

CEMCA

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Commonwealth Educational Media Centre for Asia (CEMCA)
New Delhi

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Background

One of the priority areas of work of the Commonwealth of Learning (COL) and the Commonwealth Educational Media Centre for Asia (CEMCA) is 'skill development, livelihood and sustainability'. COL-CEMCA has been supporting many governments in this endeavour. Realising that skill development in VET and vocational schooling has been going on for quite some time without showing much results, it is being felt that NQF needs to be viewed in totality including its integration with higher education, and that guidelines/ frameworks need to be reworked for proper integration of skill/VET and higher education. CEMCA on the advice of CEMCA Advisory Council (CAC) has undertaken the task with constitution of Think Tank comprising senior academic leaders, academics, senior administrators, Skill development practitioners and experts. CEMCA also engaged a consultant, Prof. Santosh Panda, from Indira Gandhi National Open University, New Delhi to create a draft guideline for the same. Prof. Panda consolidated a research paper that looks into the issues of skill/ competency/ employability (including 21st century skills) in Higher Education more closely; analyses some select national qualifications frameworks (NQFs) globally; takes stock of VET/ skilling in education with emphasis on HE in India; and, builds on the good work that has already been done, along with suggested framework/ guidelines for the development of a comprehensive 'system' of resource-based, flexible, multiple delivery strategy-based/ blended, credit and modular-based, NSQF-compliant skill development programme for higher education in India. The draft paper on "Guidelines for Linking the Skill Programme with Academic Programme", was shared with the Think Tank and later a meeting of the Think Tank was convened, on 20th November 2018, to review and provide suggestions on the paper, in order to further crystallise and give shape to the framework/ guidelines on how to visualise and operationalise Skilling in Higher Education in the country.

Report

Commonwealth Educational Media Centre for Asia organised a Think Tank meet on 20th November 2018 at India International Centre, New Delhi, to review the draft Guidelines for Linking the Skill Programme with Academic Programme. The event began at 10:30 am with a welcome address by Dr. Shahid Rasool, Director CEMCA, who greeted the guests and gave an introduction of the CEMCA Think Tank Meet, along with a background of this event and the need for such a meeting to formulate the Guidelines for Linking the Skill Programmes with Academic Programmes. “Given the preference of Indian youth for the University degrees, he stressed the need to develop guidelines for providing opportunity to Skilled to get University degrees and also provide some skills to the students undergoing UG and PG programmes to increase their employability. This is essential to help the country harvest the dividends of a huge youth population”.

This was followed by a round of self-introduction of all the Think Tank members present, who expressed their excitement towards such an initiative, and appreciated CEMCA’s efforts in trying to link the Skill Programme with Academic Programme in India, which many felt was the need of the hour in the country.

After the opening remarks of the Chairperson, Prof. Nageshwar Rao, VC, IGNOU, New Delhi, who stressed on the need for integration of skills in the education system and changing the mindset of the upcoming generations towards Skills through such integration, the session proceeded towards a presentation by Prof. Santosh Panda, IGNOU, New Delhi on the “Draft Guidelines for Linking the Skill Programme with Academic Programme” that had been prepared by him (*Annexure III*). Prof. Panda discussed how the problem lies in the implementation of policies and not necessarily in the current policies themselves, and how this area needs to be focussed on for better application of any guidelines that would be created. Through a discussion of the terminologies one needs to understand the current scenario, the need for 21st century skills and the stories of success of integration in other countries, such as Germany, UK and Austria. Through an intense review of international frameworks and good practices on skill development vis-à-vis education and training (especially higher education), the following variables were located by Prof. Panda as essential for a sustainable and useful skill development strategy within higher and further education.

