable climate, Nagaland is well poised to serve the IT industry. In order to develop skilled manpower in IT, Department of Electronics Accreditation of Computer Courses (DOEACC) and Indira Gandhi National Open University (IGNOU) provide fulltime as well as certificate courses through Community Information Centres (CICs). The IT policy also provides various incentives and concessions for investments in IT. The Department of Information Technology & Communications of the Nagaland Government promotes and manages information technology in the state. The department is undertaking development, operation and maintenance of the Nagaland IT park project through public-private partnership (PPP).</p> <p>Recently, the Government of Nagaland has signed an MOU with Software Technology Park of India (STPI) for setting up of Software Technology Park of India (STPI) centre at Kohima and has earmarked an area of 18,137 sq.ft of built-up space at the new building of the Directorate of Information Technology & Communication, Kohima. This center will cater to the needs of entrepreneurs and software industries in the State.</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 Skill, Product Development, Enquiry Handling, Soft skills, team management, accent understanding, process flow understanding, IP advisory and filing, understanding patents, legal transcription, process specialist, project management, information security/quality compliance.</p>
4	Fashion and Apparel Sector	<p>The state of Nagaland has a unique and rich traditional textile heritage, which needs to be voraciously preserved by the present generation. Fashion apparel and designing have lately become quite popular amongst the present Naga youth and every year large number of youth is entering into this line. Lately, the people of the state (particularly women) have been fusing traditional spinning and weaves with modern technology. Therefore, the need of the hour is proper technical impetus, skilling and channelizing the</p>

people of the state. This sector could become a viable entrepreneurial avenue for the educated and interested youth of the state. The Union Government has undertaken a Rs. 1,038 crore scheme, i.e the North East Regional Textile Promotion Scheme (NERTPS) in the north east to boost the textile exports, increase jobs and reduce migration. The North East Regions' first Apparel and Garment Making Centre was established in Dimapur, Nagaland in 2014 and it became operational in record time of 1 year. The Ministry of Textiles intends to take the cultural heritage of the state beyond boundaries and give it an international recognition through technology up gradation, marketing linkage and design inputs. The traditional practice of weaving in loin loom is practiced by most of the people of the region and should be continued by adopting few modifications like adopting latest know-how and better marketing linkage and commercialization.

The key skills needed for this sector to flourish in the state are *Spinning, Fabric Manufacturing, Fabric Processing, Garmenting and Merchandising*. With regard to Fabric Manufacturing knowledge regarding yarn count, latest trend and market demand and communication skills is required. In terms of Fabric Processing the skills required are shearing, singeing, de-sizing, scouring, bleaching, dyeing etc. In terms of Garment Making the skills required are cutting, stitching and assembling of the garments. Few ancillary skills are also required to develop in line with this sector viz. *sewing skills, creativity and imaginative skills, good fashion sense, computer knowledge (CAD, Corel Draw, Illustrator, Photoshop etc.), business and marketing skills and the understanding the health and safety standards* connected with working under this sector. The state should tap the potential youth of the state and create a platform for *fashion designer, fashion illustrator, fashion buyer, pattern maker, custom designer, fashion merchandiser, fashion event co-coordinator, fashion stylist, faculty for institutes, fashion choreographer, fashion photographer, fashion journalist and boutique business*.

