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## SKILLS & COMPETENCIES FOR THE AGE OF SUSTAINABILITY: AN UNPRECEDENTED TIME OF OPPORTUNITY

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### ABSTRACT

*Skills and knowledge are the driving forces of economic growth and social development for any country. Countries with higher and better levels of skills adjust more effectively to the challenges and opportunities of world of work. India has set a target of skilling 500 million people by 2022. As the proportion of working age group of 15-59 years will be increasing steadily, India has the advantage of "demographic dividend". Harnessing the demographic dividend through appropriate skill development efforts would provide an opportunity to achieve inclusion and productivity within the country and also a reduction in the global skill shortages. Large scale skill development is thus an imminent imperative. The article highlights the skills required for sustainability as the country moves to a sustainable, low carbon, resource efficient economy; a range of skills for sustainability will be required in existing, emerging and new industries. In any one context, one is likely to draw on more than one competency. In fact, any given situation or goal may demand a constellation of competencies, configured differently for each particular case. Thus the technique of combining key competencies is elaborated in the article. The article brings to light the challenges for skill development and the barriers to effective skill development. The article concludes that quality and relevance of skill development are key to India's global competitiveness as well as to improve an individual's access to decent employment.*

### KEYWORDS

Ability, commitment, competence, skills, sustainability.

### INTRODUCTION

India is increasingly becoming a top global innovator for high-tech products and services. Still, the country is underperforming relative to its innovation potential - with direct implications for long-term industrial competitiveness and economic growth. About 90 percent of Indian workers are employed in the informal sector, and this sector is often characterized by underemployment, as well as low-productivity and low-skill activities. Although India has the benefit of a dynamic young population with more than half of the country's population under 25 years old— only 17 percent of people in their mid-20s and older have a secondary education. To sustain rapid growth and help alleviate poverty, India needs to aggressively harness its innovation potential, relying on innovation-led, rapid, and inclusive growth to achieve economic and social transformation.

The need is to up-skill the Indian workforce so that our businesses and industry is efficient, sustainable, and internationally competitive. Our key competitive advantage has been the intellectual capital of our employees. Now over 60% of the jobs demand skills and competencies of well trained employees. Therefore, it is an undisputed fact that human capital is critical to organisation's financial performance. The financial impact resulting from strategic investment in learning and development is also well documented in several reputed research studies. It is critical for all successful organisations to build a competitive advantage through training & skilling human resources and to link enhanced employee productivity directly to business gains. In today's dynamic business environment, 'people skills' and competence are critical for both personal and organisational success. Skills for sustainability (also known as green skills), are the technical skills, knowledge, values and attitudes needed in the workforce to develop and support sustainable social, economic and environmental outcomes in business, industry and the community. An organisation's performance hinges on its ability to hire, retain and groom the best talent in a highly complex business environment.

### GLOBALISATION DRIVEN BY TECHNOLOGY AND THE EMERGING KNOWLEDGE ECONOMY

Globalisation and modernisation are creating an increasingly diverse and interconnected world. To make sense of and function well in this world, individuals need to master changing technologies and make sense of large amounts of available information. They also face collective challenges as societies – such as balancing economic growth with environmental sustainability, and prosperity with social equity. In these contexts, the competencies that individuals need to meet their goals have become more complex, requiring more than the mastery of certain narrowly defined skills. "Sustainable development and social cohesion depend critically on the competencies of all of our population – with competencies understood to cover knowledge, skills, attitudes and values."

Occupational patterns are changing; new jobs and job titles, job enlargement, job enrichment, and new flexible work arrangements are emerging. Employment demands are shifting towards higher skill categories. It is imperative, therefore, for India to move up the skill-ladder and produce a larger number of people with higher education and generic training for new types of knowledge work, both in high skill services and high technology industrial production. Knowledge professionals will need support from middle-skilled workers in new knowledge and technology areas. The skill development system will need to meet this challenge. The response time is limited as the rate of change is high and accelerating.

### INDIVIDUAL AND GLOBAL CHALLENGES

Individuals need to draw on key competencies that allow them to adapt to a world characterized by change, complexity and interdependence. Not only are individuals expected to be adaptive, but also innovative, creative, self-directed and self-motivated. These competencies need to be appropriate for a world where:

- Technology is changing rapidly and continuously, and learning to deal with it requires not just one-off mastery of processes but also adaptability.
- Societies are becoming more diverse and compartmentalized, with interpersonal relationships therefore requiring more contact with those who are different from oneself.
- Globalisation is creating new forms of interdependence, and actions are subject both to influences (such as economic competition) and consequences (such as pollution) that stretch well beyond an individual's local or national community.

Achieving sustainability will require a new set of skills and abilities. Decisions and activities of individuals are to be revamped so that they are supported by an understanding of science and business with the goals of:

- a) Integrating actions of conservation and human development.
- b) Satisfying basic human needs.
- c) Achieving equality and social justice for all.
- d) Facilitating social self-determination and cultural diversity.
- e) Managing our legacy for future generations.