- i) There must be a flexible framework of horizontal and vertical mobility, with lateral entry and exit options, within vocational education and general education.
- ii) The skill development is not only to be seen as leading to some kind of ‘job or work’, but be clearly linked to sustainable ‘occupations’, and go beyond a competency model to a model of holistic society-citizen development as part of social policy.
- iii) As against the dominating British and Australian models, the German, Austrian, Swiss and other European models provide for more pragmatic, socially cohesive, qualitatively richer, more life sustaining and life enriching models within a convergence but flexible framework of VET and HE, thereby categorically dispelling the age-old criticism that VET is ‘training’ (and, therefore, limited) and general HE is ‘liberal development’ (and, therefore, largely unemployable). The congruence between the two is essential for sustainable VET in HE.
- iv) When the skill, knowledge, competency, and attitude levels along with their credits are finalised and firmly located within an institutional framework, the students must be provided with ample flexibility to accumulate credits through, on the one hand, by swapping formal

education and training and work/occupational experience, and on the other hand, through a combination of mediated learning and blended delivery strategies. Coupled with this, therefore, is a clear-cut and transparent skill and level-specific recognition/accreditation of prior learning/experience (RPL/APL) in a skill/competency hierarchy like NSQF and associated standards.

- v) The skill and occupational sector cannot always be employer/entrepreneur-driven or market-driven. The government and civil society have a role to play for visualising it within the broader economic and social policy, and macro socio-economic development.

This enlightening presentation was followed by a discussion of the experts who made suggestions that could enhance the document and create more effective guidelines for the linking of the skills programme with the academic programme. Some of the key suggestions that were suggested were:

- i) While framing the guidelines, appreciation should be given to the limitations of NSQF in India. NSQF should in fact be treated only as a minimum requirement for the integration of Skills into the Academic Programme, and not as the final word. Since the field of Skills is constantly evolving, consideration should be given to the changing scenario, and instead of ignoring the market and the needs of the industry, though can be given to collaborating with them for better integration of skills into academics.
- ii) The guidelines need to be considered by both academics and experts from the skills sector, and key stakeholders who would be responsible for the implementation of these guidelines should be present in such meetings, in order to understand their points of view and their needs as well.
- iii) CEMCA can use its experience in ODL to give recommendations on how ODL can be used for skill development and skill integration in Higher Education, in order to provide better access for a comprehensive and whole education.
- iv) The micro-level should be taken into consideration and what is happening at the institutional level should be understood, in order to better motivate and change the attitude of people towards skills and why they are needed at the ground level. Limitations of the people who would implement these guidelines should also be considered, so that the guidelines created have a chance for better success.
- v) The scope of neither skill development, nor Higher Education should be narrowed through such guidelines, but such an integration should only enhance the scope of the entire framework in order to be more beneficial.
- vi) There should be enough flexibility within the framework so that it can be contextualised for different skill sets, since the skills ecosystem is a large and varied environment. The private sector should be given sufficient freedom to enable such policy decisions, but at the same time there needs to be coordination between government departments that are working towards Skill Development and Higher Education, for better policy creation.
- vii) The university system should not be treated as an equivalent of the current skills system, and instead of trying to change the current system, new venues and definitions should be created for integration of the two.

- viii) There is a major crisis in the country and there needs to be a timeframe that has to be created to address this crisis, and therefore the question of whether these guidelines need to be employment driven, or government driven, needs to be better addressed.
- ix) National skills universities should be established for uniform norms throughout the country, since currently there are many policies that have been created to address the need for skill development and there is no uniformity within them, that can give a systematic framework to the skill sector. These policies should be reviewed and converged instead of beginning from scratch and reducing the multiplicity of frameworks.
- x) There is a need for a statutory body or an equivalency body, that can bring all the sectors together for both the skills and the academic programmes.
- xi) Skills need to be offered as optional courses, under Choice Based Credit System in the universities or introduced as add on courses to increase the employability of the students.

After listening to the suggestions made by the experts, Prof. Panda responded to the ideas that had been put forth in the discussion, and gave his views on the steps he is taking to implement some of these suggestions, along with the limitations of the rest. He appreciated varied suggestions made by the guests and explained the changes he intends to make to this draft to better improve the guidelines for linking the skills programme with academic programme.