<p>5 Food and Meat Processing Sector</p>	<p>The agro climatic condition of Nagaland makes it a hub of temperate fruits and vegetables. These produces need different set of skills for post-harvest preservation and processing for state specific fruits like passion fruit, orange, pineapple, mango, wild apple, gooseberry, water melon etc. 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 (making jams, jelly, pickles, juices, etc.), Spices (Ginger, Turmeric, Black pepper, etc.), wine brewing, processing of medicinal plants like Aloe Vera by providing sufficient financial assistance for start-up business in Food Processing Sector. Processing and preservation of edible bamboo products has higher demand in the state which carries enormous potential for entrepreneurship development. The state has a comparative advantage in the availability of fruits such as Pineapple, Plum, Pears, Bananas, Passion fruit, Orange and other exotic spices. Since use of chemical fertilizers is practically unknown to Nagas, proper marketing of organic food can reap a high return. Presently most of the produce is marketed in the local markets leading to huge volume of surplus and wastage. There is also immense potential for meat processing industries in the state. Per capita meat (beef, pork, poultry, and mutton) consumption rate among the Nagas is perhaps the highest in the country and yet 80% of the live stock for meat is imported from outside the State. Animal Husbandry and Meat Processing have a huge potential as people of Nagaland are mostly non-vegetarian. The State has high potential for processing of hides and skins under leather Industry. At present, scientific processing of Poultry/Piggery and other meat products is lacking in the State. Therefore, there is potential for setting up modern abattoir and other processing units in the State and for this skill development in these areas is the need of the hour.</p>
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6	Forest based Industries Sector	<p>Nagaland is rich in forest produce such as timber, cane and bamboo, flora and fauna. Bamboo is found extensively all over Nagaland. It occurs as a predominant plant in portions of the districts of Dimapur, Peren, Mon and Mokokchung; while, it is readily found mixed with other forest species in all other districts of the state. The Nagaland Bamboo Development Agency (NBDA) is the nodal agency to undertake bamboo development in Nagaland both as a resource and as an enterprise. The state has identified numerous indigenous medicinal plants that could be cultivated and processed in Nagaland. To conserve and promote medicinal plants in the state, the government has set up herbal gardens at Dimapur, Wokha, Mon, Mokokchung and Kohima. The agro-climatic conditions of Dimapur, Mokokchung, Phek and Tuensang districts are suitable for growth and cultivation of medicinal and aromatic plants. In view of this, there exists immense scope of skill development in the area of value addition to the minor forest produces available in the state such as Bamboo and Cane, Aromatic & Medicinal Plants/Herbs, Fibres and Flosses by devising skill development courses in the areas of Procurement, Production, Processing, Entrepreneurial skill, Soft skill, Testing & Quality Control of various non-timber based forest produce available in the state. In view of the growing importance of aromatic and medicinal plants, skill upgradation is required for scientific cultivation of these crops and managements of its products. Nagaland has immense potential to produce organic honey and pollen due to its rich biodiversity, traditional knowledge, practice of beekeeping and numerous honeybee species.</p>
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7	Handloom & Handicrafts	<p>Handloom and Handicrafts being a traditional activity has potential for employment generation and to provide livelihood to rural masses. Handloom and handicraft products from the state are renowned for their beauty and intricate design. Nagas are excellent woodcarvers and are famous worldwide for their art of woodcarving. Since, cane and bamboo grow abundantly in the forests and hills of the State and are readily available, Nagas have become expert basket makers. Besides basketry, artisans of the State have also started making furniture and a wide variety of decorative items. There is a need to provide advanced training to practitioners of these trades, introducing new tools, methods and techniques and providing marketing and financing support to the existing entrepreneurs for scaling up their operations and also to potential entrepreneurs to start up new ventures in these trades.</p> <p>The practice of rearing silk worm like Eri and Mulberry is traditionally practiced in rural areas as a cottage industry. Skills needed in up-gradation of scientific silk rearing, host plant management, seed cocoon management and reeling. Skill up gradation is also required in Cane & Bamboo products which have higher potential not only within Nagaland but also outside the state. Making of bamboo mats, bamboo tables, bamboo chair, bamboo carpets, chisel, tooth picks etc. have higher demand inside the state.</p>
8	Education and Training Sector	<p>Education sector presents an opportunity to educated youth of the state for both self as well as wage employment within the state. In case of Nagaland, considerable interests were shown for Skilling in Education & Training Sector by School students, Graduate & Post Graduate students and Educated Unemployed. Skill up gradation is needed in this sector are Teaching & Training skill, Communication skill, Soft skills, Research and training, Curriculum development, Presentation skills, Logical and analytical skill, Adaptability skills, Organizational skills, Technological skills, Pedagogic skills, Educational consulting skills, Assessment ability of different levels of students etc.</p>
9	Health & Allied Sector	<p>In case of Health & Allied Sector too, the state of Nagaland 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 & 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.</p> <p>Skill Development can be initiated for Nursing, Medical Lab</p>