- f) Maintaining ecological integrity.
- g) Developing new technologies and product manufacturing processes.

In order to attain this model of practice, existing and aspiring practitioners in different areas of sustainable development should be exposed to a consistent set of criteria and competencies defining their educational achievements in the overall field of sustainability.

**SKILLS FOR SUSTAINABILITY**

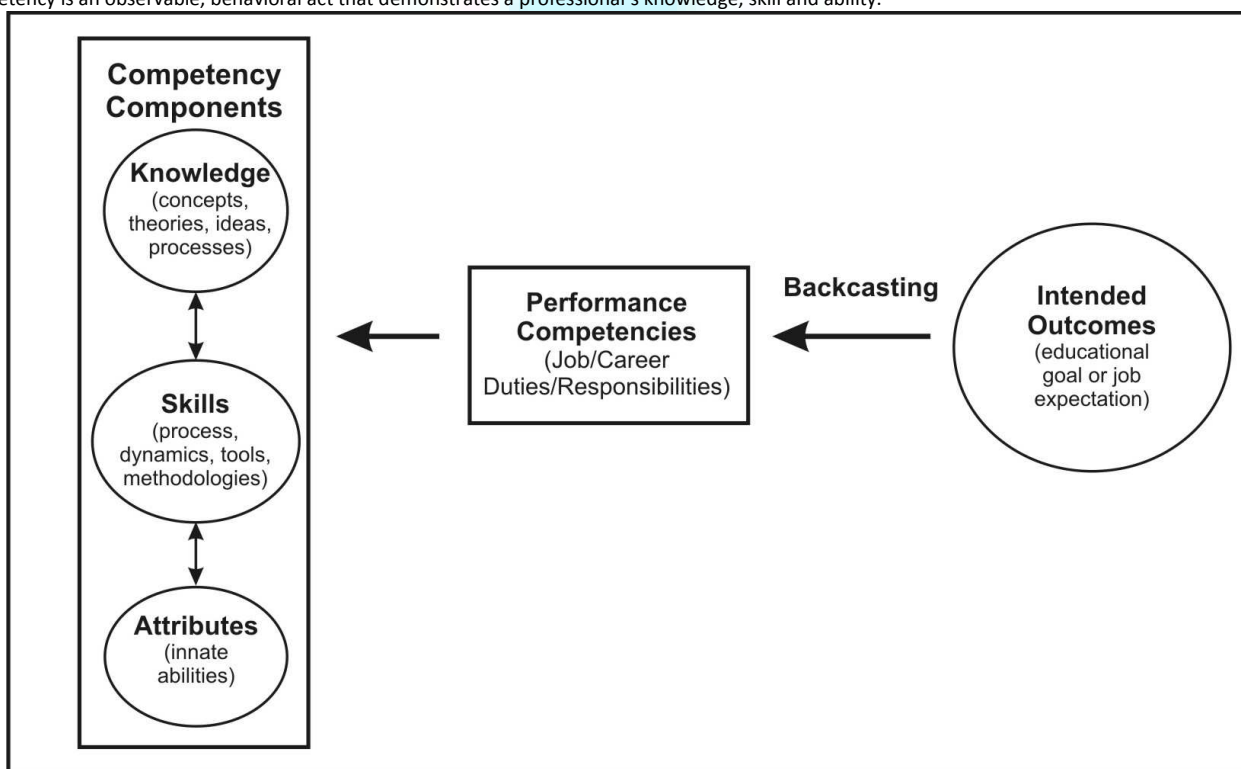
Our transformation from unsustainability to sustainability comprises of four sets of critical skills required to realize the great opportunity for creating a better world:

- ✓ the skills of thinking and seeing systemically or holistically
- ✓ the skills of creating a positive vision of the future
- ✓ the skills of finding like-minded people for cooperative efforts
- ✓ the skills of using available resources in new ways

This set of skills is absolutely essential to make strategic decisions about how to contribute to sustainability with our life, or even how to generate positive visions of humanity's future. Sustainability is not just an "environmental" matter; it is a matter of changing the whole way we understand ourselves, the way we think about and behave towards ourselves and each other. It demands a holistic approach.

As the country moves to a sustainable, low carbon, resource efficient economy, a range of skills for sustainability will be required in existing, emerging and new industries. And workers across the economy will need new skills to increase resource efficiency, reduce waste, conserve water and develop and implement new technologies and practices for a more sustainable world. Skills for sustainability will be important to all industries and sectors, not just to the trades. For example: lawyers, accountants and economists will need to respond to the demand for environmental reporting and accounting practices. Planners, architects and engineers will need to respond to demand for sustainable design and new green materials. Business owners and operators will need to respond to rapidly escalating energy, water and waste costs. Retailers, service providers and procurement managers will need to respond to increasing consumer and client demand for green products and services. Primary producers will need to respond to rising input costs and land degradation.

A competency is an observable, behavioral act that demonstrates a professional's knowledge, skill and ability.



