

# Strategic Direction for the Skill Development Policy for Bihar

by  
Harsh Singh\*

## 1. Need for an ambitious vision and a new skill development architecture

Bihar has made rapid strides since 2006 in terms of growth rates and human development indicators. Yet, the poverty levels in the state show signs of sluggishness. As per a Planning Commission bulletin of March 2012, while the population under the poverty line at the national level declined by 7.3 percent between 2004-05 and 2009-10, the decline in the case of Bihar was a mere 0.9 percent. The corresponding figures in the neighboring states of Madhya Pradesh and Orissa were 11.9 percent and 20.2 respectively. Is the low skill base in Bihar one of the important contributory factors to this sluggish trend in poverty reduction?

The demographic profile of Bihar, the livelihood pattern of its masses and the low skill baseline indeed point to a strong causal relationship. As per the 2011 Census, out of the total population of 104 million, 40 million were in the age group of 15 to 29 years and the child population in the age-group 5 to 14 years was 20 million. Further, about 60 percent of the rural population in Bihar is landless and depends on labour alone for its subsistence. Yet, the existing skill baseline that determines the livelihoods prospects of this youthful population remains quite dismal. An IIPA scoping study on skill development commissioned by the Government of Bihar reports that in the age group of 15-29 years, only 0.3 percent reported 'to be receiving formal vocational training' as on the date of the survey and 0.2 percent reported 'to have received formal vocational training'. Another 1-2 percent reported to have received non-formal vocational training. Thus, "in each category, the all-India averages were 4 to 12 times their Bihar counterpart." A similar picture emerges from a district-wise assessment of skill demand sponsored by the National Skill Development Corporation.

This note argues the need for adopting a transformational paradigm that goes beyond the confines of the traditional approach of matching the demand and supply of skill development services. Given the low baseline for this development indicator, the demand and supply projections based on past trends while appearing to reflect reality, could turn out to be highly inadequate and even misleading for development policy and planning purposes. Further, there is a need to think beyond multiplication of the skill building services primarily through public institutions and public funding. The IIPA report shows that the number of (privately owned) ITCs in Bihar increased exponentially from 28 in 2006 to 93 in 2008 and to 207 in 2010. Similarly, a large number of tiny private skill academies have sprung up like wild fire across the towns of Bihar. These may currently be dispensing substandard services. But they constitute a huge potential resource for an organized effort. Thus the main challenge for the skill development policy is to create an architecture that harnesses this massive pool of local social entrepreneurship to deliver quality skill development services across small towns, *bastis* and the vast rural hinterland. Leveraging this opportunity to spur broad-based social entrepreneurship can in fact, have much broader developmental impact. Overall, the skill development policy exercise needs to facilitate a momentum towards a robust 'road map for labour' as it is akin in importance to leading initiatives such as the 'Road Map for Agriculture (2012-22)'. This policy development exercise needs to be configured accordingly.

---

*\*Harsh Singh is Director, Market Solutions to Inclusion. He has worked in the Indian Economic Service (IES) and UNDP. His recent book 'Structural Innovation for Inclusive Development in Bihar: the Navodaya Shahar Model' was published by Academic Foundation ([http://www.academicfoundation.com/n\\_detail/642.asp](http://www.academicfoundation.com/n_detail/642.asp)). Under a consultancy with UNDP, he is leading a substantive revision of the Bihar State HDR. ANSISS has designated him as Senior Development Advisor for the Bihar Skill Development Policy formulation exercise.*

## 2. The skill baseline in Bihar

### A. The IIPA Study

The IIPA study highlights the following baseline based on NSS data for 2004-05:

- In Bihar, in the age group of 15-29 years: (i) only 0.3 percent reported 'to be receiving formal vocational training' as on the date of the survey; (ii) 0.2 percent reported 'to have received formal vocational training', and; (c) another 1-2 percent reported 'to have received non-formal vocational training'. By allowing a grace mark of another one percent for those who may have received non-formal training, the study concludes that only 3 percent of the persons in this age group in Bihar were either receiving or had received any vocational training (formal and non-formal) as compared to an estimated 15 percent at the all-India level in this age group. These ratios were lower for females and in the rural areas of Bihar. **Annex-1** provides category-wise details.
- The low educational attainment baseline in Bihar and particularly the dismal literacy levels in the lower MPCE classes is a major constraint. Among persons who were currently not attending school, the percentage of persons who never attended any educational institutions in Bihar at 66 percent was almost twice that of the all India level of 35 percent. Similarly, the drop-out rates at the middle school level was quite high-72.4 percent and 58 percent for rural and urban males respectively, and 74.3 percent and 63.2 percent for rural and urban females respectively. While school enrolment has improved considerably in the recent past, the dropout rates at the middle and secondary school levels continue to be high. The Bihar Economic Survey 2011-12 also highlights this as a constraint in skilling the masses.
- There is a limited choice of different trades in Bihar. Training is being imparted in the state only for 132 skill trades. Out of these, 50 trades are in ITIs/ITCs (21 courses of two-year duration and 29 courses of one-year duration) and the remaining 82 are in other institutes/departments of the state. In other institutions, 37 courses were of more than six-month duration, 22 courses were of six-month duration and 23 courses spanned less than 6 months. A few courses were only of a month's duration. The highest number of trades of ITIs/ITCs is in 'the building and construction sector' and 'ITES or BPO sector' (7 trades each). Similarly, the highest number of trades of other institutions are in 'textiles, apparel and garments sector' (23 trades) followed by 'health care services sector' (13 trades) and 'chemicals and pharmaceutical sector (9 trades).
- In case of males in the rural areas, the most demanded field of training was found to be 'mechanical engineering trades' followed by 'electrical and 'electronic engineering trades'. In the urban areas, it was 'computer trades' followed by 'electrical and 'electronic engineering trades'. Among the rural female youth, the demand was a little different. About 21 percent had training in the field of 'computer trades'. Among the urban females, the most important choices were 'textile related trades and artisan/craftwork/handicrafts'. In Bihar, ITIs and ITCs played a major role in providing training to male youths. The Institutes for tailoring, embroidery, and stitch-crafts played the major role in providing training to females.

Based on sector-specific growth rates and the corresponding sectoral employment elasticity estimates, the IIPA study projects that the additional (year-wise) demand for technical manpower from Bihar will increase

from 47300 in 2010-11 to 63305 in 2014-15 and to 108080 in 2024-25. Of the total additional demand, the relative share from within the state is expected to increase from 55.8 percent in 2010-11 to 65 percent in 2024-25. The report further provides a breakdown of the projected increase in demand for vocationally trained persons across different sectors in the state (see **Annex-1**).

