

National Knowledge Commission

Report to the Nation

2006 - 2009



सत्यमेव जयते

Government of India

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Introduction

Knowledge has been recognised as the key driving force in the 21st century and India's ability to emerge as a globally competitive player will substantially depend on its knowledge resources. To foster generational change, a systemic transformation is required that seeks to address the concerns of the entire knowledge spectrum. This massive endeavour involves creating a roadmap for reform of the knowledge sector that focuses on enhancing access to knowledge, fundamentally improving education systems and their delivery, re-shaping the research, development and innovation structures, and harnessing knowledge applications for generating better services. Such a knowledge revolution that seeks to build capacity and generate quality will enable our country to empower its human capital – including the 550 million below the age of 25. Our unique demographic dividend offers a tremendous opportunity as well as a daunting challenge which requires creative strategies for a new knowledge oriented paradigm.

Keeping this scenario in mind, the National Knowledge Commission (NKC) was constituted in June 2005 by the Prime Minister Dr. Manmohan Singh, under the Chairmanship of Mr. Sam Pitroda, to prepare a blueprint for reform of our knowledge related institutions and infrastructure which would enable India to meet the challenges of the future. The Terms of Reference of NKC are:

- Build excellence in the educational system to meet the knowledge challenges of the 21st century and increase India's competitive advantage in fields of knowledge.
- Promote creation of knowledge in Science & Technology laboratories.

- Improve the management of institutions engaged in Intellectual Property Rights.
- Promote knowledge applications in Agriculture and Industry.
- Promote the use of knowledge capabilities in making government an effective, transparent and accountable service provider to the citizen and promote widespread sharing of knowledge to maximise public benefit.

To take its mandate forward the Commission focused on five key aspects of knowledge: enhancing access to knowledge, reinvigorating institutions where knowledge concepts are imparted, creating a world class environment for creation of knowledge, promoting applications of knowledge for sustained and inclusive growth and using knowledge applications in efficient delivery of public services. Specific focus areas were identified to realise each of these objectives. NKC carried out wide stakeholder consultations, in particular engaging non-government organisations and experts in the form of Working Groups, while formulating recommendations.

In three years NKC has submitted recommendations on 27 focus areas in the form of letters to the Prime Minister. These have been widely disseminated in three compilations: 'Report to the Nation 2006', 'Report to the Nation 2007' as well as 'Towards a Knowledge Society' which is a compilation of the education recommendations. The recommendations, also accessible through the NKC website, have been widely debated. NKC has also reached out to State Governments for developing knowledge initiatives at the state level.

Vocational Education and Training

December 1, 2006

NKC considers Vocational Education and Training (VET) to be an important element of the nation's education initiative. In order for VET to play its part effectively in the changing national context and for India to enjoy the fruits of the demographic dividend, there is an urgent need to redefine the critical elements of imparting vocational education to make them flexible, contemporary, relevant, inclusive and creative. The Government is well aware of the important role of VET and has already taken a number of important initiatives. Through consultations with industry groups, academics, civil society and practitioners, NKC has deliberated on ways and means to strengthen these initiatives and recommends the following long and short-term strategies.

1. Place vocational education entirely under the Ministry of Human Resource Development (MHRD)

In view of the role of VET in human resource development and importance of its linkages with other streams of education, the Government may consider placing all aspects of VET under MHRD. Currently, VET falls under the purview of MHRD as well as the Ministry of Labour, which leads to fragmented management of the VET framework. MHRD may consider setting up a National Institute for Vocational Education Planning and Development to formulate strategy, advise the Government, and undertake research and development in areas pertaining to technology and workforce development.

2. Increase the flexibility of VET within the mainstream education system through the following steps

- i. Aspects of general education (such as numeracy skills) should be retained in VET as far as possible, to

enable students to return to mainstream education at a later stage.

- ii. Courses in training institutes and polytechnics should have distinct tracks for students of different educational attainments.
- iii. Entry requirements for certain trades should reflect the requirement of the trade (as appropriate, for instance the entry requirement of Class X could be relaxed to Class VIII in some cases). Students should be permitted multiple entry and exit options in the vocational education stream.
- iv. Links should be established between the vocational education stream and school education as well as higher education.
- v. Courses devoted to certain skills training at the primary and secondary level should be introduced in all schools.
- vi. Vocational training should be made available in various literacy and adult education schemes.
- vii. Schemes for lifelong skill up-gradation, through short training programs, should be introduced.
- viii. There should be a provision for generating a cadre of multi-skilled persons.

3. Quantify and monitor the impact of vocational education

Data should be collected periodically and analysed in order to assess the impact of training on employability. Empirical evidence on wage premium or other advantages enjoyed by VET graduates, seat utilisation in training institutes, nature of employment post-training, and the efficacy of various schemes is essential for continuous improvement. A detailed exercise of manpower analysis is a necessary step to understanding the nature and quantum of demand for VET and the mismatch between the skills of VET certificate holders and the requirements of the labour market. This exercise may be undertaken by the proposed National Institute for Vocational Education Planning and Development.