Competence includes the knowledge, understanding and skills that underpin performance. It is attained through a mixture of education, training and professional development. Competence (or competency) is the ability of an individual to perform a job properly. A competency is a set of defined behaviors that provide a structured guide enabling the identification, evaluation and development of the behaviors in individual employees. As defined, the term "competence" first appeared in an article authored by Craig C. Lundberg in 1970 titled "Planning the Executive Development Program". "Competence" is a combination of knowledge, skills and behavior used to improve performance or the state or quality of being adequately or well qualified, having the ability to perform a specific role. For instance, management competency might include systems thinking and emotional intelligence, and skills in influence and negotiation. Competency is also used as a more general description of the requirements of human beings in organizations and communities. Competency is sometimes thought of as being shown in action in a situation and context that might be different the next time a person has to act. In emergencies, competent people may react to a situation following behaviors they have previously found to succeed. To be competent a person would need to be able to interpret the situation in the context and to have a repertoire of possible actions to take and have trained in the possible actions in the repertoire, if this is relevant. Regardless of training, competency would grow through experience and the extent of an individual to learn and adapt. Competency has different meanings, and continues to remain one of the most diffuse terms in the management development sector, and the organizational and occupational literature.

The OECD's Definition and Selection of Competencies (DeSeCo) Project's conceptual framework for key competencies classifies competencies in three broad categories.

First, individuals need to be able to use a wide range of tools for interacting effectively with the environment: both physical ones such as information technology and socio-cultural ones such as the use of language. They need to understand such tools well enough to adapt them for their own purposes – to use tools interactively.

Second, in an increasingly interdependent world, individuals need to be able to engage with others, and as they will encounter people from a range of backgrounds, it is important that they are able to interact in heterogeneous groups.

Third, individuals need to be able to take responsibility for managing their own lives, situate their lives in the broader social context and act autonomously. These categories, each with a specific focus, are interrelated, and collectively form a basis for identifying and mapping key competencies. The need for individuals to think and act reflectively is central to this framework of competencies. Reflectiveness involves not just the ability to apply routinely a formula or method for confronting a situation, but also the ability to deal with change, learn from experience and think and act with a critical stance.



**CORE COMPETENCE IN SUSTAINABILITY**

Competence is a functionally linked complex of knowledge, skills, and attitudes that enable successful task performance and problem solving. Competencies in sustainability, these are complexes of knowledge, skills, and attitudes that enable successful task performance and problem solving with respect to real-world sustainability problems, challenges, and opportunities.

**SUSTAINABILITY REQUIRES**

- Collaboration across/beyond disciplines
- Involvement of stakeholders
- Commitment to justice and equity

Competencies as abstractions of work-relevant human behaviour have emerged as a promising concept for making human skills, knowledge and abilities manageable and addressable in a wide range of application areas. From a management point of view, they provide a more adequate approximation of human performance factors than the notion of "knowledge" in traditional knowledge management approaches as they can represent a set of skills, knowledge, and abilities that belongs together and as competencies go beyond mere "knowing" towards work-relevant action. For the traditional training (and human resource development) community, competencies allow for operationalizing learning goals and outcomes and thus can serve as a control instrument. And competence management approach aim at connecting the individual and the organizational perspective via the competency abstraction.

**COMPETENCY-DRIVEN APPROACHES ARE FACING FUNDAMENTAL CHALLENGES**

- a) A well-defined common understanding of each competency needs to be developed and enforced across various departments or even organizations.
- b) On the technical level, various systems and services involved in HR, training, and knowledge management need to be semantically coherent so that competency-driven approaches can live up to their holistic expectations.
- c) The crucial trade-off in competency modelling needs to be solved: the more accurate, realistic and fine-grained considered competencies are, the more complex management and controlling tasks become. Today's societies place challenging demands on individuals, who are confronted with complexity in many parts of their lives.