The IIPA study also projects the shortage in ITI/ITC trainees and in the number of these institutions upto 2024-25 (see **Annex-1**). In this exercise, it draws on some parameters derived from other states as even the basic information such as on the pass percentage is not available. The report estimates that the shortage of ITIs/ITCs is 86 in 2010-11 and by 2024-25 this would increase to 550. Thus measures should be initiated to fill this gap. Overall, the report suggests the need for a capacity to enroll 150,000 students annually so as to turnout about 100000 vocationally equipped persons. With its assumption of 100 students per centre, it projects the need for a total of 1500 industrial/other vocational institutions by 2024-05. The study also suggests a list of trades that need to be added to those that are currently available (See **Annex-2**).

The IIPA study needs to be commended for its depth and sophistication in projecting the demand and supply sides of formal vocational training. But on account of its TOR, this study does not span the overall contours of the skill building needs of the masses.

*First*, its focus is primarily on the institutional delivery aspects of industrial training. Thus it does not venture out to unravel fully the complexities of meeting the skill building needs of workers in the informal sector who comprise about 97 percent of the state's workforce.

*Second*, some of its assumptions derived from the current baseline are quite conservative. But equally, the assumptions are conservative because the study proceeds on the basis of the existing skill building architecture. For example, despite strong evidence on growth in privately owned ITCs, it does not factor in an increase in the ratio of private to public supply.

*Third*, while the National Skill Development Policy emphasizes the need for 'game-changing delivery/innovation', the study does not take cognizance of a major innovation that has surfaced spontaneously through the efforts of small entrepreneurs. A large number of small skill development entrepreneurs have sprung up in all cities and towns to provide training in computer literacy, repair of mobile phones and other appliances etc, These initiatives are yet quite small, and many of them are perhaps dispensing sub-standard training at unregulated prices. But this cadre of entrepreneurs represents a huge potential resource for a decentralized and cost effective solution to the skill development needs in the informal sector. This has been discussed in some depth in the following sub-section.

*Fourth*, the study does not dwell on the quality of skill delivery by ITIs/ITCs/other vocational training institutions. Perhaps this is on account of limited information availability.

Finally, the study confines itself to the demand and supply of skill delivery institutions and does not address suitably the broader institutional issues such as the back-end structure required for creating and sustaining the requisite skill development apparatus in the state, and the need for employment support services.

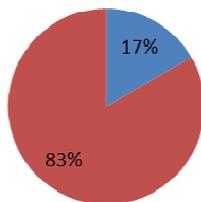
## B. The NSDC study

NSDC has also commissioned a district-wise assessment of skill demand in Bihar. The study is being carried out by Tholons, a consultancy firm. While the overall report of this study is not yet available, Tholons has shared the draft report in respect of Muzaffarpur. This report presents the following observations/conclusions:

- Literacy rates have improved tremendously from the 2001 Census to the 2011 Census, but large number of students drops out before passing the 10th class.
- Low education levels are leading to a huge concentration of unskilled workers in the district. This category was found to be about 63 percent of all the respondents interviewed.
- Over 40 percent of those interviewed were in the working age group but unemployed.
- Over 25 percent of those interviewed were engaged in very low paid occupations-marginal farmers, farm labor, construction labor, small scale artisans and petty shop owners.
- More than 20 percent of the respondents claimed that they had undergone some form of the training. Most in this category have received informal training or on-job training. But such training is not sufficient for finding better jobs or improvement in the remuneration. This clearly indicates that the quality of training programs is inefficient and not inadequate for improving the job conditions of the participants.

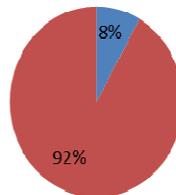
Did you find a Better Job after training?

■ Yes ■ No



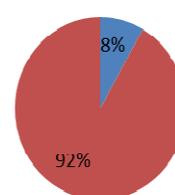
Did your remuneration improve after Training?

■ Yes ■ No



Did you get a Promotion after Training?

■ Yes ■ No

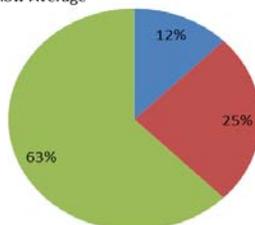


(Source: NSDC Report)

- Tholons conducted sample tests for employees in various companies in the food industry and construction industry. It was found that almost 60% of the test attendees scored below average.

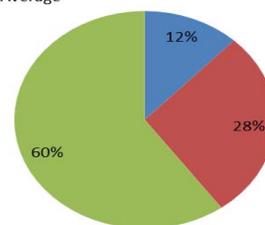
Test Scores - Food Industry

■ International Standards ■ National Standards  
■ Below Average



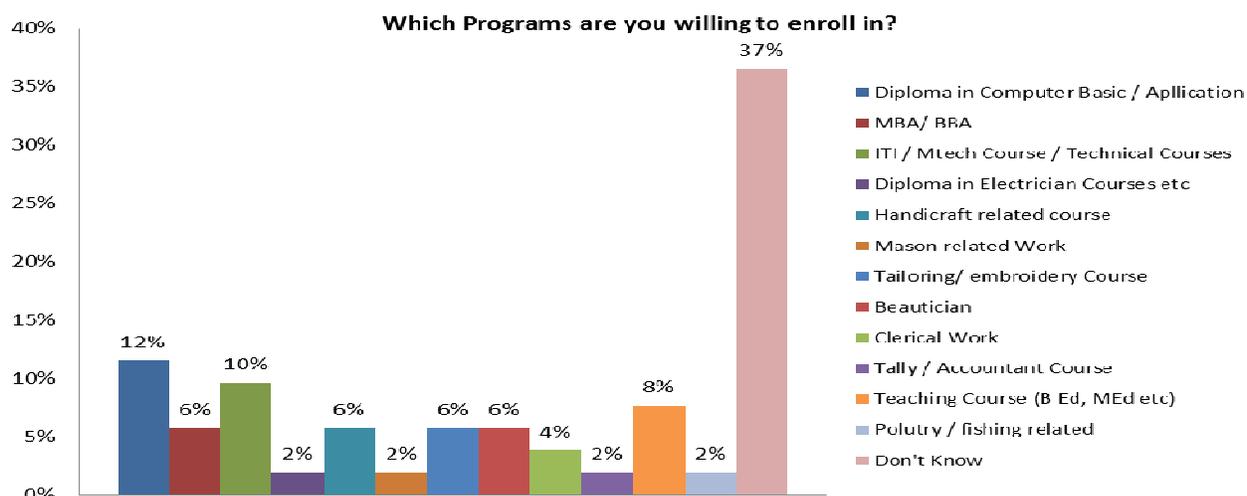
Test Score - Construction Industry

■ International Standards ■ National Standards  
■ Below Average



(Source: NSDC Report)

- Though two thirds of the respondents are willing to enroll in a formal training programme. But about 37 percent of the respondents did not appear to have any knowledge of the courses to take up or the areas to specialize. Female respondents, particularly housewives are more keen to enroll in to tailoring and embroidery courses, and beautician courses which will help them become self-employed. Male counterparts are keen to attend ITI or any technical course such as computer education, and work in the upcoming food processing industry, construction activities, and activities related to their current occupation.



