Skill Development in India

Challenges and Opportunities
© All Rights Reserved, Athena Infonomics

The information contained in this report prepared by Athena Infonomics India Pvt. Ltd. is furnished for information purposes only. While every effort has been made to ensure the accuracy of information presented in the report, Athena Infonomics India Pvt. Ltd. makes no representations or warranties regarding the accuracy or completeness of such information and expressly disclaims any liabilities based on such information or on omissions there from. The material presented in the report can be used in academic or professional work with appropriate citation.
This report has been prepared with support from the British High Commission, through its Prosperity Fund India Programme
CONTENTS

1. AN INTRODUCTION TO SKILL DEVELOPMENT 1

2. SKILL DEMAND-SUPPLY GAP 3

2.1 THE DEMAND FOR SKILLS 3
2.1.1 Sectoral Division of Skills 3
2.1.2 Formal and Informal Skills 6
2.1.3 Organized and Unorganized Sectors 7

2.2 THE SUPPLY OF SKILLS 8
2.2.1 Regional Distribution of the Supply of Skill at Different Skill Levels 8

3. EXISTING SKILL DEVELOPMENT INITIATIVES 11

3.1 INDIA 11
3.1.1 National Skill Development Corporation 11
3.1.2 Basics Academy for Building Lifelong Employability (B-Able) 12
3.1.3 Gram Tarang Employability Training Services (GTETS) 13
3.1.4 Everonn Skill Development Limited (ESDL) 14
3.1.5 ITI-Ukai 16

3.2 GLOBALLY 18
3.2.1 Australia 18
3.2.2 Germany 18
3.2.1 Korea 19
3.2.2 Singapore 19
3.2.1 South Africa 20
3.2.2 Sri Lanka 20
3.2.3 Switzerland 21
3.2.1 USA 21

3.3 BEST PRACTICES 22
3.3.1 Objective Definition 22
3.3.2 Funding 22
3.3.3 Incentive Mechanisms 22
3.3.4 Flexibility 23
3.3.5 Integration 23
3.3.6 Partnership 23
4. CHALLENGES

4.1 UNDER-INVESTMENT IN SKILL ACQUISITION
   4.1.1 Students
   4.1.2 Industry
   4.1.3 Government

4.2 DEMAND-SUPPLY MISMATCH
   4.2.1 Low Student Mobilization
   4.2.2 Inadequate Industry Linkages

4.3 POOR QUALITY OF TRAINING
   4.3.1 Absence of Aptitude Tests
   4.3.2 High Cost
   4.3.3 Lack of Infrastructure
   4.3.4 Shortage of Quality Trainers
   4.3.5 Relevance of Skills
   4.3.6 Lack of Mobility between Formal and Vocational Education Systems
   4.3.7 Lack of Standardization

4.4 POOR AVAILABILITY OF INFORMATION
   4.4.1 Absence of a Labour Market Information System
   4.4.2 Lack of Clarity on Industry’s Skill Requirements
   4.4.3 No Information on Career Progression
   4.4.4 Low awareness of existing courses

4.5 LACK OF BRANDING
   4.5.1 Skill Development not seen as a viable alternative to formal education
   4.5.2 Perceived lack of dignity in blue collar jobs

5. RECOMMENDATIONS

5.1 PERFORMANCE EVALUATION
   5.1.1 Research on Alternative Models
   5.1.2 Performance-based Incentives for Skill Institutes
   5.1.3 Financial Assistance based on Performance
   5.1.4 Institute rankings to provide credibility
   5.1.5 Checking Fraudulent Institutes

5.2 FOCUS ON QUALITY
   5.2.1 Detailed Surveys to assess exact Skilling Requirements
   5.2.2 The Use of Technology
   5.2.3 Certification and Retention of Trainers
   5.2.4 Information to skill institutes for designing courses
   5.2.5 Compulsory Upgradation of Courses
   5.2.6 Mandatory Internships/Apprenticeships
5.2.7 Coordinate among institutes for consistency 34

5.3 CATERING TO STUDENT NEEDS 34
5.3.1 Awareness among students 34
5.3.2 Access to Information 35
5.3.3 Aptitude Tests 35
5.3.4 Indicators of Institute Quality 35
5.3.5 Mobility between formal and informal education 35
5.3.6 Student Feedback 36
5.3.7 Focus on Women 36
5.3.8 Awareness among employers 36
5.3.9 Minimum Salary Requirements 36
5.3.10 Promote Local Jobs 36
5.3.11 Employment Exchanges 37
5.3.12 Promote dialogue among students, industry and skill institutes 37
5.3.13 Job Matching 37

6. CONCLUSION 38

7. BIBLIOGRAPHY 39
TABLE OF FIGURES

Figure 1-1: Skill Pyramid ................................................................. 1

Figure 2-1: Sectoral Composition of Employment ................................................. 4

Figure 2-2: Incremental Skill Level Requirements - 2022 ........................................ 5

Figure 2-3: Current Structural Framework of the Education and Skill Development Sector in India .......................................................... 7

Figure 2-4: Skill Strata in Major Secondary and Tertiary Sectors (2011) .................. 8

Figure 2-5: Supply of Skilled Persons: A Geographical Distribution of Capacity .......... 9

Figure 3-1: Stakeholder Model for NSDC .................................................. 11

Figure 3-2: Stakeholder Model for B-Able ................................................. 13

Figure 3-3: Stakeholder Model for Gram Tarang Employability Training Services ........ 14

Figure 3-4: Stakeholder Model for Everonn Skill Development Limited ................. 15

Figure 3-5: Stakeholder Model for IT-Ukai ............................................... 17
ABBREVIATIONS

ADB: Asian Development Bank
AICTE: The All India Council for Technical Education
AQF: Australian Qualifications Framework
ATI: Advanced Training Institutes
B-Able: Basics Academy for Building Lifelong Employability
CET: Continuing Education & Training
DEA: Department of Economic Affairs
DRDA: District Rural Development Authority
EDB: Economic Development Board (EDB)
ESDL: Everonn Skill Development Limited
GTETS: Gram Tarang Employability Training Services
ICT: Information and Communication Technologies
IMC: Institute Management Committee
ITC: Industrial Training Centre
ITI: Industrial Training Institute
JSDP: Job Skill Development Program
LMIS: Labour Market Information System
MoRD: Ministry of Rural Development
MRC: Master Resource Centre
NCVT: National Council on Vocational Training
NSDC: National Skill Development Council
NSSO: National Sample Survey Organization
OPEC: Organization of Petroleum Exporting Countries
PPP: Public Private Partnership
SETA: Sector Education and Training Authorities

SSC: Sector Skill Council

SDP: Skills Development Project

SETA: Sector Education and Training Authorities

TAFE: Technical and Further Education

UGC: University Grants Commission

VET: Vocational Education and Training

VTC: Vocational Training Centre

WDA: Workforce Development Agency

WSQ: Workforce Skills Qualifications
EXECUTIVE SUMMARY

Skill development is a means to harness the human resource potential of a region by equipping the prospective or the existing members of the workforce with marketable skills through vocational or technical training to meet industry requirements. It emphasizes demand-driven systems for skill acquisition.

According to the 11th Five Year Plan, only 10% of the Indian workforce has formal skill training in the form of higher education, technical education or vocational training. India currently has an annual skilling capacity of 4.3 million, less than 20% of the industry requirement of 22 million skilled workers. While the demand-supply gap may not adversely affect economic growth in the long run, it will prevent inclusive growth. Under-investment in skill acquisition is one of the major problems faced by the Indian skill sector. Since the returns from skill acquisition do not accrue exclusively to a single stakeholder, this can be formulated as a free-rider problem. Skill training can be viewed as a public good in which all market agents under-invest because they will not be the sole beneficiaries.