		<p>Technician, Medical Equipment Technician, Pharmacy Assistant, Dietician Assistant, Dental Assistant, Radiology, Dental Assistant, Operation Theatre Assistant etc. Health & Allied Sector has wide range of skill areas which creates employment in both public and private sectors. This sector could become a viable entrepreneurial avenue for the educated youths of the state. Skill development can be initiated in Nursing, Anaesthesia Technician, Physiotherapist, Blood Bank Technician, Cardiac Care Technician, Dental Assistant, Diabetes Educator, Dialysis Assistant, Histotechnician, Medical Equipment technician, Medical laboratory technician, Operating Theatre Technician, Pharmacy Assistant, Phlebotomy technician, Radiology technician, Vision Technician and Refractionist etc.</p>
10	BFSI (Banking and Financial Services Insurance) Sector	<p>BFSI Sector is another sector which is having decent employment potential. The projected manpower requirement of the BFSI labour force in the country by 2022 is 8.5 million.</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>
11	Construction Sector	<p>Construction is another sector which has good prospects of generating employment within the state considering the various infrastructure projects undertaken by the state. Skills such as Supervision Skills, skills required for Foreman and Crane operators, Electrical Skills, Welding skills, Bar Bending Skills, Plumbing Skills, Carpentry skills, Surveying Skills, Tiles & Marble fitting 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 NAGALAND

The complete exercise of understanding the Characteristic of Skill Development System operational in the state of Nagaland, 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 Nagaland and to identify the ways in which the gains made in the

state in the area of skill development can be consolidated further and taken to the next best possible level in short to medium term i.e, within 1 to 5 Years time horizon.

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

1. **Strengthening the Governance Framework currently governing the Skill Development Ecosystem of the state**
2. **Improving the Effectiveness and Utilization of existing Technical Vocational Education & Training (TVET) Institutions**
3. **Making Provisions for providing Specialised Skill Development Training in Identified Sectors and Domains relevant to the State**
4. **Making General Education Provided in Schools an Integral Part of Skill Development Efforts by Improving the Quality and Learning Outcomes of School Education**
5. **Creating a Robust Ecosystem of Credible Private Vocational Training Providers (VTPs) having Training Facilities Within Nagaland Who can Partner with Government in the Delivery of Quality Skill Development Training Efficiently**
6. **Improving Linkages between Industry and Institutions providing Skill Development Training,**
7. **Strengthening the Handloom and Handicrafts Sector**
8. **Making Extensive Provisions for Career Counselling and Information Dissemination.**

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

Strategic Goals	Strategies Suggested for Achieving the goals
<p>1. STRENGTHENING THE GOVERNANCE FRAMEWORK CURRENTLY GOVERNING THE SKILL DEVELOPMENT ECOSYSTEM</p>	<p>1.1 Creation of State Skill Development Mission for Introducing Right Amount of Centralization for Governance of Skill development Schemes in the state</p> <p>1.2 Comprehensive Planning for Skill Development activities in the state which takes care of duplicities, redundancies and inefficiencies present in the Skill Development Ecosystem of the state</p> <p>1.3 Formulation of State Specific Comprehensive Skill Development Policy</p>

Strategic Goals	Strategies Suggested for Achieving the goals
	<p>1.4 Creation of a Dedicated Department of Skill Development & Entrepreneurship (SD&E)</p> <p>1.5 Adequate Organizational Structure, Staffing and Capacity Building of proposed Department of Skill Development & Entrepreneurship to enable it to work as full-fledged Mission Directorate directly attached to the State Skill Development Mission.</p> <p>1.6 Creation of State Council for Skill Development, an Advisory & Regulatory body to look into the regulatory and quality aspect of various issues facing Skill Development Ecosystem</p> <p>1.7 Development of a Skill Development-Quality Assurance Framework (SD-QAF)</p> <p>1.8 Creation of Labor Market Intelligence System (LMIS)</p> <p>1.9 Creation of a State Skill Development Fund</p> <p>1.10 Concurrent Monitoring & Evaluation of Skill Development Efforts</p>
<p>2. IMPROVING THE EFFECTIVENESS AND UTILIZATION OF EXISTING TECHNICAL VOCATIONAL EDUCATION & TRAINING SYSTEM (TVET) INSTITUTIONS</p>	<p>2.1 Restructuring & Up gradation of ITIs and Polytechnics as per the Skill Requirement Needs of the state</p> <p>2.2 Better Utilization of ITIs and Polytechnics which apart from training for formal sector should also be providing training to informal sector as per the need of the community</p> <p>2.3 Capacity Building of Teachers/Trainers of TVET Institution</p>
<p>3. MAKING PROVISIONS FOR PROVIDING SPECIALISED SKILL DEVELOPMENT TRAINING IN IDENTIFIED SECTORS AND DOMAINS RELEVANT TO THE STATE</p>	<p>3.1 Intensifying Skilling Efforts in the identified Sectors relevant to the state such as</p> <ul style="list-style-type: none"> • Agriculture & Allied • Tourism & Hospitality • Information Technology & information Technology Enabled Services (IT & ITES) • Fashion and Apparel • Food and Meat Processing • Forest Based Industries • Handloom and Handicrafts • Education & Training