(Source: NSDC Report)

- Majority of those surveyed i.e. 85 percent were not ready to pay for the training. Of the 15 percent of the respondents that was willing to pay for the training, the majority was willing to pay less than 5 percent of the total monthly earning. Thus, the report concludes that most training programmes will need to be state funded and only after they have been established well enough that the users will be willing to pay more.
- According to the State Investment Promotion Board (SIPB), an investment of more than Rs. 8,500 crores is under consideration for approval and implementation over the next 5 years. Most of the investment has been identified in industry sectors such as: power generation, agriculture and food processing, dairy and animal husbandry, sugar industry, education (schools, colleges), and cement. The state government has approved two Food Parks, one Food Crafts Institute and multiple food processing factories. Based on these, this study projects creation of 209,267 skilled jobs and 1,029,267 unskilled jobs between 2012-17 and 348,863 skilled jobs and 1,353,376 unskilled jobs between 2018-23. Also it suggests an industry-wise menu of skill development activities (see **Annex-3**). But as indicated above, Tholons is of the view that that most training programmes will need to be state funded, atleast in the initial stages.

The NSDC study is valuable in that it throws up some ground level perceptions and parameters based on a primary survey. Its value however, would have been considerably enhanced if it had also explored in some depth the supply side parameters particularly, the functioning of ITIs, ITCs and the large number of tiny private skill academies that have surfaced across the cities and towns. The IIPA Report indicates that of Rs. 40 crores allocated for vocational training in schools, only Rs. 13 crore was spent. A insight into this would also have been most useful.

The report indicates that only 15 percent are willing to pay for skill building services, and that two-thirds of this group are willing to pay less than 5 percent of their earnings. Skill acquisition is a development activity. Thus the propensity to invest in it can be better understood by relating it to *future* incomes (rather than the current income) and the availability of avenues for financing such costs. In this context, the availability of credit emerges as a crucial consideration. The report would have done well to explore the same in some depth.

Given the growing importance of skill development, it would be reasonable to believe that significant public funding may already be flowing for this objective (directly and indirectly). But spread over various departments and implementing agencies there is little impact. As considerable enhancement in the public outlay for skill development cannot be expected, one of the main challenges of the skill policy is find ways of getting much better results from the existing public outlays. In this regard, it would have been useful to survey in some depth, 2-3 representative districts and prepare an inventory of all the public schemes that are directly and indirectly contributing to skill development activities, estimate the resources being deployed and assess the outcomes. Such information/feedback would help build models for alternative deployment of the existing public resources. Thus such an exercise needs to be carried out to supplement the rich existing findings.

The feedback that a large proportion of the people are unsure of the kind of training that they need to undertake is important. So is the feedback that by and large, the training received has not contributed to finding better jobs or securing enhanced remuneration. These findings highlight the need for a range of employment support services (eg. vocational guidance, placement support etc.) as a part of an organized skill development architecture.

The NSDC report presents a well thought out structure of skill development courses that are required. However, there is a need to correlate the proposed structure to the curriculum developed by NCVT covering 1600 skill trades, particularly as NCVT's certification is related to their own curricula.

### **3. Towards a new skill development architecture**

The forgoing discussion brings up evidence to support the stand that the state's skill development policy exercise needs to go beyond the traditional approach aimed at matching the demand and supply of skill building services, and that provisioning of skill building services could be organized primarily through public institutions or through public funding. It lends weight to a wholesome attempt at creating an architecture that leverages the existing resource base to create a multiplier effect with respect to the overall development goals. The following discussion outlines the proposed architecture.

There are five main aspects of the skill building architecture:

- Knowledgebase on skills to enable development of quality skill building content/pedagogy
- A delivery mechanism to ensure wide leverage of the knowledgebase
- Integrated approaches in certain areas especially agriculture
- The demand side factors
- Broader labour security issues and complimentary employment support services

A review of the work done shows that point no 1 above has received most attention and consumed maximum resources. But this knowledgebase has not benefitted the masses. This is because it is not yet organized in a form that could support its universal use. The dependence on institutional delivery models also makes for a highly restricted leverage of the knowledgebase. Similarly, the latter three points are of vital importance, particularly in the context of an undeveloped baseline. But often they are overlooked.

#### **A. Knowledgebase on skills**

A vast knowledgebase on skills already exists. The Director General of Labour and Employment (DGET) in the Union Ministry of Labour and Employment has developed a vast range of course curricula. Besides the course curricula for longer term vocational training through ITIs and ITCs, DGET has developed the curricula for over 1600 skill trades under the Skill Development Initiative Scheme (SDIS) aimed at the needs of the informal sector workers,. Similarly, most of the apex institutions have developed suitable curricula in areas corresponding to their mandate. For example, the Khadi and Village Industries Commission (KVIC) has developed a range of curricula in areas linked to rural livelihood activities such as food processing, clay pottery, bee keeping etc. Currently, NSDC is also developing a range of curricula to facilitate participation of private players in skill building activities. Thus significant work is underway in this direction. Yet the effort is fragmented. As a result although an impressive knowledge base exists, there is little awareness about the same at the ground level.

Thus one of the key objectives of the Bihar Skill Development Policy should be to create a mechanism to identify the main skill sets of relevance to Bihar, to identify the relevant knowledge base along with corresponding mother institutions, and to maintain such knowledgebase in a manner that facilitates its easily accessibility and use by multiple partners. This is not a one-time effort but a continuous process. The box below provides an example of such an effort.