The public good problem is one of the factors contributing to the huge demand-supply gap for skills in the Indian economy. Other causes for this mismatch include issues in student mobilization and low placements due to weak industry linkages. The quality of training imparted by skill institutes suffers from a number of problems including the high cost of courses, inadequate infrastructure, shortage of good trainers, low relevance of the curriculum to industry requirements, lack of mobility between formal and informal education systems and the lack of standardization of courses. Informational asymmetries among the stakeholders further complicate the problem – students are not aware of existing courses and do not have adequate information to make decisions; and private employers are reluctant to recruit from skill institutes due to a mismatch in the skill set required and the skills imparted by the institutes. The problem is exacerbated by the fact that skill development in India is yet to gain acceptance as a viable alternative to formal education due to the lack of dignity associated with blue collar jobs.

This report attempts to find solutions for the skill gap in the Indian economy based on global best practices. The approach adopted involves understanding the implications of the skill gap; evaluating existing skill development initiatives in India and abroad to identify best practices; ascertaining causes for the mismatch between the demand and supply of skills in India; and proposing solutions that could be adopted to resolve these challenges.

The recommendations lie in three broad areas: performance evaluation, focus on quality and catering to student needs. There is an urgent need for undertaking detailed performance evaluation of the existing investment portfolio of the Government. We also recommend further research into industry requirements and better access to information for students and performance-based incentives for skill institutes as well as trainers. There is a need to focus on the local economy and promote the interests of socially and economically disadvantaged groups through skill development programs that improve employability by imparting relevant skills that meet industry requirements.
Within the framework of our recommendations, we discuss a solution for the public good problem in the form of a cost sharing methodology for different stakeholders in the skill acquisition process. Economic theory suggests that the optimal skill investment model is one in which employees invest in improving general skills that lead to a rise in their wage profile across firms, while employers fund the acquisition of job-specific skills. It is possible to incentivize private firms to invest in imparting job-specific skills to employees, since it improves their performance and productivity on the job, by offering tax breaks or rebates to private employers who invest in training their employees.
1. AN INTRODUCTION TO SKILL DEVELOPMENT

Skill may be defined as the set of relevant competencies required to carry out identified tasks in the most efficient and timely manner while adhering to an agreed set of qualities and standards. Skill development is a means to harness the human resource potential of a region by equipping the prospective or the existing members of the workforce with marketable skills through vocational or technical training to meet industry requirements. Jobs are progressively becoming more skill-intensive due to the increasing complexity of economic activity, which has led to skill shortages on the one hand and unemployment on the other. Skill development, in its contemporary sense, emphasizes on demand-driven systems for skill acquisition. The traditional model of skill acquisition through formal education is supply-driven and is therefore not very responsive to labour market requirements. In other words, such a skill acquisition process may not substantially improve productivity or impart skills relevant to the industry.

Internationally, skills are broadly divided into two categories – hard skills and soft skills. Hard skills are specific, measurable technical abilities that can be methodically taught, e.g. operating machinery, using software. They may be industry-specific or generic. Hard skills are quantifiable, easily observable and essential for performing the job. Soft skills are characteristics or personal habits that cannot be quantified, e.g. communication, teamwork. They are applicable in all settings – across industries and work places.

In India, skills are divided into different categories based on the level and duration of training required. We follow the classification adopted by the National Skill Development Council (NSDC), where skills are classified into four levels.

**Figure 1-1: Skill Pyramid**

Source: NSDC
Skill Level 1 (L1) refers to skills that require minimal education and can be acquired through on-the-job training, short-term modular courses and focused interventions.

Skill Level 2 (L2) refers to skills that can be acquired through technical/vocational training or trade certificates, and are specific to the occupation, such as knowledge of complex operations and machinery, skills of supervision, etc.

Skill Level 3 (L3) refers to skills which require long drawn preparations through acquisitions of degrees, diplomas and post graduate education. These skills require highly technical or commercial operations.

Skill Level 4 (L4) are highly specialized skills involving research and design which can be gained through PhD or post doctoral work and extensive work experience.

L1 and L2 are called “Bottom of the Skill Pyramid” as they constitute the “minimally skilled” workforce. As per NSDC data, more than 70% of the industry workforce requirement comprises of the bottom of the pyramid skills, and hence this policy brief will focus on providing skill development and training for this Bottom of the Skill Pyramid.

In the next section, we discuss the skill demand-supply gap and differences in the levels of skill acquisition, which lead to imbalances in employment rates across regions and groups, wage disparities and varying productivity levels across workers. The third section of this report evaluates domestic and international skill development initiatives. The fourth section identifies the major challenges faced by the skill development sector in India. The fifth section proposes solutions for these challenges. The sixth section concludes and the last section provides a list of selected relevant publications.
2. SKILL DEMAND-SUPPLY GAP

2.1 THE DEMAND FOR SKILLS

According to the 11th Five Year Plan, only 10% of the Indian workforce has formal skill training in the form of higher education, technical education or vocational training. The corresponding figure for developed countries is more than 75%. India currently has an annual skilling capacity of 4.3 million, less than 20% of the industry requirement of 22 million skilled workers. It is essential to translate the large labour force into a skilled workforce in order to raise employment as well as productivity.

The level of skill acquisition is an important determinant of firm productivity and directly affects the wages that a worker receives. While there is high demand for skilled labour in the industry, the lack of skills is unlikely to substantially affect productivity in the long term due to the possibility of technological solutions to address the lack of skilled labour. Therefore, while the demand-supply gap will not adversely affect economic growth in the long run, it will prevent inclusive growth. In the absence of skill development, employment generation for economically and socially disadvantaged groups becomes extremely difficult. Leaving the task of skill development to the free market is likely to create inequalities in employment and income generation. It is hence the government’s responsibility to provide an impetus for skill development in order to ensure inclusive growth and to protect the interests of socially disadvantaged groups.

2.1.1 Sectoral Division of Skills

An increasing proportion of the workforce is engaged in the secondary and the tertiary sector. The graph below shows the sector-wise employment share across the globe for the year 2011. The share of the total workforce in primary activities in the developed nations has fallen from 5.5% in 2000 to 3.8% in 2011 and that in the industry sector has decreased from 27.3% to 22.1% in the same period. The largest employment sector for developed nations is the services sector, which accounts for over 70% of total employment. Similar trends can be seen all over the globe, as the world average employment share in the agricultural sector has fallen from 40.5% in 2000 to 34.6% in 2011. On the other hand, there has been an increase in the share of employment in the services sector across the world from 39.1% to 43.8%.

A common feature of all developing and underdeveloped economies, including India, is the high share of primary sector employment in total employment. Although developing countries are gradually moving away from seeing agriculture as the mainstay of employment generation, a majority of the population is still engaged in agriculture or allied activities.
Figure 2-1: Sectoral Composition of Employment

Source: Global Employment Trends 2012, International Labour Organization
In India, the proportion of the workforce involved in agriculture is likely to decline from the current level of 54% to 40% by 2020. The migration of the workforce towards higher productivity sectors is a trend that is expected to continue in India since these sectors have the greatest potential for job creation.

NSDC reports suggest that by 2022, the greatest demand for skilled labour will arise in the construction, automobile, textile and transportation industries. Figure 2-2 presents the estimates for skilled labour requirements in 2022 for some major secondary and tertiary industries in the Indian economy.

Figure 2-2: Incremental Skill Level Requirements - 2022

Source: NSDC

1 The Planning Commission, Government of India (2002). India Vision 2020
2.1.2 Formal and Informal Skills

In India, skill acquisition takes place through both, formal and informal streams, although a large part of it takes place informally. Professional technical institutes, vocational schools, specialized institutes for technical training and apprenticeship training by industry are the major channels for the delivery of skill education.

Figure 2-3 illustrates the current structural framework of the education and skill development sector in India. Elementary, secondary and higher education is governed by the Ministry of Human Resource Development. Polytechnics are categorized as Technical Education. The University Grants Commission (UGC) provides funds through grants to universities, sets teaching and evaluation standards and coordinates among institutes of higher education. The All India Council for Technical Education (AICTE) plans, regulates and coordinates the technical education system.