4. Increase resource allocation to vocational education

In per capita terms, vocational education costs more than general education, however public expenditure on vocational education has been extremely low, as compared to general secondary education. Given the demand for skilled manpower in manufacturing and services, the Government should aim to spend at least 10-15 per cent of its total public expenditure on education, on vocational education. Some options that may be considered for raising additional funds to finance a modernised VET scheme are:

- i. Enhancing fees, coupled with student loan schemes. This would also make VET institutions more responsive to market needs.
- ii. Raising funds through a cess on employers (for instance two per cent of salaries of all employees, as in Singapore).
- iii. Making it obligatory for companies to finance public vocational education and training programs (as in Korea).

5. Expand capacity through innovative delivery models

In order to meet the burgeoning requirements of skilled and unskilled labour, a massive increase in quantity of training is needed. The Government could explore new delivery models to increase capacity such as public private partnerships, decentralised delivery, distance learning and computerised vocational training. At the same time, the Government must introduce certain minimum standards as a measure of quality, and ensure that all public and private VET institutions adhere to these.

6. Enhance the training options available for the unorganised and informal sector

The greatest challenge lies in providing training for potential entrants in the unorganised/informal sector, which accounts for the largest proportion of employment. Systematic efforts need to be made to impart the skills required by the unorganised sector. These should be formally introduced in the curricula and practical training courses. In order to achieve this, the Government should act as a facilitator and provide financial support. This aspect of VET is critical for the success of the system as a whole.

7. Strengthen the current institutional structure

The existing Industrial Training Institutes (ITIs) and Industrial Training Centres (ITCs) are widely recognised to face problems such as poor quality trainers, lack of flexibility, and outdated infrastructure. Measures to improve the existing institutions are as follows:

- i. Extent of functional autonomy must be increased, ITIs should be given more power to strengthen and adapt their training programs to better meet local market needs.
- ii. Indicators of internal and external efficiency should be developed (by the proposed National Institute) to incentivise good performance.
- iii. Modules on literacy, numeracy, communication skills, entrepreneurship and other general skills relevant to workplace requirements must be introduced in all courses.
- iv. Different tracks within courses for different levels of specialisation should be introduced.
- v. Students should be offered incentives such as tools, membership of trade associations etc., as part of their degree or diploma.
- vi. Industry and trade involvement should be enhanced not only at the internship stage, but also at the time of examinations and placements.
- vii. Curricula should be constantly monitored and updated.
- viii. The skills and courses offered should be reviewed periodically. The number of skills currently offered needs to be increased.
- ix. Teaching should be conducted in English as well as local languages.
- x. Infrastructure should be regularly upgraded.
- xi. Quality of teaching should be drastically improved.

8. Ensure a robust regulatory and accreditation framework

In order to achieve the desired modernisation and expansion, a critical aspect will be to regulate entry of new institutions and accreditation of all institutions. NKC therefore recommends that an independent regulatory agency for VET be established. This body would license accreditation agencies and prescribe standards for certification. The procedures and methodologies adopted by the body would need to be simple and transparent to ensure unhindered growth in the sector.

9. Ensure proper certification

At present, the process of certification is handled by the National Council for Vocational Training (NCVT), in association with State Councils for Vocational Training (SCVTs). Clear demarcation between the roles of the NCVT, the SCVTs and the Directorate General of Employment and Training is essential for the proper functioning of the certification process. In order to ensure recognition of certification by employers, both in India and abroad, an electronic database of certified training providers as well as electronic identification for certified workers should be introduced. Electronic identification should contain information regarding skills and qualifications (and eventually other relevant information as well) about certified individuals and can be used to facilitate mobility of workers, encourage bank linkages and entrepreneurial initiatives.

10. Undertake a re-branding exercise

It is widely recognised that a crucial problem with vocational training in India is a negative association

with manual labour. In order to match the modern requirement of the skills and competitiveness of the workforce, a massive re-branding exercise is of the highest priority. This could be the prime task of the recently announced National Skills Mission. Initiatives such as replacing the use of terms like 'vocational education' by 'skill development' are a step in the right direction. Training institutes should try to chart out a career path for their students and introduce entrepreneurship training modules.

It is crucial to significantly increase public and private investment in VET. However, a detailed analysis of manpower requirements in terms of numbers, skills and competitiveness is essential before formulating a master plan and deciding the quantum of expenditure in the 11th Plan. A robust framework put in place as a visible and dedicated resource in the MHRD is a pre-requisite to ensuring quality and facilitating significant private investment and participation. Most importantly, the quality as well as the image of VET needs to be actively promoted in order for it to be viewed as comparable to general secondary education, and as relevant.