#### **Creating an Accessible Knowledgebase on Skills**

The UNDP-supported project 'Skills and Knowledge for Improved Livelihoods and Living Standards (SKILLS)' drew upon the power of ICT to create a universally accessible knowledge-base on skills. Suitable audio visual modules elucidating the skill development pedagogy for 49 skill trades obtained from the 6 institutions involved in the project was created and made available on the web (<http://www.skillindia.com>).The portal was meant for grass root training organizations who could supplement the quality skill pedagogy made available with hands-on skill development component. The plan was to make the material available in a number of local languages, and to progressively expand the coverage to 200 commonly used skill trades.

#### **B. A robust delivery mechanism to cater to the needs of informal sector workers**

As discussed above, a vast knowledgebase on skill already exists. But the traditional institutional delivery model has confined its reach to some urban areas and to a relatively few. The main challenge lies in delivering it across the small towns, *bastis* and rural areas where they are needed.

To reach out to the informal sector workers across widely dispersed areas in the country, the ambitious National Skill Development Mission (NSDM) talks of creating 50,000 Skill Development Centers by leveraging schools and post-offices. But in reality, when the vocational education programme through schools has not taken-off, how would this mechanism deliver on a massive initiative involving the informal sector workers? Similarly, while the Plan document places a lot of importance on the public-private partnership modality, its strategic content in the context of service delivery to the masses in the informal sector is not clear. This is the point where most public developmental efforts seem to flounder.

As the traditional institutional delivery approach has very limited outreach, the power of entrepreneurship referred to above needs to be harnessed in an organized way. In particular, local entrepreneurs need to be supported to create small but agile skill development academies in their small towns, semi-urban areas, *baastis* and the rural hinterland, and cater to potential demand in a convenient and cost effective manner. A suitable franchise mechanism could ensure that these micro-skill development academies draw high quality skill pedagogy from the 'mother institutions' and maintain requisite quality and financial viability. In other words, it is possible to create a grid that brings the capacity embedded in the best of our national and regional institutions to the doors of citizens in the far nooks and corners of the country. ICT could play an important role in this skill delivery design as also for creating a host of supplementary employment support services such as electronic employment exchanges.

Also, local entrepreneurs are likely to be better informed of the out-migration patterns from their area. Thus empowering them may be the best way to serve the needs of the migrant population.

An organized enterprise-based solution to skill development would be able to attract institutional credit, both for the skill development entrepreneurs and for trainees. This will liberate the spread of skill building activities from the limitations of public funding and in all likelihood spur its exponential growth. The box below provides some evidence of success in such an approach to skill development in the informal sector

**Enterprise-based solutions to skill development: Lessons from the UNDP-supported project 'Skills and Knowledge for Improved Livelihoods and Living Standards' (SKILLS)**

The India Labour Report, 2009 of Team Lease states, "much of the demographic dividend will accrue in states that are backward in terms of any indicator. Between 2010 and 2030, for instance, UP, Bihar and MP will account for 40% of the increase in the 15-59 year old in the country. But they will account for only 10% of the total increase in income..." The Report also cautions against continuing with the traditional skill building approach and emphasizes, "there are several reasons for dissatisfaction with the government's road map...the only way to address the problem of these mismatches is by ensuring that market-based mechanisms function smoothly."

This view is echoed by others. For example, in a discussion on the Work and Employment Community of the UN Knowledge Management Network, an official from the Employees State Insurance Corporation comments, "I have visited many blocks and villages in Bihar, Jharkhand and other parts of the country and my interactions revealed that at grass root level even Block Development Officers (BDOs) are not aware of the skill up-gradation scheme launched by GOI then how can we expect the poor illiterate villager to know all the facts about skill up-gradation."

Similarly, while private initiatives in skill development, including those by NGOs have mushroomed, there are question marks with regard to their quality, cost and coverage. This calls for an organised approach to skill development to draw on the vast knowledgebase/capacity in public agencies and deploy it for the benefit of masses residing in small towns, *bastis* and in rural areas through a suitable delivery mechanism.

The UNDP-supported project 'Skills and Knowledge for Improved Livelihoods and Living Standards (SKILLS)' demonstrated the promise of an enterprise-based delivery mechanism by building a cadre of small local entrepreneurs. It was based on the premise that only local actors could provide a sustained link to the backward regions, districts and small towns and *bastis*.

The project launched initially in 2000 focused on developing a comprehensive competency-based curriculum in the skill trade area of modern appliances maintenance. In partnership with major white goods OEMs, a set of comprehensive training modules covering nearly 28 commonly used modern household appliances was developed. The follow-up phase started in 2004 drew on the 'franchise model' to ensure wide delivery of such high quality skill development curriculum. SKILLS Academies owned and operated by micro-entrepreneurs were established in order to ensure wide dispersal and to make this endeavour market oriented and self-supporting. The SKILLS Academies have created state-of-the-art facilities near to the source of the demand and adopted a standard training pedagogy franchised by the mother institution. This franchise arrangement ensures a continuous improvement system for excellence and active involvement of industries networked centrally.

Each SKILLS Academy has a capacity to train 600 to 700 mechanics per year. Three pilot skill academies focusing on maintenance of home appliances set up in Chennai and Bangalore have proved to be quite successful. That this model works in rural settings also has been proved by a successful pilot set up by the Vivekananda Institute of Biotechnology in Nimpith, West Bengal for the supply of agriculture/biotechnology-related services and another one in Goa on training of rural women for producing packaged food for the market. This project also leverages the power of ICT to support and supplement the 'franchise model.' The website <http://www.skillIndia.com> seeks to make available the substantive content on different skills/trades available in the public space and progressively emerge as an electronic employment exchange for the informal sector.

The above modality enabled harnessing of the complementarities in the inherent strengths of the respective private and public partners and ensured a win-win for all. The SKILLS Academies secure their own finances and provide services close to the source of demand. Their profits depend on good quality implementation and service delivery. Technical institutions in the public sector get an opportunity to use their expertise to design curriculum and quality assurance systems in line with the emerging market demand. The franchise system ensures very wide dispersal and the payback ensures that such a process is well funded and sustainable.

The evaluation report of the SKILLS project concludes, "the VoTEG (Vocational Training) Project created an alternate approach to skill formation, the SKILLS project has successfully evolved a model to upscale that approach at a mass scale. The concept of giving training in market dictated skills, on commercial terms (through PPP), is a laudable innovation...The Project has successfully developed the real and virtual (through PPP and through the e-Portal) modes of skill formation under the SKILLS Project...The programme was successful in attracting semi-educated youth in both rural and urban settings with large

number of school drop outs, farmers and also marginalized women (in Goa)... In all four cases, trainees expressed satisfaction in the quality and usefulness of the training imparted. The evaluation team could feel improvements in terms of skill, knowledge and confidence in the trainees. Trainees were willing to pay for the training, whether in repair of home appliances or agriculture, in spite of various free training courses provided by government agencies. This should be treated as an indicator of success for the programme..."