Vocational training is imparted through government-run Industrial Training Institutes (ITIs) and privately operated Industrial Training Centres (ITCs). The governing body is the Ministry of Labour and Employment. The National Council on Vocational Training (NCVT) develops the curriculum, formulates policies, sets standards and certifies institutes through a trade test. The National Skill Development Council (NSDC) was set up under the Ministry of Finance to provide viability gap funding and promote private skill initiatives. The Prime Minister’s National Council on Skill Development coordinates different skill development initiatives.

During 2009-10, the total enrolment in formal higher education in India was 2,07,40,740 as compared to 1,86,48,923 in the previous year. Of the total enrolment in higher education during 2009-10, 34,45,654 students enrolled in Open Universities. The rest of the students were enrolled in Post-School Diploma Institutes, Graduate Institutes & Post-Graduate Institutes. The total capacity of student intake during 2009-10 in vocational training institutes, comprising Industrial Training Institutes (ITIs), private Industrial Training Centres (ITCs) and Polytechnics was 18,42,096 (collectively called “skill institutes” henceforth).
2.1.3 Organized and Unorganized Sectors

Employment may be divided into the organized (formal) and unorganized (informal) sectors. The organized sector refers to workers who are formally employed by a registered organization (all public sector establishments or private sector establishments with 10 or more employees). The unorganized sector consists of unregulated casual labourers and informal workers.

A large proportion of the Indian work force, particularly in the agriculture sector forms a part of the unorganized labour force. However, the Planning Commission predicts significant growth in the share of the formal sector over the next decade. From the NSSO 2009-10 Report, it is evident that the construction industry is the most labour-intensive. The highest degree of informality is in the construction, textile and leather sectors, while chemicals & pharmaceuticals and electronics & IT hardware have the highest degree of formality.
In Figure 2-4, we observe a strong correlation between intensity of skill required for a particular sector and the level of formalization in that sector. For example, according to NSS data, approximately 30% the construction sector employs formal labour while 75% of the chemical and pharmaceuticals sector is formalized. Figure 2-4 shows that nearly 80% of the labour employed in the construction industry has L1 level skills while the pharmaceuticals sector requires higher level skills. This suggests that skill acquisition is particularly important for sectors that are more organized. In other words, skill development provides an option for workers in the unorganized sector to acquire skills so that they can enter the organized sector.

2.2 THE SUPPLY OF SKILLS

2.2.1 Regional Distribution of the Supply of Skill at Different Skill Levels

Figure 2-5 displays the zone-wise capacity of student intake in a given academic year as of 2010 in Post–School Training Institutes\(^2\), Graduate Institutes & Post–Graduate Institutes. The distribution of institutes is highly uneven, both geographically and in terms of institute type i.e., technical, non-technical, etc. Even among the institutes of higher education, the number of graduate degree colleges is far greater than other institutes across the country.

The Southern region has the maximum number of seats in post-school training institutes, which is 12,12,444 as compared to 9,97,057 and 6,89,021 in the Western and Northern regions respectively.

\(^2\) Comprises of Post–School Diploma Institutes, ITIs, Private ITCs and Polytechnics.
and only 3,50,980 in the East. However, the North has the highest number of seats for undergraduate students: 43,59,027, while the West has the highest number of seats for postgraduate students, which is 7,78,593.

**Figure 2-5: Supply of Skilled Persons: A Geographical Distribution of Capacity**

Figure 2-5 shows a comparison of the number of seats available per 1000 persons in a year at the state level. It can be inferred that a number of states in the eastern region e.g., Bihar, Jharkhand and Assam, have relatively lower intake capacity per 1000 persons – less than 10 seats for every 1000 persons – and none of the states have more than 20 seats per 1000 persons. On the other hand, the average intake per 1000 persons in the West, North and South are 20, 15 and 20, respectively. Further, only seven states, mostly in the northern and western regions, have over 21 seats per thousand persons in the country. With the growing need for skilled human resource in the country, there is a need to increase the skilling capacity of the country with a balanced approach across regions. Moreover, most of the existing skill infrastructure in the country is funded and managed by the government and
suffers from many problems, including the availability of infrastructure, mobilization of students and the quality of training.

Before addressing these issues, we describe some of the models adopted by existing skill institutes within the country and skill development models adopted in countries around the world, to enable us to draw from international and domestic best practices.
3. **EXISTING SKILL DEVELOPMENT INITIATIVES**

3.1 **INDIA**

3.1.1 **National Skill Development Corporation**

NSDC, a PPP between the private sector and the Department of Economic Affairs (DEA), Ministry of Finance, is a not-for-profit organization established in 2009. NSDC’s mandate is to fund skill training initiatives by providing viability gap funding to private skill development institutes. It controls the National Skill Development Fund, created with funds sourced from donors, private entities, central and state governments, statutory bodies and financial institutions, and offers soft loans with a repayment moratorium to private skill development institutes at interest rates of 6-7%. It provides flexible funding modes – loan, equity and grant – after submission of proposals to set up skill institutes. Funds are also provided by the Asian Development Bank along with technical assistance to the skill institutes.

![Figure 3-1: Stakeholder Model for NSDC](source: Athena Research)
In addition to providing financial assistance for private skill initiatives, NSDC plans to set up Sector Skill Councils (SSC) which will be autonomous bodies registered as Section 25 companies or public companies. SSCs will initially be funded by the government and seek to ensure partnership among different stakeholders to develop skill training capacity for a specific sector. They are employer-led organizations that support and guide initiatives to develop sector-specific skills. NSDC also plans to set up a Labour Market Information System (LMIS) – an online system that provides qualitative and quantitative information on the labour market.

NSDC has flexible criteria for submitting skilling proposals to encourage competition between innovative business models. It uses robust evaluation criteria for such proposals and encourages leverage of existing public and private infrastructure. The main sources of revenue are interest income and dividends. The Prime Minister’s Skill Council works with NSDC to meet skilling objectives by coordinating skill initiatives and identifying core strategies for skill development.

### 3.1.2 Basics Academy for Building Lifelong Employability (B-Able)

Working in 17 Indian states, Basix Ltd. is a livelihood promotion institute which was established in 1996. B-Able, a subsidiary of Basix, was launched in 2009 to impart skill training to under-educated and under-skilled school drop-outs. It procured funds from NSDC and partnered with state governments for fee subsidies. The organization focuses on the farm sector and employs trained students locally. It uses a franchise model whereby it provides content support to franchisees in exchange for a one-time membership fee from franchise owners and a share of the revenue from the franchises. The other main source of revenue is student fees. The operating costs have been kept to a minimum by renting public and private infrastructure.

B-Able aims to set up 400 student-centric vocational training centres with the target of training over one million Indian youth over the next 10 years. Technology-enabled training centres will be set up for sectors such as rural trades, healthcare, tourism, hospitality, food processing, automobile, construction, banking, insurance and finance.
3.1.3 Gram Tarang Employability Training Services (GTETS)

GTETS is a for-profit organization founded in 2006, focusing on states in the eastern region. Using soft funding from NSDC, it offers residential skill courses in order to check the problem of absenteeism. It mobilizes students through multiple modes – marketing vans, DRDA assistance and through NGOs. GTETS has adopted a portfolio approach to skilling whereby a wide range of courses are offered at the entry level as well as at advanced levels. Some of the courses are offered under government schemes while others are offered with the collaboration of private firms. GTETS also provides post-training support to students in the form of accommodation.

Skill training is offered through tailor-made skill building programs suited to industry requirements, which provide technical skills as well as soft skills. The focus is on underdeveloped regions. Skilling centres are located close to target areas. Equal proportions of students are enrolled under government sponsorships, industry sponsorships and self-sponsorship by the students.