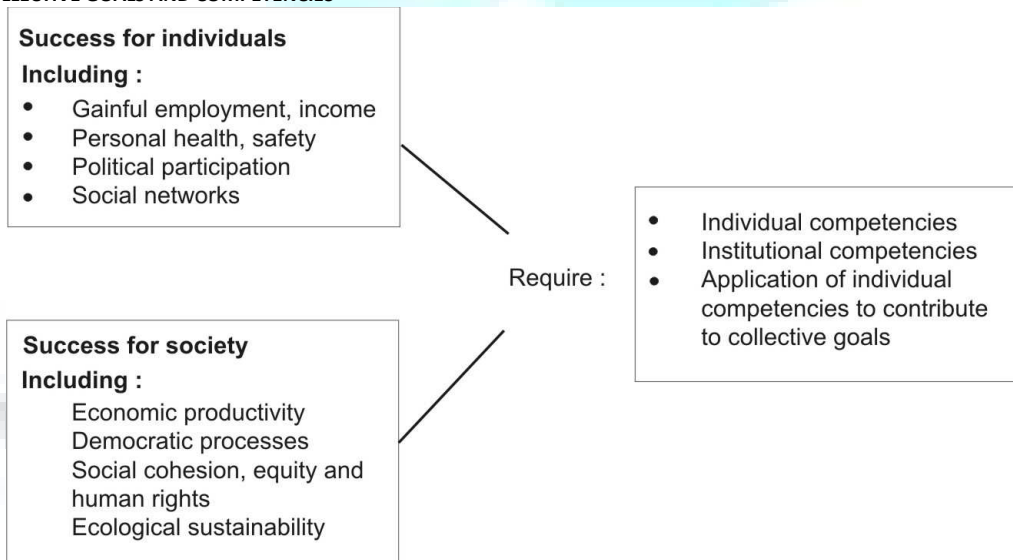
Defining such competencies can improve assessments of how well prepared young people and adults are for life's challenges, as well as identify overarching goals for education systems and lifelong learning. A competency is more than just knowledge and skills. It involves the ability to meet complex demands, by drawing on and mobilizing psychosocial resources (including skills and attitudes) in a particular context. For example, the ability to communicate effectively is a competency that may draw on an individual's knowledge of language, practical IT skills and attitudes towards those with whom he or she is communicating. Individuals need a wide range of competencies in order to face the complex challenges of today's world, but it would be of limited practical value to produce very long lists of everything that they may need to be able to do in various contexts at some point in their lives. Some of these competencies may be general and some peculiar to the chosen career.

**A BASIS FOR KEY COMPETENCIES**

**COMPETENCE AND THE DEMANDS OF MODERN LIFE**

Key competencies are not determined by arbitrary decisions about what personal qualities and cognitive skills are desirable, but by careful consideration of the psychosocial prerequisites for a successful life and for a well-functioning society. Competence is also an important factor in the ways that individuals help to shape the world, not just to cope with it. Thus, as well as relating to key features and demands of modern life, competencies are also determined by the nature of our goals, both as individuals and as a society. Coping with today's challenges calls for better development of individuals' abilities to tackle complex mental tasks, going well beyond the basic reproduction of accumulated knowledge. Key competencies involve a mobilisation of cognitive and practical skills, creative abilities and other psychosocial resources such as attitudes, motivation and values. Competencies comprise more than just taught knowledge. The framework described here relates to individual competencies, rather than to the collective capacities of organisations or groups. However, as illustrated in the diagram below, the sum of individual competencies also affects the ability to achieve shared goals.

**INDIVIDUAL AND COLLECTIVE GOALS AND COMPETENCIES**



In so far as competencies are needed to help accomplish collective goals, the selection of key competencies needs to some extent to be informed by an understanding of shared values. The competency framework is thus anchored in such values at a general level. These values imply both that individuals should be able to achieve their potential and that they should respect others and contribute to producing an equitable society. The complementarity of individual and collective goals needs to be reflected in a framework of competencies that acknowledges both individuals' autonomous development and their interaction with others.

**SELECTING KEY COMPETENCIES**

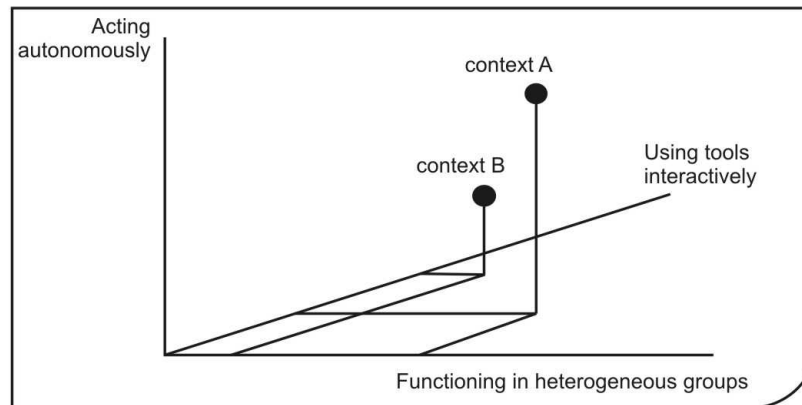
The above demands place varied requirements on individuals in different places and different situations. However, key competencies are those of particular value, that have multiple areas of usefulness and that are needed by everyone. The first of these conditions, that competencies should be valued, applied in relation to measurable benefits for both economic and social purposes. Recent research reinforces the view that human capital not only plays a critical role in economic performance, but also brings key individual and social benefits such as better health, improved well being, better parenting, and increased social and political engagement. The second condition, that competencies should bring benefits in a wide spectrum of contexts, means that they apply to multiple areas of life. Thus, certain areas of competence are needed not only in the labour market but also in private relationships, in political engagement and so on, and it is

these transversal competencies that are defined as key. The third condition, that key competencies should be important for all individuals. Emphasis is given to transversal competencies that everyone should aspire to develop and maintain.