**Commercial viability of the PPP model:** Commercial viability in the provision skill development services has already been demonstrated in so far the higher-end of market-driven skills is concerned. Infact, a number of initiatives have now acquired significant scale. Currently most of these initiatives are operating in cities and towns.

#### **Market Solutions to Skill Development: Some Examples**

- The Indian Institute of Job Training, a Team Lease venture, is a rapidly vocational training provider. It has a network of over 250 centres with a capacity to train 1 lakh students. The courses are based on Team Lease National Employment Framework.
- The NTTF Foundation in Kerala initially established with Swiss grant funding has grown in a sustained manner and now commands an annual revenue of over Rs 100 crores.

The novelty of above UNDP Project lay in that it pointed to the possibility of attractive commercial returns through PPP even under modest fee structure (for example, Rs. 6000 for duration of 3-4 months) and in the context of some ordinary livelihoods activities.

#### **UNDP SKILLS Project: Indicators on Financial Viability**

"In the case of TREC-STEP and AIFCCS around 70% to 75% of the initial capital cost was borne by the private entrepreneur and 25% to 30% was paid by the nodal institution from the project. In case of VIB, the entire initial capital expenditure (around Rs. 600,000) of a PPP Centre was borne by the project...It was seen that a Centre could break even in the 2nd year of operation with around 250 registrations per year. The agri-based PPP model with training alone was found to have low profit margins and broke even in the 3rd year of operation. Addition of escort service (sale of agri inputs) to training increased the project viability substantially and profit could be booked from the 2nd year of operation."

But will the above PPP-based model work in a backward districts setting? This key question relates to both the availability of local entrepreneurs and the paying capacity of trainees from the socially and economically weaker sections. The evidence on growth of ITCs and small skill academies across the cities and town of Bihar presented above is a promising indicator. Similarly, the evaluation report of the above UNDP project pointed to a positive propensity amongst the trainees for paying for services that they value. It states, "trainees were willing to pay for the training, whether in repair of home appliances or agriculture, in spite of various free training courses provided by government agencies. This should be treated as an indicator of success for the programme." Overall, however, in the context of backward areas, given the low paying capacity for training and the serious problem of high drop-out rates (upto 25%) even under fully government-funded programmes, a package of support measure will be necessary. The main plank in this

package would be re-deployment of the existing public outlays for skill development scattered across a myriad of sub-optimal programmes. Through a new PPP architecture built on an organized back-end structure, such outlays are likely to deliver results of an entirely different order and quality.

### **C. Integrated approaches in certain areas**

It is observed that while the share of the primary sector in total employment in Bihar has been steadily declining, it continues to be the mainstay of employment in rural areas, especially for female workers. Agriculture-related activities dominate the primary sector. Within agriculture, activities such as dairying which are employment intensive for female workers have seen rapid growth in the recent past.

Thus agriculture and allied activities must receive prime focus in the state's skill building activities. It is particularly important to recognize the skill building needs of women farmers who outnumber men. A recent survey of small and marginal farmers in Dungarpur, Rajasthan highlights the importance of this point. Knowledge input emerged as top most priority of the women farmers surveyed. Also, they were highly enthusiastic about the possibility of coming together to create a local support structure for agri-extension services. Despite their extremely meager resource base, they responded with a resounding 'yes' to contributing in cash for support services that generate long term benefits. But such innate dynamism at the grassroots is seldom noticed or nurtured and this stakeholder group capable of leading the transformation process is clubbed into the omnibus category of 'the poor' and offered nothing but paltry subsistence support. This approach needs to change towards a developmental paradigm.

It is also important to highlight that skill building support in agriculture and allied activities is not a matter of one-time training. A mechanism for continuous backstopping/handholding is required. There are numerous successful examples of such mechanisms which need to be studied and adapted. While the main action on this front belongs to the Roadmap on Agriculture, the state's skill building policy must be alive and supportive to this need/opportunity.

The IIPA report highlights the potential strengths of Bihar in some sectors such as leather-based products. It notes however, that such potential is not being tapped for output and employment within the state. In such areas (which are likely to include a whole range of agri-based products), an integrated approach to creating production capacity and skill development needs to be evolved. The skill building policy in conjunction with the relevant sectoral policies must promote suitable mechanisms in this regard.

### **D. Need for an enabling demand side strategy**

It is important to dispel the notion that structural challenges lie only on the supply side. As per the NSSO reports for 2004-05, 63 percent of the households belonging to the bottom MPCE class (i.e. below Rs. 235) in rural areas in Bihar did not have any literate among their adult members. In urban areas, 49 percent of the households belonging to the bottom MPCE class (i.e. below Rs.335) did not have any literate among their adult members. The NSSO also reported that in the case of 'rural females' in the age group of 15-29 years, the predominant reason for not attending any educational institution was 'education not considered necessary' in the kind of occupation that they are likely to be in. It is clear that a long history of local stagnancy, compounded by the poor quality of training delivery has resulted in low premiums being attached to development activities such as skill acquisition. This is manifested in the problem of high drop-out rates even under fully government-funded skill development programmes. Thus social mobilisation through the Panchayati Raj Institutions, schools and other socially influential institutions will be required to

create awareness about the benefits of quality skills and the need to invest in it. Similarly, adoption of a broader labour up-gradation and security framework may improve the demand for skill building activities.

#### **E. Need for a comprehensive labour up-gradation and security framework, and employment support services**

Given the low socio-economic baseline in large parts of Bihar, an initiative focused narrowly on skill development activities is unlikely to make the desired breakthrough. The public policy package needs to take cognizance of the imperfections of the labour markets and spur specific steps towards dealing with these through a more comprehensive labour upgradation and security framework. Both the central and the state government have created a number of social security programmes, but their outreach is minimal. Can an organized skill development initiative be leveraged to make a breakthrough in this regard? Similarly, could initiatives such as ADHAR be taken advantage of in this context?

It may appear that broadening of the agenda as proposed above may dilute the focus away from the important task of skill building. But as highlighted below, the deficient skill building baseline is not just a result of deficient supply of skill building activities. The policy for skill building will only derive strength by reaching out to complimentary issues.