GTETS currently operates in east India. Residential training programs certified by the Ministry of Labour are offered, with the course length varying from one month to two years. Candidates are
sourced through the assistance of government authorities, NGOs, self-help groups and industry tie-ups. An agreement with the Centurion Group guarantees at least 75% placements to skill training graduates from the institute. Students receive financial assistance to meet the cost of training through industry sponsorships, government employment schemes and microfinance education loans.

**Figure 3-3: Stakeholder Model for Gram Tarang Employability Training Services**

A subsidiary of the Everonn Group, ESDL is a major partner of NSDC with the latter having an equity stake in addition to granting a loan. It is a technology-driven enterprise, leveraging VSAT and 3G technology for new skilling, up-skilling and re-skilling of people. ESDL’s mandate is to skill and place 15
million youth by 2022. Over 100 customized courses across nine sectors are offered for some industries and students are mobilized through marketing sessions in colleges or schools. Entry-level courses are offered to impart employable skills and advanced courses such as up-skilling and cross-skilling programs are offered to provide vertical and horizontal mobility to the existing work force. The objective is to create a pan-India presence to make unemployed youth industry-ready to meet the demand for skilled labour. They monitor progress through Student Management Systems and the curriculum is developed in partnership with leading educational institutes and content providers. Courses are taught by trainers who are trained at Master Resource Centres. Revenue is generated from student fees and payments under MoRD schemes.

Figure 3-4: Stakeholder Model for Everonn Skill Development Limited

Source: Athena Research
Box 3-1: ITI Upgradation Scheme

The Directorate General of Employment & Training, Ministry of Labour & Employment, Government of India, initiated the Craftsman Training Scheme in 1950 by establishing 50 ITI to impart vocational skills to meet the growing industry's requirement for skilled manpower. Rapid economic growth, developments in technology and globalization of the economy led to a number of changes in the industry's skill needs.

At the beginning of 2007, India had 1,896 Government-run ITIs. The ITI Upgradation Scheme, which commenced in 2005-06, seeks to upgrade 500 of these ITIs into Centres of Excellence. In the Budget Speech 2007-08 Union Finance Minister announced a scheme for upgradation of 1,396 Government ITIs into centres of excellence in specific trades and skills through PPP.

The objective of the Upgradation Scheme is to improve the quality of vocational training in the country in order to make it demand driven and ensure better employability of the graduates.

Source: Directorate General of Employment & Training

3.1.5 ITI-Ukai

Located in one of the most socially and economically backward regions of Gujarat, ITI-Ukai is a government-owned ITI with JK Paper Ltd. as the Lead Industry Partner under the ITI Upgradation scheme. This ITI caters to the skilling needs of the tribal people.

ITI-Ukai has received a 10-year interest-free loan of Rs. 2.5 crore and budgetary support for administrative expenses from the government. This model has facilitated professional management of the institute and has strengthened institute-industry linkages. No fee is charged from the students. Revenue is expected to be generated from the proceeds of sale of plantation crops in the surplus land with the institute, production centres and fees from 20% of the seats under IMC quota.
Figure 3-5: Stakeholder Model for IT-Ukai

Source: Athena Research
3.2  GLOBALLY

Different approaches to skill development have been adopted around the world with varying levels of success. Innovative features adopted by some of the successful programs are presented below, but they must be understood with regard to the context and the characteristics of the country in which they were applied.

3.2.1  Australia

Australia’s Vocational Education and Training (VET) system adopts a market approach regulated by the government and independent bodies, which function within the Australian Qualifications Framework (AQF). Training takes place in classrooms, in the workplace, online and through other flexible delivery methods. The national training system consists of registered training providers (public or private) offering accredited courses. There are currently over 4400 registered training organizations in Australia (approximately 3100 private providers). Government-registered training organizations comprise of Technical and Further Education (TAFE) institutes, secondary schools and colleges, universities and agricultural and technical colleges. Private registered training organizations include enterprises training their own employees, private training and business colleges, specialist bodies providing training within their industry and adult and community organizations. Within the Australian framework, there are also VET options available to school students, with courses ranging from a few hours per week to part-time school-based apprenticeships and traineeships. Apprentices and trainees receive a training wage which increases as they progress. VET is largely funded by the Australian Government and state and territory governments. Companies can contribute by purchasing training for their employees, while students contribute through the payment of course and administrative fees.

3.2.2  Germany

Germany’s dual system of vocational education integrates work-based and school-based learning to prepare apprentices for a successful transition to full-time employment. Each week, trainees spend one or two days in vocational school and three or four days in their company. Progress is evaluated through final examinations in which trainees must show that they have acquired the necessary skills, practical and theoretical knowledge from their companies and that they have mastered the course material. Vocational schools and companies have a joint educational responsibility, while the state coordinates the framework of regulations for training. The responsibility for funding vocational schools lies with the States (to pay teachers’ salaries) and local authorities (to provide equipment, infrastructure), while companies bear the costs of training in the workplace. In some sectors, all the companies contribute towards a general fund to cover the costs of the apprenticing institution, while in other sectors each company bears its own cost. The Federal government and the Employment
Service provide additional VET funding and some government financial support is available for training firms. A bulk of the training cost, however, is borne by the training firms.

3.2.1 Korea

Korea recognized the problem of inadequate investment in skill development as early as the 1970s, when it imposed in-plant training obligations for large firms. The program was reformed in the 1990s in order to ensure a mass supply of skilled workers to the industry and to protect vulnerable groups of the population from unemployment. Korea’s Job Skill Development Program, under the framework of the Employment Insurance system, expanded the existing levy-grant system, whereby employers received a rebate for training of existing employees. Under the JSDP, employers provide training to insured employees, assisted by funds from the government. The government levies insurance payments on the businesses and uses the fund to subsidize corporate training. While the government provided public training centres for self-directed training and training for the unemployed, the focus of the program was to facilitate voluntary training in the private sector. This led to an increase of over 27% in training participation by insured employees in 2004. From 1994 to 2004, the number of employees trained by employers increased by almost 13 times. Following the economic crisis of 1997, there was a substantial increase in training participation by the unemployed as well. Although the scheme successfully addressed the issue of under-investment in training, it did not resolve inequalities in training since employers often chose to invest in training high-skill employees.

3.2.2 Singapore

Singapore’s Continuing Education & Training (CET) program adopts an integrated approach that couples economic development strategies with skill development strategies. Focusing on 23 identified industry sectors, the CET uses a government-driven model that involves a significant level private participation. The Workforce Development Agency (WDA) and the Economic Development Board (EDB) work closely to ensure that the CET provides the requisite skills. The EDB secures specific inward investment from abroad. With the assistance of industry sector groups (industry skills and development councils), the WDA develops strategic plans by mapping future skill requirements in each economic sector. Training is delivered through the CET centres under the Singapore Workforce Skills Qualifications (WSQ) system and its network of training providers. The WDA designs the curriculum, ensures quality control and works with partners including employers, industry leaders, unions, governmental agencies and training organizations to offer training programs. Courses are offered in seven levels, ranging from the entry level to the graduate diploma level. The CET system is financed

---

through a Skill Development Fund (SDF) levy on all employees. The current contribution, introduced in 2008, is payable by employers for all employees up to the first S$4,500 of gross monthly remuneration at the rate of 0.25 per cent or S$2, whichever is higher.