#### COMBINING KEY COMPETENCIES

A further link between the specific competencies described below is that in any one context, one is likely to draw on more than one such competency. In fact, any given situation or goal may demand a constellation of competencies, configured differently for each particular case. People living in different situations will draw to varying degrees on various competencies according, for example to cultural norms, technological access, social and power relations. The ability to deal with differences and contradictions is found on many lists of key competencies within the economic and educational sector. Today's diverse and complex world demands that we do not necessarily rush to a single answer, to an either-or solution, but rather handle tensions –between, for instance, autonomy and solidarity, diversity and universality, and innovation and continuity – by integrating seemingly contradictory or incompatible goals as aspects of the same reality. Thus, individuals have to learn to think and act in a more integrated way, taking into account the manifold interconnections and interrelations between positions or ideas that may appear contradictory, but that may sometimes only superficially be so.

#### KEY COMPETENCIES ARE EMPLOYED IN DIFFERENT COMBINATIONS IN VARYING CONTEXTS



#### COMPETENCY CATEGORY 1: USING TOOLS INTERACTIVELY

The social and professional demands of the global economy and the information society require mastery of socio-cultural tools for interacting with knowledge, such as language, information, and knowledge, as well as physical tools such as computers. Using tools interactively requires more than having access to the tool and the technical skills required to handle it (e.g. read a text, use software). Individuals also need to create and adapt knowledge and skills. This requires a familiarity with the tool itself as well as an understanding of how it changes the way one can interact with the world and how it can be used to accomplish broader goals. In this sense, tools not just a passive mediator, but an instrument in an active dialogue between the individual and his or her environment. Individuals encounter the world through cognitive, socio-cultural and physical tools. These encounters, in turn, shape how they make sense of and become competent in the world, deal with transformation and change, and respond to long-term challenges. Using tools interactively opens up new possibilities in the way individuals perceive and relate to the world.

##### COMPETENCY 1-A: THE ABILITY TO USE LANGUAGE, SYMBOLS AND TEXT INTERACTIVELY

This key competency concerns the effective use of spoken and written language skills, computation and other mathematical skills, in multiple situations. It is an essential tool for functioning well in society and the workplace and participating in an effective dialogue with others. Terms such as “communication competence” or “literacies” are associated with this key competency.

##### COMPETENCY 1-B: THE ABILITY TO USE KNOWLEDGE AND INFORMATION INTERACTIVELY

Both the increasingly important role of the service and information sectors and the central role of knowledge management throughout today's societies make it essential for people to be able to use information and knowledge interactively. This key competency requires critical reflection on the nature of information itself – its technical infrastructure and its social, cultural, and even ideological context and impact. Information competence is necessary as a basis for understanding options, forming opinions, making decisions, and carrying out informed and responsible actions. Using knowledge and information interactively requires individuals to:

- Recognise and determine what is not known;
- Identify, locate and access appropriate information sources (including assembling knowledge and information in cyberspace);
- Evaluate the quality, appropriateness and value of that information, as well as its sources; and
- Organise knowledge and information

##### COMPETENCY 1-C: THE ABILITY TO USE TECHNOLOGY INTERACTIVELY

Technological innovation has placed new demands on individuals inside and outside the workplace. At the same time, technological advances present individuals with new opportunities to meet demands more effectively in new and different ways. Interactive use of technology requires an awareness of new ways in which individuals can use technologies in their daily lives. Information and communication technology has the potential to transform the way people work together (by reducing the importance of location), access information (by making vast amounts of information sources instantly available) and interact with others (by facilitating relationships and networks of people from around the world on a regular basis). To harness such potential, individuals will need to go beyond the basic technical skills needed to simply use the Internet, send e-mails and so on. As with other tools, technology can be used interactively if users understand its nature and reflect on its potential. Most importantly, individuals need to relate the possibilities embedded in technological tools to their own circumstances and goals. A first step is for individuals to incorporate technologies into their common practices, which produces a familiarity with the technology that then allows them to extend its uses.

#### COMPETENCY CATEGORY 2: INTERACTING IN HETEROGENEOUS GROUPS

Throughout their lives human beings are dependent on ties to others, for material and psychological survival, as well as in relation to social identity. As societies become in some ways more fragmented and also more diverse, it becomes important to manage interpersonal relationships well both for the benefit of individuals and to build new forms of co-operation. The building of social capital is important, as existing social bonds weaken and new ones are created by those with the ability to form strong networks. One of the potential sources of inequity in the future could be differences in the competence of various groups to build and benefit from social capital. The key competencies in this category required for individuals are to learn, live and work with others. They address many of the features associated with terms such as “social competencies”, “social skills”, “intercultural competencies” or “soft skills”.