Further, the evidence emerging in Section 2 above points to the need for a host of vocational guidance and employment support services so that skill building activities are suitably used.

#### **Need for new approaches to employment support services**

The India Labour Report 2009 comments on the sorry state of affairs in so far as public employment exchanges are concerned. It concludes, “the 968 employment exchanges are largely dysfunctional. The need for efficient clearing houses that match supply and demand is there and is not being met.”

ICT could help in this area through web-based match-making between the demand and supply for informal sector workers and opportunities on a highly cost effective basis. This could help reduce/eliminate the rampant practice of sourcing labour supply through contractors. This practice entails high transaction costs for the firms and a large cut from the meager labour earnings.

The small skill development academies weaved under an organized under could be empowered to provide suitable vocational guidance as also serve as a local node for a integrated electronic employment exchange for the informal sector workers. This enhanced menu of services will also improve their viability.

The above discussion shows that in the context of Bihar, the overall framework for the skill development policy will have to be far broader and deeper than the traditional vocational training approach. Particularly, a solid back-end structure is required to bring the pieces together in a manner that helps leverage the existing knowledgebase and spurs broad-based entrepreneurial activity in support of the skill development needs of the masses in distant locations. This back-end structure should be government led, but it must have suitable autonomy and capacity to create and nurture social entrepreneurship on a very large scale. Thus, identifying carefully the trigger points for large scale social entrepreneurship and creating a suitable back-end structure to sustain it through continual content infusion and quality control are really at the heart of the proposed skill development policy. In this context, a suitable organizational model for the Bihar Skill Development Mission needs to be evolved. Also, the successful enterprise-based models such as Sudha Dairy and Jeevika need to be studied in some depth.

#### 4. Methodology/process for the policy formulation exercise

The following generic framework adopted by the National Skill Development Policy remains valid in the context of the Bihar skill development policy exercise. However, the above framework needs to be elaborated/refined in the context of the new skill development architecture discussed in sub-section 3.

:

<b>National Skill Development Policy</b> <b>Policy agenda, operational strategies and core operating principles</b>
<p><u>Policy Agenda</u></p> <ul style="list-style-type: none"><li>a) Increasing capacity and capability of existing system to ensure equitable access to all.</li><li>b) Promoting life-long learning, maintaining quality and relevance, according to changing requirement particularly of emerging knowledge economy.</li><li>c) Creating effective convergence between school education, various skill development efforts of government and between government and private sector initiative.</li><li>d) Capacity building of institutions for planning, quality assurance and involvement of stakeholders.</li><li>e) Creating institutional mechanism for research development quality assurance, examinations &amp; certification, affiliations and accreditation.</li><li>f) Increasing participation of stakeholders, mobilizing adequate investment for financing skill development, attaining sustainability by strengthening physical and intellectual resources.</li><li>g) Ensuring policy coherence.</li></ul> <p>Similarly the following operational strategies and core operating principles outlined in the National Policy document remain largely relevant:</p> <p><u>Operational Strategies:</u></p> <ul style="list-style-type: none"><li>a) Folding the future in:</li><li>b) Skills framework must move to a system of equivalence to diplomas and degrees:</li><li>c) Skills must be bankable</li><li>d) Co-created solutions and forging partnerships</li><li>e) Game-changing delivery/innovation:</li></ul> <p><u>Core Operating Principles:</u></p> <ul style="list-style-type: none"><li>a) Government financial support must complement private investment</li><li>b) States as key actors</li><li>c) Deployment of funds more for activities than for buildings and other hard assets</li><li>d) Focus of modular courses, open architecture and short term courses</li><li>e) Separate financing from delivery</li><li>f) Create infrastructure for on-the-job-training and encourage apprenticeships</li><li>g) Publicise rating and outcome information on training institutions</li><li>h) Effective assessment and credible certification</li><li>i) Restructure employment exchanges as career guidance centres</li><li>g) Expand formal employment</li></ul>

A host of preparatory action is required to arrive at the critical parameters of the proposed architecture. Such preparatory action must be carried out in a participatory manner. These are outlined in **Annex-4**

**Annex-1**

**Table: A.1**  
**Per 1000 Distribution of Persons of Age Group 15-39 Years by Status of Received or Receiving Vocational Training in Bihar**

Location/ Sex	State/ India	Receiving Formal Vocational Training	Received Vocational Training				Did not receive Vocational Training	Total (incl. n.r.)
			Formal	Non-Formal		All		
				Hereditary	Others			
1	2	3	4	5	6	7	8	9
Rural Male	Bihar	4	2	8	7	1	987	1000
	India	10	15	58	37	110	871	1000
Rural Female	Bihar	0	0	2	3	5	995	1000
	India	5	13	32	30	74	910	1000
Rural Person	Bihar	2	1	5	5	11	986	1000
	India	8	14	45	34	92	890	1000
Urban Male	Bihar	15	4	13	30	47	938	1000
	India	33	52	31	61	144	817	1000
Urban Female	Bihar	4	8	3	12	23	973	1000
	India	19	45	17	32	94	881	1000
Urban Person	Bihar	10	6	9	22	37	953	1000
	India	27	49	25	48	121	847	1000
Total Male	Bihar	6	2	9	10	21	973	1000
	India	17	26	50	44	120	855	1000
Total Female	Bihar	0	1	2	4	7	993	1000
	India	9	21	28	31	8	902	1000
Total Person	Bihar	3	2	6	7	14	983	1000
	India	13	24	39	38	100	878	1000

(Source: IIPA Study)

**Table: A.2**  
**Total Year-wise Additional Demand for Manpower with Vocational Skills from Bihar**

Year	Additional Demand			Total
	(WIS)	(ROI)	(ROW)	
1	2	3	4	5
2010-11	26400(55.8)	12500(26.4)	8400(17.8)	47300
2011-12	29200(57.1)	13125(25.7)	8820(17.2)	51145
2012-13	32050(58.2)	13780(25.0)	9260(16.8)	55090
2013-14	34950(59.1)	14470(24.4)	9725(16.5)	59145
2014-15	37900(59.9)	15195(24.0)	10210(16.1)	63305
2015-16	40900(60.5)	15955(23.6)	10720(15.9)	67575
2016-17	43950(63.8)	16750(24.3)	11255(16.3)	68905
2017-18	47050(64.1)	17590(24.0)	11820(16.1)	73360
2018-19	50200(64.4)	18470(23.7)	12410(15.9)	77930
2019-20	53400(64.6)	19390(23.5)	13030(15.8)	82620
2020-21	56650(64.8)	20360(23.3)	13680(15.6)	87440