### 3.2.1 South Africa

Under the Skills Development Levy Act, 1999, the South African government collects a statutory levy amounting to 1% of the wage bill from each employer, thereby ensuring that the employers invest in training. In March 2000, 25 Sector Education and Training Authorities (SETAs) were established by the government. The money collected from the statutory levy is used to fund these SETAs. Such subsidization addresses the problem of under-investment in training and simultaneously ensures broad participation by the private sector in such initiatives. SETA also functions as an accreditation agency for training providers in order to ensure that quality standards are maintained. Under the Workplace Skills Plan, the management and the employees discuss the requisite skills and shortfalls in the workplace and the employer funds training for the staff from the accredited training provider. SETA compensates the employer for a part of the money spent while implementing the Workplace Skills Plan. Currently, the Southern African Development Community Qualifications Framework has been planned to facilitate regional integration, quality assurance and global competitiveness of education and training systems in nine Southern African countries.⁴

### 3.2.2 Sri Lanka

In 1999, the ADB-funded Skills Development Project was undertaken in Sri Lanka in response to the high demand for vocational training courses offered by four training providers in the country. The project was co-financed by the Nordic Development Fund and OPEC. The objectives were to improve the quality and relevance of skill training programs and to address the high rate of unemployment among women. In partnership with NGOs and the private sector, the SDP developed a national vocational qualification framework, introduced 20 new courses, upgraded selected vocational training centres and developed a policy framework for the institutionalization of competency-based training. A Vocational Training Complex (VTC) and a Labour Market Information System were also established under the project. The convergence of curricula and standards effected by these measures raised the completion rate at VTCs from 50% to 90%.⁵ IT training for the rural youth helped reduce unemployment and the common national framework allowed better cooperation between VTCs and

---


⁵ Department for International Development (2011). *Engaging the Private Sector in Skills Development* (Guidance Note)
the private sector. However, weak targeting prevented the program from satisfactorily addressing gender inequality in skill acquisition. There was confusion over the purpose and role of the learning resources utilization centres established under the scheme.

### 3.2.3 Switzerland

Switzerland’s VET program caters to two thirds of its youth, who join after completing compulsory schooling. Switzerland’s dual education system involves a combination of vocational education at school and training and practical experience while working for a company. The program involves three sites for learning: the factory or business place (3-4 days a week), vocational schools (1-2 days a week) and the introductory courses (3 months in a special centre/workshop). Apprenticeships typically last from one to four years. Some VET programs are based on a full-time curriculum, usually offered by trade/commercial schools. VET programs closely match the needs of the labour market, both in terms of professional qualifications and the number of jobs available, due to which Switzerland has one of the lowest youth unemployment rates in the world. Tertiary-level Professional Education and Training (PET) is the next step after VET and it prepares students for managerial and specialised positions. There are around 400 PET programs leading to national PET examinations and 400 PET programs leading to PET college degrees. VET programs are funded by the Confederation, the cantons and professional organizations, while the costs of PET programs are borne by companies and private individuals.

### 3.2.1 USA

USA imparts skill training and education through community colleges or city colleges, which are conventionally structured as two-year programs. The fee is heavily subsidized by the local government and costs are significantly lower than traditional private colleges. Community colleges offer associate degrees for jobs that require some college education but not a full four-year degree such as nursing, computer repair, fire-fighting and welding, and local services like job placement, adult continuing education classes and developmental classes for children. These institutions provide opportunities for high school drop-outs to earn a diploma. Many such colleges have also started offering bachelor’s degrees. The courses and programs offered vary across colleges and states. The open enrolment policy allows students who are unable to procure admission in traditional colleges or cannot afford such education to earn a college degree. The time limits for completion of a degree are more relaxed than those of private colleges. However, the quality of education is not usually at par with private colleges and facilities like library and accommodation are limited. The focus of community colleges is to provide some level of post-school education to the students.
3.3 BEST PRACTICES

A best practice is the result of a clear problem definition and well-planned execution of an activity. It is an approach that has been demonstrated to achieve the stated objectives. A best practice should be interpreted and implemented after a thorough evaluation of the context in which it was applied and adapting it to existing circumstances. Based on the review of skill development practices across the world, a set of best practices for skill development have been identified and described in this section.

3.3.1 Objective Definition

Detailed skill gap assessment to understand industry requirements and the shortfall in supply is necessary for understanding larger skill development objectives. Clear objective definition allows the formulation of realistic targets for identified problems. Checks and balances at different levels are required to ensure that short-term needs do not distort broader educational and training goals. Economic development strategies and skill development practices must be closely aligned.

3.3.2 Funding

Skill development requires at least partial state funding. The problem of under-investment by different stakeholders is often addressed by creating infrastructure and providing financial assistance for skill development. It is important, however, to ensure that the financial assistance is linked to performance to ensure optimal utilization of funds. The USA community college model also provides an appealing alternative since the colleges are funded by the local community and the graduates are often absorbed by the local economy. A combination of public and private funding is demonstrated to yield the best results.

3.3.3 Incentive Mechanisms

Since it is not feasible for the state to undertake the entire cost of skill development, incentive mechanisms that induce private players and students to invest must be instituted. The Korean levy-grant system and the South African statutory levy, for instance, try to mobilize funds from the private sector for imparting skills. Singapore’s Skill Development Fund, on the other hand, is created through employee contributions. A combination of public and private funding improves accountability in the utilization of funds. Private sector involvement assures a degree of relevance to the curriculum, since there is an incentive for skill and technology transfer.
3.3.4 Flexibility

Flexibility is a key characteristic of successful skill development initiatives, such as the VET programs in Germany and Singapore. This is a prerequisite for a client-focused approach to skill development. Recognizing and responding to changes in technology and the corresponding changes in industry requirements is necessary for maintaining the relevance of the curriculum to employment opportunities in the labour market, and for ensuring that the trainees are employable. The system should phase out outdated courses and add new programs in response to the emergence of new fields.

3.3.5 Integration

Dual systems (e.g. Germany and Switzerland) that integrate work-based and school-based learning often impart more practical skills. The Australian VET system allows easy movement in and out of vocational training. This offers greater flexibility to students in terms of the choice of courses and career options. Allowing mobility between school/college education and vocational/technical training is likely to reduce difficulties in student mobilization.

3.3.6 Partnership

A high degree of engagement and ownership on the part of the employers and other social partners not only provides access to a larger resource base, but also creates greater awareness about the training programs offered, which in turn facilitates student mobilization. A strong system of communication and interaction between multiple agencies is a running theme across different skill development initiatives. Strong industry leadership ensures that the outcomes expected from training are well-defined.
4. CHALLENGES

4.1 UNDER-INVESTMENT IN SKILL ACQUISITION

The first problem in the skill acquisition process is under-investment by all stakeholders. This is because the cost of skill acquisition exceeds the benefit to any single stakeholder. Since the benefits of skill acquisition do not accrue exclusively to the trainees, we could view training as a public good and formulate the unwillingness to invest in skill acquisition or the under-provision of training as the free-rider problem.

4.1.1 Students

Students are unwilling to invest because they do not fully understand the benefits of acquiring training and are not assured of jobs on completion of the training program. Skill institutes are unable to assure placements or a minimum salary on completion of training. Hence, students are apprehensive about committing their time and/or funds towards acquiring skills. The willingness to pay for training depends on the perceived difference in income before and after acquiring the skills. In the absence of scholarships and educational loans and the lack of evidence about the benefits of skill training, the targeted group of disadvantaged youth has neither the ability, nor the willingness to pay for such training. However, the latest Finance Budget includes a provision of funds for providing scholarships and loans to students for vocational education. NSDC also gives First Loss Default Guarantee to the Central Bank of India for the students’ loans. Under this scheme, the bank offers student loans at an interest rate that is 2% higher than the Prime Lending Rate. While such measures do provide some incentive to backward communities, they do not fully address the fundamental student apprehensions associated with skill development.

4.1.2 Industry

Employers or private firms are unwilling to invest in training employees or contributing towards training the unemployed due to the possibility of the trainee choosing to work for another firm after training. The skills imparted by the training institutes are not sufficiently relevant to the industry, which makes them reluctant to recruit graduates from such institutes.

Becker (1962) distinguishes between general and specific training. General training imparts skills that are applicable across firms and/or industries and lead to steep increases in wage profiles since the worker’s value in the market increases. Specific training which imparts skills that directly enable an employee to perform a particular job more efficiently increase his productivity within the organization he works for, but the skills are not directly transferrable to other jobs. Becker argues that workers should invest in general training since the benefits can be said to accrue directly to the employee in the form of higher wages, while the employer should invest in specific training since the benefits
accrue to the firm in the form of higher worker productivity. He suggests that the cost of general training, if provided by the employer, may be recovered from employee wages during the training period itself, while the cost of specific training can be recovered by paying employees wages that lie below their marginal product.