##### COMPETENCY 2-A: THE ABILITY TO RELATE WELL TO OTHERS

This first key competency allows individuals to initiate, maintain and manage personal relationships with, for example, personal acquaintances, colleagues and customers. Relating well is not only a requirement for social cohesion but, increasingly, for economic success as changing firms and economies are placing increased emphasis on emotional intelligence. This competency assumes that individuals are able to respect and appreciate the values, beliefs, cultures and histories of others in order to create an environment where they feel welcome, are included and thrive. Co-operating well with others requires:

- Empathy - taking the role of the other person and imagining the situation from his or her perspective. This leads to self-reflection, when, upon considering a wide range of opinions and beliefs, individuals recognize that what they take for granted in a situation is not necessarily shared by others.
- Effective management of emotions – being self-aware and able to interpret effectively one's own underlying emotional and motivational states and those of others.

**COMPETENCY 2-B: THE ABILITY TO COOPERATE**

Many demands and goals cannot be met by one individual alone but instead require those who share the same interests to join forces in groups such as work teams, civic movements, management groups, political parties or trade unions. Co-operation requires each individual to have certain qualities. Each needs to be able to balance commitment to the group and its goals with his or her own priorities and must be able to share leadership and to support others. Specific components of this competency include:

- The ability to present ideas and listen to those of others;
- An understanding of the dynamics of debate and following an agenda;
- The ability to construct tactical or sustainable alliances;
- The ability to negotiate; and
- The capacity to make decisions that allow for different shades of opinion.

**COMPETENCY 2-C: THE ABILITY TO MANAGE AND RESOLVE CONFLICTS**

Conflict occurs in all aspects of life, whether in the home, workplace or the larger community and society. Conflict is part of social reality, an inherent part of human relationships. It arises when two or more individuals or groups oppose one another because of divergent needs, interests, goals or values. The key to approaching conflict in a constructive manner is to recognise that it is a process to be managed rather than seeking to negate it. This requires consideration of the interests and needs of others and solutions in which both sides gain. For individuals to take an active part in conflict management and resolution, they need to be able to:

- Analyse the issues and interests at stake (e.g. power, recognition of merit, division of work, equity), the origins of the conflict and the reasoning of all sides, recognising that there are different possible positions;
- Identify areas of agreement and disagreement;
- Reframe the problem; and
- Prioritise needs and goals, deciding what they are willing to give up, and under what circumstances

**COMPETENCY CATEGORY 3: ACTING AUTONOMOUSLY**

Acting autonomously does not mean functioning in social isolation. On the contrary, it requires an awareness of one's environment, of social dynamics and of the roles one plays and wants to play. It requires individuals to be empowered to manage their lives in meaningful and responsible ways by exercising control over their living and working conditions. Individuals must act autonomously in order to participate effectively in the development of society and to function well in different spheres of life including the workplace, family life and social life. This is because they need to develop independently an identity and to make choices, rather than just follow the crowd. In doing so, they need to reflect on their values and on their actions. Acting autonomously is particularly important in the modern world where each person's position is not as well-defined as was the case traditionally. Individuals need to create a personal identity in order to give their lives meaning, to define how they fit in. In general, autonomy requires an orientation towards the future and an awareness of one's environment, of social dynamics and of the roles one plays and wants to play. It assumes the possession of a sound self-concept and the ability to translate needs and wants into acts of will, decision, choice and action.

**COMPETENCY 3-A: THE ABILITY TO ACT WITHIN THE BIG PICTURE**

This key competency requires individuals to understand and consider the wider context of their actions and decisions. That is, it requires one to take account of how they relate, for example, to society's norms, to social and economic institutions and to what has happened in the past. One needs to recognise how one's own actions and decisions fit into this wider picture. This competency requires individuals, for instance, to:

- Understand patterns;
- Have an idea of the system in which they exist (i.e. understand its structures, culture, practices, and formal and informal rules and expectations and the roles they play within it, including understanding laws and regulations, but also unwritten social norms, moral codes, manners and protocol). It complements an understanding of rights with knowledge of the constraints on actions;
- Identify the direct and indirect consequences of their actions; and
- Choose between different courses of action by reflecting on their potential consequences in relation to individual and shared norms and goals

**COMPETENCY 3-B: THE ABILITY TO FORM AND CONDUCT LIFE PLANS AND PERSONAL PROJECTS**

This competency applies the concept of project management to individuals. It requires individuals to interpret life as an organised narrative and to give it meaning and purpose in a changing environment, where life is often fragmented. This competency assumes an orientation towards the future, implying both optimism and potential, but also a firm grounding within the realm of the feasible. Individuals must be able, for instance, to:

- Define a project and set a goal;
- Identify and evaluate both the resources to which they have access and the resources they need (e.g. time and money);
- Prioritise and refine goals;
- Balance the resources needed to meet multiple goals;
- Learn from past actions, projecting future outcomes; and
- Monitor progress, making necessary adjustments as a project unfolds.

**COMPETENCY 3-C: THE ABILITY TO ASSERT RIGHTS, INTERESTS, LIMITS AND NEEDS**

This competency is important for contexts ranging from highly structured legal affairs to everyday instances of assertiveness of individuals' own interests. Although many such rights and needs are established and protected in laws or contracts, it is ultimately up to individuals to identify and evaluate their rights, needs and interests (as well as those of others) and to assert and defend them actively.