<b>2021-22</b>	59950(64.9)	21380(23.1)	14365(15.5)	92395
<b>2022-23</b>	63300(64.9)	22450(23.0)	15085(15.5)	97485
<b>2023-24</b>	66700(65.0)	23570(22.9)	15840(15.4)	102710
<b>2024-25</b>	70150(65.0)	24750(22.9)	16630(15.4)	108080

(Source: IIPA Study)

(Note: Figures in brackets are percentages)

**Table: A.3**  
**Increase in Demand for Vocationally Trained Persons (in 000)**  
**from 2005 to 2005 in Different Industries in the State**

<b>Industry</b>	<b>2005-10</b>	<b>2010-15</b>	<b>2015-20</b>	<b>2020-25</b>	<b>2005-25</b>	<b>2010-2025</b>
<b>Agriculture &amp; Allied activities</b>	53.3	76.4	85.1	106.4	321.2	267.9
<b>Mining &amp; quarrying</b>	0.1	0.2	0.3	0.3	0.9	0.8
<b>Manufacturing</b>	14.4	33.6	57.1	87.9	192.9	178.6
<b>Construction</b>	14.4	33.6	57.1	87.9	192.9	178.6
<b>Electricity, Gas and Water supply</b>	0.2	0.3	0.3	0.4	1.2	1.0
<b>Trade, Hotels and restaurants</b>	13.9	26.5	38.0	55.5	133.9	120.0
<b>Transport, storage and communication</b>	6.0	11.0	14.8	23.7	55.5	49.5
<b>Banking, Insurance and real estate</b>	0.9	1.6	2.0	2.8	7.4	6.5
<b>Public administration and other services</b>	2.2	2.8	2.7	3.0	10.6	8.4
<b>Total</b>	99.1	164.6	214.5	299.4	777.6	678.5

(Source: IIPA Study)

**Table:A.4**  
**Shortages in Industrial Training Institutions/Centers in Bihar**  
**(Table 6.27 from the IIPA Report to be appended-see pg 159)**

<b>Periods</b>	<b>Shortages ITI/ITC Trainees</b>	<b>Shortage of Intake in ITI/ITCs</b>	<b>Shortages of IT Institutes/ Centers</b>
<b>1</b>	<b>2</b>	<b>3= 2*100/60`</b>	<b>4</b>
<b>2010-11</b>	5050	10300	86
<b>2011-12</b>	6970	13800	115
<b>2012-13</b>	8945	17500	146
<b>2013-14</b>	10970	21600	180
<b>2014-15</b>	12665	26200	218
<b>2015-16</b>	15185	23300	195
<b>2016-17</b>	15850	27200	227
<b>2017-18</b>	18080	31400	262
<b>2018-19</b>	20365	36000	300
<b>2019-20</b>	22710	40800	340
<b>2020-21</b>	25120	43000	358
<b>2021-22</b>	27600	48100	401
<b>2022-23</b>	30140	53700	447
<b>2023-24</b>	32755	59600	497
<b>2024-25</b>	35440	66000	550

(Source: IIPA Study)

(Copy Tables from IIPA Report –Table 7.7 pg 184/185)

(Copy two tables from pgs 23 and 25/26 of the NSDC Report)

**Muzaffarpur – Employment and Labor****Industry/Sector Wise Skill Demand Forecast (5 to 10 Years)**

Industry	2012-2017					2018-2023				
	Highly Skilled	Skilled	Semi Skilled	Total Skilled	Total Unskilled	Highly Skilled	Skilled	Semi Skilled	Total Skilled	Total Unskilled
Manufacturing	749	5,241	8,984	14,974	22,461	1,415	9,905	16,981	28,301	33,961
Dairy and Animal Husbandry	400	1,542	3,770	5,712	34,272	1,028	2,970	7,426	11,424	55,978
Agriculture & Food Processing	3,212	11,931	30,285	45,887	275,322	7,801	19,502	50,705	78,008	312,032
Construction Industry	6,079	14,184	47,280	67,543	425,521	10,807	27,017	70,245	108,069	529,537
Trade, Hotel and Restaurants	1,817	7,788	16,355	25,961	132,401	3,089	12,357	28,687	44,134	207,428
Healthcare	1,680	1,680	840	4,200	8,400	3,696	3,696	1,848	9,240	14,784
Education	3,526	1,763	588	5,876	11,752	6,875	3,437	1,146	11,458	17,187
Banking and Financial Services	2,931	1,466	489	4,886	3,420	5,863	2,931	977	9,771	4,886
Communications	1,542	1,542	771	3,856	4,627	3,085	3,085	1,542	7,712	37,789
IT & ITeS	522	149	75	745	298	730	209	104	1,043	417
Transportation including Railways	763	6,865	3,269	10,897	55,575	1,068	9,611	4,577	15,256	74,753
Power	930	6,201	8,371	15,502	38,755	1,209	8,061	10,882	20,153	44,336
Fishing & Poultry	59	729	1,182	1,970	10,047	80	984	1,596	2,660	12,766

Forestry & Logging	38	465	755	1,258	6,416	49	605	981	1,635	7,523
<b>Total</b>				<b>209,267</b>	<b>1,029,267</b>				<b>348,863</b>	<b>1,353,376</b>

(Source: NSDC, Tholons, page- 23)

Industry	Skills in Demand	Long Term Courses (Above 3 Months)
Food Processing	Lab Technicians, Food Technologists, Food processing machine operator, Shift/Floor Supervisor, Batch makers, Packagers, Production Manager, Security Staff, Computer operator	Advanced Farming Techniques
Dairy and Milk Products	Milk producers, Lab Technicians, Milk Technicians, Allied dairy products technicians, Milk processing equipment operator, Shift Supervisors, Production Managers, Security Staff, Computer operator	Advanced Dairy Production Techniques Milk Storage and Packaging
Sugar Industry	Sugar Traders and Procurement, Sugarcane Feed processors, Sugarcane processing equipment operator, Lab technicians, Shift Supervisor, Sugar Instrument Operators, Security Staff, Computer operator	Advanced Sugar Production Technology Sugar Packaging & Storage
Construction & Roads Industry	Mason, Plumber, Site Supervisor, Electrician, Concrete mixer, Road layer, Road roller operator, Tar machine operator, Security Staff, Computer operator	Diploma/ITI Carpentry, Plumbing, Masonry
Leather Industry	Skilled artisan, Tannery workers, leather cutting Instrument Operators, Security	Diploma/ITI certification in Leather Technology