Under NSDC, Sector Skill Councils have been formed by prominent companies to build a skill base for their sector. These are employer-led organizations funded by NSDC, which work towards reducing skill gaps, building sector-specific competencies and improving workers’ productivity.

4.1.3 Government

According to the 11th Five Year Plan document, India has about 5,114 Industrial Training Institutes (ITIs) which offer 57 engineering courses and 50 non-engineering courses with durations of 1-2 years. State governments run 1,896 ITIs and 3,218 ITIs are run by private organizations. The total seating capacity in these institutes is 7.42 lakh, of which 4 lakh seats are in government-run ITIs. Additionally, the Central Government provides training for topics like electronics and process instrumentation through six Advanced Training Institutes (ATIs). However, none of the courses cater to people who have not completed Class 8. The existing infrastructure is grossly inadequate considering the projected demand for skilled labour. There are also acute regional disparities in the spread of ITIs and ITCs, with over half of them located in the southern states.

4.2 DEMAND-SUPPLY MISMATCH

4.2.1 Low Student Mobilization

The enrolment in skill institutes like ITIs, ITCs and polytechnics, has remained relatively low. Private skill institutes often face very high drop-out rates, in excess of 50% at some institutes. The current Gross Enrolment Ratio\(^6\) for tertiary education in India stands at 12.4% and is low compared to the world average of 23.2% and 36.5% for developing countries. In addition, only 3% of the rural youth and 6% of the urban youth have been vocationally trained. Fewer than 3% of the 14 million students in grades 11–12 are enrolled in vocational education.\(^7\) There is a mismatch between the demand and supply of labour at different skill levels – while there is excess supply of labour with L3 and L4 skill levels, there is excess demand in the industry for people with L1 and L2 skills.

\(^6\) The total enrolment within a country in a specific level of education, regardless of age, expressed as a percentage of the population in the official age group corresponding to this level of education. The gross enrolment ratio can be greater than 100% as a result of grade repetition and entry at ages younger or older than the typical age at that grade level.

\(^7\) Planning Commission and World Bank (2006)
4.2.2 Inadequate Industry Linkages

The overall performance of skill institutes and their attractiveness to students largely depend on industry linkages and whether they are able to provide good placements on completion of the training program. Strong industry linkages also have a positive impact on the quality of skill training by ensuring that the curriculum is relevant to the industry. Despite high industry demand for a skilled workforce, the Indian skill development sector currently suffers from poor placement records and low starting salaries, indicating low quality and the lack of industry relevance of the skills imparted.\(^8\)

4.3 POOR QUALITY OF TRAINING

4.3.1 Absence of Aptitude Tests

One of the major causes for poor delivery of training is the low incidence of pre-assessment or aptitude tests before admission of students at skill institutes. Arbitrarily choosing courses leads to a mismatch between a student’s inherent abilities and interests and the skill training imparted. This is one of the reasons for high drop-out rates – students are unable to cope with the course requirements. In the absence of any formal testing of the students’ scholastic abilities, the courses often impart training at a level that is either too basic or too advanced to meet the students’ requirements.

4.3.2 High Cost

Considering the economic status of the population targeted for skill development, the cost of training is unaffordable for many students. According to Planning Commission estimates, 80% of new entrants to workforce have no opportunity for skill training. In the absence of good placement records and relative to the salaries received at the end of such training programs, the high cost of the course presents a value proposition that is unlikely to appeal to the target market. Vocational training programs that cost more than three months’ salary on completion often struggle to attract students.

4.3.3 Lack of Infrastructure

The existing training infrastructure in India consists of over 5,000 ITIs, 1,200 polytechnics, 20,000 public and private establishments that provide apprenticeships, 10,000 schools for pre-vocational

\(^8\) There have been a few initiatives by the industry in the skill development sector, e.g. Everonn and JK Paper have partnered with skill development institutes under the PPP model, while companies like Larsen & Toubro and Bharti have set up captive skill institutes to meet their skill requirements.
education and 2,500 rural development and self-employment training institutes. Combined, these organizations produce 3.5 million trained personnel per annum against the 12.8 million new entrants into the workforce each year. Most of the infrastructure in the skill development sector today is government-owned, and not many private players are willing to enter the sector due to the uncertain financial sustainability of skill development models.

4.3.4 Shortage of Quality Trainers

One of the major challenges faced by skill institutes is the lack of good trainers. Student-teacher ratios vary from 9 to 50 at different ITIs depending on capacity utilization. Training teachers/trainers and retaining them is expensive. Innovation in training delivery methods can lead to substantial improvements in the quality of the training imparted to the students. The delivery of skills to the students depends, to a large extent, on the competence of the trainers. The lack of industry-faculty interaction on course curricula often leads to irrelevant training modules. The absence of an autonomous system for monitoring the quality of training imparted makes it very difficult to assess the value addition from the programs and the performance of the trainers.

4.3.5 Relevance of Skills

The relevance of skills is a function of how the industry evolves, which in turn depends on regional and international developments, technological advancements, policy changes, etc. One of the reasons that skill institutes have poor placement records is that the curriculum does not provide training that is relevant to job requirements. Outdated curricula or technology cause the training programs to become redundant.

Inflexibility in the curriculum would negate the purpose of a demand-driven skill acquisition system and lead to excess supply in some trades and excess demand in others. Designing a flexible curriculum and constantly upgrading training infrastructure and pedagogy is not only expensive, but also complex since it requires the trainers to learn the new incorporations in the course content. To address this issue, NSDC plans to institute “train the trainers” centres to update instructors with the latest sector-specific competencies.

4.3.6 Lack of Mobility between Formal and Vocational Education Systems

The current formal education system provides limited options for vocational training, while vocational training systems have limited options involving mathematics and language learning. This lack of options makes it very difficult for a person enrolled in the formal education system to get industry relevant skills and leaves a person enrolled in vocational training with limited soft skills. Vocational
courses restrict mobility to formal education and do not allow students to migrate to other institutions of higher education. Students desire more than a semi-professional education.

The Ministry of Human Resource Development’s proposed National Vocational Qualification framework is expected to facilitate integration between formal and vocational education.

4.3.7 Lack of Standardization

There is no standardization of course content, training delivery systems or curricula. Students and employers do not have a clear understanding of the skills that will be imparted under a specific course at a training institute and it is difficult to compare courses across institutes due to the absence of precise definitions for deliverables and the lack of accreditation systems. This is one of the reasons for the preference for formal education since such qualifications are better understood and recognized than skill development programs.

The National Vocational Education Qualification Framework launched in February 2012 is a seven-level certification program with sector-specific qualifications requiring 1,000 hours of training each year in order to standardize vocational degrees. The purpose is to put in place a nationally recognized qualification system covering higher secondary school, vocational education institutes, polytechnics, colleges and institutes of higher education.

4.4 POOR AVAILABILITY OF INFORMATION

4.4.1 Absence of a Labour Market Information System

The purpose of the Labour Market Information System is to provide qualitative and quantitative information, such as the size and composition of the labour market and opportunities available for workers at different skill levels, to allow students to make informed decisions with regard to career planning and education choices, to help employers formulate appropriate recruitment plans and investment strategies for human resource management, and to assist skill institutes in constructing courses based on business requirements. In the absence of this information, all the stakeholders in the skill acquisition process make sub-optimal decisions.

4.4.2 Lack of Clarity on Industry’s Skill Requirements

The skill institutes do not appear to clearly understand the skill requirements of the industry. There is no faculty-industry collaboration to ensure that the skill development courses help students imbibe skills that are important for performing the available jobs. Of the trained candidates, the labour
market outcomes in terms of placement records or the rate of absorption into the industry of skill institute graduates is very low, thereby reducing the incentive for students to enrol in such programs.