On the one hand, this competency relates to self-oriented rights and needs; on the other hand, it also relates to the rights and needs of the individual as a member of the collective (e.g. actively participating in democratic institutions and in local and national political processes). The competency implies the ability, for instance, to:

- Understand one's own interests (e.g. in an election);
- Know written rules and principles on which to base a case;
- Construct arguments in order to have needs and rights recognised; and
- Suggest arrangements or alternative solutions

**CHALLENGES FOR SKILL DEVELOPMENT**

The country is poised at a moment in history when a much brighter future for its entire people is within its reach. Skill development will help actualize this potential. Development and articulation of a national policy on skill development is a matter of priority.

A task of skill development has many challenges which include:-

- Increasing capacity and capability of existing system to ensure equitable access to all.
- Promoting life long learning, maintaining quality and relevance, according to changing requirement particularly of emerging knowledge economy.
- Creating effective convergence between school education, various skill development efforts of government and between government and Private Sector initiative.

- d) Capacity building of institutions for planning, quality assurance and involvement of stake holders.
- e) Creating institutional mechanism for research, development, quality assurance, examinations and certification, affiliations and accreditation.
- f) Increasing participation of stakeholders, mobilizing adequate investment for financing skill development, attaining sustainability by strengthening physical and intellectual resources.

## BARRIERS TO EFFECTIVE SKILL DEVELOPMENT

### LACK OF EXPERTISE

As a new and emerging area of skill development, accessing the necessary expertise to develop and deliver skills for sustainability is another challenge. To be considered credible, teachers and trainers need to have expertise and experience in sustainable practices, as well as to be skilled facilitators of learning. The difficulty lies in finding people who have expertise in both sustainability and in education. Drivers and support Consultations have overwhelmingly confirmed that action taking place in the area of skills for sustainability is being driven by individual passion. The impetus for developing and offering skill development was the result of a passionate individual pushing for action - even in the large-scale state-wide programs. Amongst participants, individual passion is also a key driver for participating in skills for sustainability. The lack of support from managers, institutions and state policy directives were by far the most common challenges in undertaking skill development for sustainability and in trying to implement or pass on their learning back in their workplaces. This lack of systemic support means that responsibility and time for addressing skills for sustainability issues is not being built into role descriptions, workloads or organisational practices.

### FUNDING AND LONG-TERM APPROACHES

An issue raised in almost every consultation is the lack of funding for skills for sustainability. In our country those with responsibility for sustainability and professional development scrounge for funding opportunities. In situations where funds are available, it is generally for one-off projects, rather than for the implementation of long-term initiatives or funding of ongoing sustainability-focused positions of responsibility. As education for sustainability is about changing values, attitudes and behaviours, skill development will require long-term approaches, including support for encouraging and embedding change over the long term. It also requires mechanisms for measuring change and for long-term approaches to evaluation.

### INDUSTRY ENGAGEMENT

Most of the expertise in sustainability currently lies within industry, and the challenge lies in the VET sector connecting with it.

### COST

The most common barrier is cost. This includes costs of providing replacement staff to cover those attending skill development programmes, as well as the cost of the skill development activity itself. Budgets can be a problem, particularly for part-time and seasonal staff, who often have to fund their own skill development. Distance, time and cost barriers are exacerbated for those in regional and remote areas, as most professional development activities tend to be offered in capital cities.

### TECHNOLOGY

With technology now being a central part of learning, either to access the learning itself, or to do the necessary research for undertaking learning tasks or finding resources, lack of access to appropriate technology can be a major barrier.

Planned development of skills must be underpinned by a policy, which is both comprehensive as well as national in character. A national policy response is, therefore, needed to guide the skill development strategies and coordinated action by all stake holders linked to policies in the economic, employment and social development arenas.

## VISION FOR THE NATIONAL SKILL DEVELOPMENT INITIATIVE IN INDIA

- ❖ Scale of ambition: At present the capacity of skill development in India is around 3.1 million persons per year. The 11<sup>th</sup> Five Year Plan envisions an increase in that capacity to 15 million annually. India has target of creating 500 million skilled workers by 2022. Thus, there is a need for increasing capacity and capability of skill development programs.
- ❖ High inclusivity: The skill development initiatives will harness inclusivity and reduce divisions such as male/female, rural/urban, organized/unorganized employment and traditional/contemporary workplace.
- ❖ Dynamic and demand-based system planning: The skill development initiatives support the supply of trained workers who are adjustable dynamically to the changing demands of employment and technologies. This policy will promote excellence and will meet the requirements of knowledge economy.
- ❖ Choice, competition and accountability: The skill development initiative does not discriminate between private or public delivery and users' choice and competition among training providers and their accountability.
- ❖ Policy coordination and coherence: The skill development initiatives support employment generation, economic growth and social development processes. Skill development policy will be an integral part of comprehensive economic, labour and social policies and programmes. A framework for better coordination among various Ministries, States, industry and other stakeholders will be established.