Strategic Goals	Strategies Suggested for Achieving the goals
	<ul style="list-style-type: none"> • Health & Allied • Banking, Financial Services & Insurance • Construction <p>Apart from above Sectors, the domains in which skill development is required in the state of Nagaland for gainful self and wage employment within the state are Automobile works, Stone Crushing, Steel Fabrication, Mobile Repairing, Beauty & Wellness, Knitting & Tailoring, Cooking, Carpentry, Electrician, Plumber, Mason, Painting, Fashion designing, Welding, Pottery etc.</p> <p>3.2 Provision for Specialized Skill Development Training for Entrepreneurship in the sectors which are relevant to the state</p> <p>3.3 Provisions for Specialized Skill Development Training for enterprises working in Informal sector and Strengthening of In-house training capabilities of enterprises</p> <p>3.4 Provisions for High-End Skill Development Training for Educated Unemployed Youth</p>
<p>4. MAKING GENERAL EDUCATION PROVIDED IN SCHOOLS AN INTEGRAL PART OF SKILL DEVELOPMENT EFFORTS BY IMPROVING THE QUALITY AND LEARNING OUTCOMES OF SCHOOL EDUCATION</p>	<p>4.1 Creating partnership with specialized institutions for improving the learning outcomes in schools especially up to elementary level.</p> <p>4.2 Introducing Special Classes in Schools on New Skills Set such as STEM (Science, Technology, Engineering and mathematics) skills, Learning & Innovation skills, Life & Career Skills, Information Technology Skills and Green Skills with the help of specialized Institution</p>
<p>5. CREATING A ROBUST ECOSYSTEM OF CREDIBLE PRIVATE VOCATIONAL TRAINING PROVIDERS (VTPS) HAVING TRAINING FACILITIES WITHIN NAGALAND WHO CAN PARTNER WITH GOVERNMENT IN THE DELIVERY OF QUALITY SKILL DEVELOPMENT TRAINING</p>	<p>5.1 Capacity building of credible Private vocational Training Providers(VTPs) based within the state for providing skill development training in certain sectors and domains which are important from the point of view of creating livelihood opportunities within the state based on local needs and demands</p> <p>5.2 Identifying credible Private Vocational Training Institutions located outside the state and inviting them to set up the State of Art Training Facilities in the identified sectors to provide High end skill development Training Programmes</p>

Strategic Goals	Strategies Suggested for Achieving the goals
EFFICIENTLY	
6. IMPROVING LINKAGES BETWEEN INDUSTRY AND INSTITUTIONS PROVIDING SKILL DEVELOPMENT TRAINING	<p>6.1 Awareness and Implementation of the Amended Apprenticeship Act 2014 in Letter and Spirit</p> <p>6.2 Providing Autonomy & Resources and Incentives to Institutions for developing Industrial Linkages</p>
7 STRENGTHENING THE HANDLOOM AND HANDICRAFTS SECTOR	<p>7.1 Creation of a Dedicated Department for Handloom and Handicrafts.</p> <p>7.2 Establishing Craft Centers in all the 11 districts of the state and integrate these facilities with Tourism</p> <p>7.3 Facilitating Technical, Marketing, Sales & Distribution Skills and Financial Support to the Traditional Skill Sectors of the state</p>
8 MAKING EXTENSIVE PROVISIONS FOR CAREER COUNSELLING AND INFORMATION DISEMINATION	<p>8.1 Making provisions for Extensive Career Counselling to different category of population as per their need for information</p> <p>8.2 Setting up of information infrastructure for disseminating information to all on a robust online platform</p>