4.4.3 No Information on Career Progression

Trainees at skill institutes do not receive information on the career progression that can be expected on completion of training. This is partly due to the scanty placement statistics and weak industry linkages. Although the institutes are often set up in rural areas, the jobs offered to the trainees are in urban areas. The absence of information on the nature and location of the job leads to uninformed skill acquisition choices. For example, skill trainees belonging to economically weaker sections of society cannot be expected to migrate to another area for a job, considering the higher costs associated with living independently in a city. High attrition of such trainees from jobs is one of the reasons for low recruitment from skill institutes.

4.4.4 Low awareness of existing courses

The section of the population that does not finish school remains largely under-skilled and unutilised. Nearly 40% of the total secondary level education population over the last decade fall within this category. The 61st NSSO Round (2004-05) results show that only 2% of the population between 15–29 years of age received formal vocational training and 8% received informal vocational training, indicating that very few young people actually enter the labour force with any kind of formal vocational training. This is partly because students are not aware of the existing courses or how they can improve career prospects.

4.5 LACK OF BRANDING

4.5.1 Skill Development not seen as a viable alternative to formal education

Skill development is yet to gain acceptance as a viable alternative to formal education. Most of the prospective students are not willing to substitute the two since they neither have information on industry requirements, nor have adequate evidence of people receiving jobs after completing skill development courses. While it may be seen as an enhancement of career prospects, skill training, by itself is not deemed adequate for employment.

4.5.2 Perceived lack of dignity in blue collar jobs

Low enrollment in skill institutes can also be attributed to the perceived lack of dignity in blue collar jobs. The youth increasingly prefer to opt for white collar jobs. The lack of integration between formal
and vocation education systems, and the low salaries received by workers with such skills contribute towards the formation of this perception. Poor working conditions and the lack of career progression for blue collar labour is one of the major factors contributing to this perception.

The payoff curves of different vocations vary widely. For some trades, the starting pay is attractive but career growth prospects are few. For others, while the starting salaries may be low, there are steady growth opportunities. Providing such information would help the youth make better choices.\(^9\)

\(^9\) NSDC’s 2011 advertising campaign: “hunar hai to kadar hai” (if you have a skill, you will be respected) attempted to improve the public perception of vocational education. Over 20,000 persons got skilled in 2010-11 and 50,000 in the first half 2011.
5. RECOMMENDATIONS

5.1 PERFORMANCE EVALUATION

Performance evaluation will induce competition among skill institutes and reduce informational asymmetries, which will lead to a more efficient market outcome. In order to improve the performance of the skill institutes, detailed performance evaluation of the companies that NSDC has invested in needs to be undertaken. This will help identify models that are successful, prevent misuse of funds and ensure that the capacity created is contributing towards improving the employability of the students.

Another indicator of institute performance is tracking the performance of the students who enroll at the institute by creating learning curves for a sample of students at different stages of the training process to assess the quality of training provided and the value addition from the course to the students, allowing the training methodology to be revised accordingly.

5.1.1 Research on Alternative Models

Currently, there is very little research on possible business models and structures that can be used. In order to ensure optimal use of government funds and to encourage private enterprise, further research must be carried out regarding alternative models that could be implemented, along with pilot surveys and evidence to support the suggestions.

5.1.2 Performance-based Incentives for Skill Institutes

In addition to creating capacity, there is a need to impart quality training to improve the employability of students enrolled in skill institutes. Currently, NSDC provides grants to private skill institutes that submit proposals with models that satisfy certain criteria. Incentive mechanisms that focus on the performance of skill institutes in terms of training and placements will go a long way in addressing a number of issues in the skill development process. Unless there is a noticeable improvement in wages/salaries after training, student mobilization will continue to be a problem.

5.1.3 Financial Assistance based on Performance

Financial assistance provided to such institutes should not only depend on capacity-creation, but on the performance of skill institutes in terms of capability building and placements. Implementing such performance evaluation systems will also encourage competition among various institutes, thereby improving course quality. Relaxing loan repayment schedules or providing rebates to institutes based on the number of students placed and the salary packages received by those students will incentivize
stronger industry linkages, relevant curricula and efficient use of government funds. It is essential to associate the provision of funds with the actual performance of skill institutes.

5.1.4 Institute rankings to provide credibility

Third-party rankings of existing skill institutes based on their curriculum, faculty, quality of training provided, placement statistics and student feedback must be published and made available to students, similar to the rankings of other institutes of higher education. This will incentivize skill institutes to perform better in order to attract better talent and provide credibility to the skill development courses, thereby partially resolving the issue of under-investment in skill acquisition.

5.1.5 Checking Fraudulent Institutes

One of the causes for under-investment by students and industry is the lack of credibility of skill institutes. Recognizing institutes and establishing accreditation systems will help prevent fraudulent institutes from cheating students or misusing government funds. Transparency norms and compulsory disclosures under accounting systems should also be put in place.

5.2 FOCUS ON QUALITY

Free entry into the skill development market should lead to higher competition, thereby ensuring that the best institutes attract the best students. The quality of a course should be assessed by the capability of the graduates. Incentive mechanisms should ensure that market outcomes are favorable for all the stakeholders in terms of course quality, i.e. the courses should be relevant to the jobs available. Initiating programs for tracking on-the-job performance of skill institute graduates and the movement of manpower will indicate productivity improvements from undergoing training.

5.2.1 Detailed Surveys to assess exact Skilling Requirements

There is a lack of understanding regarding industry skill requirements and student aspirations. In order to bridge the demand-supply gap, it is essential to further probe the causes of this skill gap. It is important to understand the exact skilling requirements and the career progression that a skill institute graduate can expect. This information will be invaluable in designing courses and facilitating placements. One possible study design that can be used is tracking a panel of students after they complete the skill development program.
5.2.2 The Use of Technology

The lack of quality trainers is a debilitating issue that has adverse implications for skill institutes as well as students. One possible solution is encouraging private players to reduce the dependence on trainers by leveraging technology. Using teaching aids such as videos, presentations and study material can help standardize course content and ensure that core ideas and concepts are delivered in the intended manner. There is a need for research-based innovation in teaching methodologies at skill institutes, which can be induced through greater competition and investment in research.

5.2.3 Certification and Retention of Trainers

Instituting a certifying exam that serves as an entrance exam for being a trainer at a skill institute will provide a signal to measure trainer quality, indicating that the trainer possesses a certain basic level of expertise. Providing certification to trainers in their area of specialization will improve the quality of training delivered and allow students to view skill development as a viable alternative to formal education. Private skill institutes will prefer certified trainers since it will act as a signal of course quality in the market.

In order to retain quality trainers, there should be incentive mechanisms that encourage them to perform better. Skill institutes should offer performance-based incentives, e.g. bonuses for every student placed will make the economic returns to training higher and ensure better training quality.

5.2.4 Information to skill institutes for designing courses

Information systems that inform skill institutes about the vacancies available for trainees on completion of the course and the skills required for performing such jobs will ensure that the skills imparted through such training are relevant to industry requirements. In a market with many players and positive incentives, this information will become a source for gaining competitive advantage and skill institutes will find it in their interest to invest in research and development.

5.2.5 Compulsory Upgradation of Courses

In order to ensure that the curriculum and the pedagogy retain their relevance, it should be mandatory for skill institutes to revise their curriculum and upgrade their infrastructure and technology at regular intervals. Skill institutes must regularly update their curriculum and use feedback from the industry to ensure that the courses taught incorporate changes in the business environment.
5.2.6  Mandatory Internships/Apprenticeships

Often, it is difficult to attract master craftsmen/traders to work as trainers at skill institutes. However, they possess very specific skill sets which may be difficult to imbibe through classroom teaching. In order to strengthen industry linkages, address the issue of the lack of quality trainers and maintain the relevance of the skill set to the jobs available, internships or apprenticeships should be made a mandatory part of the course requirement for certain fields of specialization. Exposure to the industry before formally being inducted in it will also prepare a student better for jobs, teach him/her to apply the skills acquired and improve placement opportunities.