	Staff , Computer operator	
Power Generation	Electrical workers, Lineman, Electrical Foreman, Technical Assistant, Security Staff, Computer operator	ITI/ Diploma in Electrical technology
Healthcare	Trained Paramedical resources, Nursing staff, ward boys and house keeping and Security Staff,	Medical Lab Technology (DMLT) Blood Bank Technician ANM / GNM Nurses MPW (Multi-purpose Worker) Front Office Assistant
Hotels, Trade and Hospitality	Wholesale and Retail Trading, Chefs, Front Office staff, Housekeeping staff, Waiters, Hotel and Restaurant Operations Management, Goods Traders, Suppliers and Transporters, Security Staff. Computer operator	Diploma in Hotel Management & Catering Food & beverage services, Front office operations
Education	Teaching staff for Primary, Middle and Secondary schools, Lab Instructors, School Administration staff, Librarian, Accountant, Security Staff, Computer operator	Diploma in Teacher Training – Primary & Secondary school Lab Instructors Physical Trainers & Yoga Experts
Security Services	Security Guard, Security Officer, Security Trainer, Security Inspector, Fire Safety Marshalls, Evacuation expert , Computer operator	Diploma in Building Security Management Systems, Fire Safety etc.
Entrepreneurship Development	Micro, Small and Medium Industry Entrepreneurs, Social Entrepreneurs, Security Staff	Diploma in Entrepreneurship and Business Management – MSME

Other Allied Jobs (across industry)	Electricians, Plumbers, Carpenters, Tractor Driver, Watchman, Polisher, Machinist, Painter, Welder, Standard machine operators, Fireman, Drivers	ITI Diploma for Electricians, Plumbers, Carpenters, Painter, Welder, Machinist
--	--	--

(Source: NSDC, Tholons, page- 25,26)

**Annex-4**

**Suggested Preparatory Action**

S.No.	Activity	Purpose
1.	Quick revision of the projections of the IIPA study in light of: a) Census 2011 results and the latest NSS surveys; b) the new policy thrust of GoB, and; c) a set of policy determined assumptions/parameters.	To create a dynamic projection model that helps work out the implications of alternative policy determined assumptions/parameters.
2.	Mutual reconciliation of the demand projections made under the IIPA study and the NSDC study	The IIPA study is based on sectoral growth rates and estimates of sectoral elasticity. The NSDC estimates on the other hand, are based on local plans and prospects. A matching of the two will help arrive at highly robust and insightful estimates.
3.	Survey of 5-10 ITIS (through a questionnaire, interview and where possible, joint consultation )	To derive reliable information on parameters such as the social background of candidates, how candidates finance their course, the pass percentage, placement rate, quality assurance mechanisms, career guidance and placement-related mechanisms, industry linkages including prospects and problems, ideas of growth and

		expansion etc.
4.	Survey of 10-15 ITCs (through a questionnaire interview and where possible, joint consultation)	The above points. Additionally, the cost-economics of private players
5.	Survey of 10-15 other vocational training institutions such as KVIC centers, stitch-craft centers etc. (through a questionnaire interview and where possible joint consultation)	As in 1 and 2 above.
6.	Survey of 100-200 small private vocational training centers covering various fields and location across the urban-rural continuum etc. (through a questionnaire interview and where possible, joint consultation)	As in 1 and 2 above. To additionally explore how the small centers build-up their course content. Also, to ascertain if they would be willing to join an organized framework through a franchise mechanism.
7.	Survey of lead banks in 5 districts (and their regional headquarters)	To identify their existing level of involvement in skill building activities, directly and indirectly. Also, explore the feasibility of funding both skill entrepreneurs and trainees under the proposed organized skill building framework as well as suitable mechanisms needed for a workable scheme.
8.	Survey of two representative districts	To prepare an inventory of all the public schemes that are directly and indirectly contributing to skill development activities, enlist the resources being deployed and possible outcomes. Also, obtain their views on field-level problems and prospects. Further, the survey on the above items could be merged with this survey.
9.	Consultations with the main concerned Departments in GoB	To note their expectations from the proposed Skill Development Policy, enlist views on specific points in the base paper and gather their views/suggestions including on inter-departmental coordination.
10.	Consultations with the apex state-level bodies of industries, trade, construction, transport, hotels etc.	To note their expectations from the proposed Skill Development Policy, enlist views on specific points in the base paper and gather their views/suggestions including on creation of organized employment support

		services (e.g. apprenticeship, electronic employment exchanges).
11.	Consultations with NIC	To explore the possibility of creating an organized IT backbone for various aspects of skill development architecture and other employment support services (e.g. electronic employment exchanges).
12.	In-depth consultations with BBOSE	To get a sense of their capacity for dealing with the ambitious agenda that they have taken on. Also to explore their ideas on an organized policy oversight and implementation structure at the state-level.
13.	Consultations with NSDC	To note their expectations from the proposed Skill Development Policy and gather their views/suggestions on the proposed architecture/methodology. Explore scope for collaborating in the proposed district-level study. Also to gather best practices from other states.
14.	Consultations with multilateral and bilateral partners that are active in Bihar (the World Bank, ADB, UNDP, UNICEF, UNFPA, ILO, FAO, WFP, DFID)	To note their expectations from the proposed Skill Development Policy and gather their views/suggestions on the proposed architecture/methodology. Also to explore collaboration support for development of the policy/its implementation.
15.	Consultations with major NGOs that are active in Bihar (the Gates Foundation, CARE and prominent local NGOs )	To note their expectations from the proposed Skill Development Policy and gather their views/suggestions on the proposed architecture/methodology methodology. Explore in some depth the support services required for a pro-poor orientation.
16.	Working group on vocational training in schools	To review the progress and evolve a design/strategy.
17.	Working group on internalizing broader labour upgradation-related issues and security framework	To evolve a design that helps internalize broader labour upgradation-related issues and security framework without diluting the focus on skill development.
18.	Working group on demand-side strategy	To arrive at measures to strengthen the demand for skill aquisition

19.	Working group on creation of the skill building architecture outlined in the base paper	How to create an architecture that is enterprise based. What are the lessons from Sudha Dairy, Jeevika etc.
20.	Working group on development of a suitable organizational structure for the State Skill Development Mission	To develop a powerful coordination structure for skill development activities across Ministries/agencies.