## OPERATIONAL STRATEGIES

The following operational strategies shall be adopted:

- Folding the future in: If we start from our current position, we are likely to extrapolate. Folding the future in allows us to innovate. Innovation is, therefore, an important element of the strategy.
- Skills framework must move to a system of equivalence to diplomas and degrees: National Vocational Qualification Framework (NVQF) shall be created with an open/flexible system which will permit individuals to accumulate their knowledge and skills, and convert them through testing and certification into higher diplomas and degrees. NVQF shall provide quality assured various learning pathways having standards, comparable with any international qualification framework. NVQF shall support lifelong learning, continuous up gradation of skills and knowledge.
- Skills must be bankable: The process of skill acquisition especially for the poor and needy persons shall be made bankable. The effort would be to complement public investment with institutional/ bank finance.
- Co-created solutions and forging partnerships: We have to accept a very asymmetric India as a starting point. Partnerships shall be consciously promoted between Government, industry, local governments, civil society institutions and all potential skill providers. Institutional mechanism and standing platforms shall be created to ensure sustainability.
- Game-changing delivery/innovation: Availability of public institutions above the high school level, after class hours for skill development by the Private Sector, without disturbing the normal working, shall be explored. Necessary regulations would be brought in by the local management authority of the particular educational institution.

## CORE OPERATING PRINCIPLES

- ✓ Government financial support must complement private investment: The Central Ministries must focus on areas where private investment in skilled development is unlikely to be available or forthcoming. The Government would aim at useful public-private partnerships.
- ✓ States as key actors: The States being the key actors in Skill Development would set up overarching integrated framework for action for Skill Development through State level Skill Development Missions.
- ✓ Deployment of funds: The funds would be deployed more for activities than for buildings and other hard assets. However, up gradation of machinery and equipment, teaching and learning aids will be a continuous process. Creation of infrastructure in latest technology, need-based new initiatives, creation of infrastructure in rural, remote and difficult areas should continue.

- ✓ Focus of modular courses, open architecture and short term courses: With fast changing skills in the labour market, focus should be on short, relevant and effective courses that would get candidates into the workplace. They shall be welded through NVQF to maintain dynamism and open to feedback.
- ✓ Separate financing from delivery: Today Government funds are only available for government delivery. National Skill Development Corporation shall support private skill development initiatives. Following financing options shall be explored:
  - Link financing to outcomes: Today public and private training is financed largely on inputs viz. number of courses, number of students, faculty, etc. Efforts would be made to move towards Government financing linked to placement ratios and outcomes.
  - Focus funding on candidates: The focus would be on funding the candidates rather than institutions to create choice. This could be structured as a scholarship, skill voucher, outcome based reimbursement, etc.
- ✓ Create infrastructure for on-the-job-training and encourage apprenticeships: The enabling infrastructure for large number of formal apprentices needs to be built that includes modification to the Apprentices Act, 1961.
- ✓ Publicize rating and outcome information on training institutions: A framework of accreditation and infrastructure for information dissemination around measurable criteria on institutions shall be created. Ratings of public and private institutions would be put on public domain.
- ✓ Effective assessment and credible certification: Quality assured learning, credible assessment and certification shall be developed. This will allow employers to use the certificate as a proxy to fast track job applicants.
- ✓ Restructure employment exchanges as career guidance centres: Employment Exchanges shall be restructured as career guidance centres to channelize candidates into jobs, apprenticeships and training.
- ✓ Expand formal employment: Formal employment is not only fiscally attractive but more amenable to financing innovations. This shall require a review of existing State and Central legislations which shall encourage informal and unorganized employment.
- ✓ Promoting Excellence: To promote excellence, a significant number of well performing institutions shall be assisted to develop into institutions of excellence. These institutions shall be generously resourced, equipped with internationally comparable facilities and high quality faculty and able to offer high quality programmes in current and emerging technology areas. These institutions shall be networked with a number of training institutions in their vicinity and shall serve as lead institutions in supporting their development.

### APPROACH TO DELIVERABLES

- Diversity of skills: There is a need to identify, catalog and project the range and depth of skills e.g. traditional, industrial-era and post-industrial era skills to understand and present the vast array of skills that individuals can choose from.
- Talent pool: Skill inventory along with its various levels and grades shall be created.
- Employment outcomes: Skill training must ensure a job for those who seek it. The placement ratio shall be monitored and placed in the public domain by agencies involved in skill training.

### CONCLUSION

Quality and relevance of skill development are key to India's global competitiveness as well as to improve an individual's access to decent employment. For enterprises to compete in the global economy, the quality of labour force must reach world standards and be relevant to the needs of national and international markets. To increase the relevance with future employment market including promotion of self employment, soft skills and entrepreneurship skills shall be made integral part of skill development. The demographic advantage that the country enjoys, coupled with prospects of global shortages in skills as the world population ages, means that the country could be supplying skills to the world.

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