5.2.7  Coordinate among institutes for consistency

NSDC must coordinate with different skill institutes to standardize course content, create classifications of skill types, maintain skill inventories and draft skill standards and uniform evaluation criteria. Compulsory core courses should be defined for each skill diploma awarded. This will ensure consistency in skill certification, thereby reducing employer apprehensions regarding recruitment.

5.3  CATERING TO STUDENT NEEDS

The purpose of skill development is to meet student aspirations and enhance their employability. Therefore, orienting skill courses to student needs is essential. The first step in this process is to facilitate informed decision-making. One solution is to hold focus group discussions among students at different skill levels to understand their aspirations.

5.3.1  Awareness among students

Under-investment in skill acquisition by students is partly due to the lack of awareness about existing courses and institutes. Making information about existing skill institutes easily accessible to students through websites, local newspapers and magazines will lend credibility to skill institutes, allow students to make informed skill investments taking account of the expected career progression and increase student mobilization. Positioning skill development as a viable alternative to formal college education through campaigns like ‘hunar hai to kadar hai’ will help reduce the lack of dignity associated with blue collar jobs. Advertising campaigns by skill institutes can also contribute towards brand-building and generating greater awareness among students.
5.3.2 Access to Information

Students should have access to information about the courses available, the jobs that they will be eligible for on completion of the course and their future career prospects. Development of centralized or state level portals for information dissemination about skill institutes and their performance is also required. Students can choose to specialize in skill courses based on the skill set provided, the quality of training and the vacancies available in the job market.

To provide clarity on the market value of the course, LMIS data should be freely available to prospective students so that they can assess the demand for each skill set based on the vacancies available and the labour market changes forecasted before choosing to invest in any course. Encouraging the private sector or industry associations to maintain sector-specific LMIS is a possible solution. Industry-feedback mechanisms will lead to market-driven courses that effect a measurable improvement in the students’ chances of getting a job in their industry of interest.

5.3.3 Aptitude Tests

In order to help students identify their own interests and abilities, students should undergo aptitude tests before enrolling at a skill institute. This will allow a student recognize his/her innate talents and make a better investment decision, thereby facilitating better matching of students with courses. Private skill institutes may collaborate to hold a single aptitude test, as is the case with formal education at present.

5.3.4 Indicators of Institute Quality

To help students gauge the quality of the skill institutes, alumni rosters should be maintained and prospective students should be encouraged to seek the opinions of ex-students on the training quality, the effect on career prospects and the market assessment of different skill sets. In addition to helping students make better course choices, this will provide an incentive for skill institutes to maintain certain quality standards.

5.3.5 Mobility between formal and informal education

The National Vocational Education Qualification Framework is an attempt to integrate formal and informal education systems. Allowing students to transfer to the formal education system after completing a course at a skill development institute by defining its degree equivalent will incentivize more students to enhance their employability without the fear of adversely affecting their career and education prospects. It will also reduce the perceived lack of dignity associated with such courses.
5.3.6 Student Feedback

Seeking feedback from students about the courses will ensure that the focus of the skill development process is on student outcomes. Allowing students to share their views about the course at regular intervals will also prevent students from dropping out. It will help formulate innovative training methods to suit student needs. On completion of the course, students should be asked to provide detailed responses regarding the structure of the course, the pedagogy and the learning process.

5.3.7 Focus on Women

While NSDC has attempted to meet the skilling needs of socially and economically disadvantaged groups through loans and scholarships, there is a need to create greater focus on employing women to address gender imbalances in skill acquisition and employment. Further research to assess the extent of inequality is required. Recruiting female trainers and setting up skill institutes that focus on making women employable will increase overall participation rates in skill development.

5.3.8 Awareness among employers

Initiatives to inform prospective employers about skill development courses and to encourage them to recruit from skill institutes are required to address the problem of inadequate industry linkages for skill institutes. Investments by employers for imparting job-specific skills to the employees will help resolve the issue of under-investment in skill development by the industry and ensure that the curriculum is suited to business requirements. It can be expected that private skill institutes will increase efforts to improve placements by contacting employers in order to attract more students.

5.3.9 Minimum Salary Requirements

Guidelines on the minimum salary requirements for different types of skilled labour must be developed. Such an assurance of a minimum salary will prevent under-investment by students. It will also make the value proposition presented by the skill institutes clear to the students.

5.3.10 Promote Local Jobs

Students at skill institutes are often unwilling to relocate to a city due to limited resources and the higher costs associated with living in an urban area. Skill institutes must take student needs into
consideration and focus on equipping them with skills relevant for the local industry and offer placements in nearby areas. This will help make a skilled labour force available to the local economy.

5.3.11 Employment Exchanges

Better management of employment exchanges will increase the probability of placement. It will serve as an interface between the industry and the students in order to facilitate recruitments. This will have a positive impact on student mobilization due to improved industry linkages and placement records. Encouraging private management of employment exchanges is one possible solution.

5.3.12 Promote dialogue among students, industry and skill institutes

There exists an information asymmetry between the skill institutes and the students on the nature of courses provided. Skill institutes know the nature of course offered but prospective students do not receive adequate information in this regard. Creating a forum that allows dialogue and interaction among students, prospective students, alumni and prospective employers will allow students to make more informed decisions regarding investments in skill acquisition based on industry requirements, the quality of training provided by skill institutes and the expected career prospects on completion of the course.

5.3.13 Job Matching

Better job matching by informing students of the tradeoff between salary and flexibility in working conditions is a must. It will reduce attrition rates after placement and allow the students to make better choices based on their aspirations. Seminars should be conducted by the trainers, recruiters and alumni.
6. CONCLUSION

It is possible to incentivize private firms to invest in imparting job-specific skills to employees since it improves their performance and productivity on the job. It is possible to provide impetus to such initiatives by offering tax breaks or rebates to private employers who invest in training their employees.

Economic theory shows that the optimal skill investment model is one in which employers fund the acquisition of job-specific skills while employees invest in improving general skills that improve their productivity across firms. However, it is difficult to segregate all training clearly into general or specific training. Solutions adopted globally advocate a role for the government in funding skill acquisition. In Korea, for instance, employers are required to make a contribution towards employees’ insurance. The funds so collected are used by the government to provide grants to businesses that train their employees. However, in such a system, it can be expected that an employer will choose to equip the employee with specific training for fear of losing the employee to another firm when the training is completed. Since the purpose of such training is to improve productivity, the employers often choose to train employees who are already high-skilled. Hence, such a system will not target the disadvantaged groups.

In USA, community colleges offer education at highly subsidized rates to local students. The fees are subsidized using local taxes. This framework addresses the funding problem, ensures a focus on the local economy and allows the student to choose the skills he/she would like to acquire. However, it is not geared towards skill development based on industry demand and is similar to supply-driven systems.

A combination of such measures, taking account of the Indian context and the problems faced in the skill acquisition process, may help solve the problem. For instance, subsidizing skill institutes through local taxes and focusing on developing skills required by local industry is one possible solution. Providing rebates to employers for providing training to existing employees, with special focus on disadvantaged groups, is also a possibility.

A deeper investigation of the economic conditions and the regional challenges faced in skilling is required to address the problems faced by different stakeholders in the skill acquisition process. The structure of the courses offered will depend on who pays for the courses. If the students finance it, it is likely that the training will be more general. If the employer finances it, it will involve more specific, technical skills. Institutes should offer a range of courses to suit different training requirements.

The skill development policy itself needs to be revised and reformed based on the business environment and economic developments. Policy must stay abreast of changing industry needs, changes in the composition of the labour force, demand and supply disturbances and best practices in the skill development sector.
7. BIBLIOGRAPHY