Prof Nageshwar Rao, the Chairman of the committee, in his concluding remarks appreciated the thought that has gone into the presentation and expressed his happiness at the quality of discussion that took place. He stressed the need to push this further in a systematic way and asked Prof Panda and CEMCA to rework the draft in the light of the feedback. He also suggested to involve stake holders including AICTE, NSDC, UGC, Skill Development/labour Ministry and MHRD in formulating the guidelines.

Director CEMCA, while thanking the Chair, Participants and Prof Panda for active participation in the meeting, requested members to mail any new ideas to CEMCA or Prof Panda and desired Prof Panda to integrate the advice/suggestions of the Hon'ble members. The revised paper will again be circulated among the members and will also be shared with the stake holders before the next meeting.

This was followed by a formal vote of thanks by Dr. Manas Panigrahi, Programme Officer, Education, CEMCA, who appreciated CEMCA's advisory council for showing the way for the creation of such guidelines. He also thanked Prof. Nageshwar Rao for his presence and active participation as the chairperson. Dr. Panigrahi then showed gratitude to the experts who had taken time out of their busy schedules to attend the Think Tank meet, and to all the CEMCA team members along with Dr. Shahid Rasool, who had worked hard to make this event possible. This marked the end of the meeting, and everyone dispersed for lunch.

Annexure I:

List of Participants

CEMCA Think Tank Meet

“Guidelines for Linking the Skill Programme with Academic Programme”

Date: 20 November 2018

Venue- IIC, Lodi Road, New Delhi

LIST OF EXPERTS

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Annexure II: Programme Schedule

CEMCA Think Tank Meet on “Guidelines for Linking the Skill Programme with Academic Programme”

Venue: India International Centre, New Delhi

Date: 20 November 2018

Programme Schedule

<i>Time</i>	<i>Activity</i>
<i>10:00-10:30</i>	<i>Registration and Tea</i>
<i>10:30-11:00</i>	<i>Opening Session</i> <ul style="list-style-type: none"> <i>Welcome of the guests and Introduction of the CEMCA Think Tank Meet: Dr. Shahid Rasool, Director CEMCA</i> <i>Self-Introduction of Think Tank members</i> <i>Opening remarks of the Chair: Prof. Nageshwar Rao, VC, IGNOU, New Delhi</i>
<i>11:00-11:30</i>	<i>Presentation of “Draft Guidelines for Linking the Skill Programme with Academic Programme”:</i> <i>Prof. Santosh Panda, IGNOU, New Delhi.</i>
<i>11:30-13:00</i>	<i>Open House: Discussion and Reflections on the “Draft Guidelines for Linking the Skill Programme with Academic Programme”</i>
<i>13:00-13:30</i>	<i>Concluding and Way Forward:</i> <ul style="list-style-type: none"> <i>Major recommendations and suggestion of the Think Tank: Prof. Santosh Panda, IGNOU, New Delhi.</i> <i>Closing Remarks of the Chair: Prof. Nageshwar Rao, VC, IGNOU, New Delhi</i> <i>Vote of Thanks: Dr. Manas Ranjan Panigrahi, Programme Officer (Education), CEMCA</i>
<i>13:30-14:30</i>	<i>Lunch Break</i>

***Annexure III:
Presentation of Prof. Santosh Panda***

**Linking Skill Programmes with
Academic Programmes in Higher
Education: Draft Guidelines**

Concept note

- Undergraduate students lack ability to apply knowledge in practical settings.
- They lie below the required standards skill sets of the job market.
- Need for linking skills and HE, and skilling the general HE students.
- Framework with guidelines to address this in the context of flexible system, low cost structure, and strengthen disciplines and degrees for employment.
- Balancing academic discipline with employability skills (5-D approach).

Terminologies:

- Skills (general and vocational for immediate application)
- Competencies (holistic with defined individual responsibility)
- Qualifications (representing specific standards at various levels of skills and competencies)
- Vocational Education* (general education + skills required of a job)
- Professional Education* (diploma/ degree leading geared towards requirements of established professions)

Terminologies:

skill development has been considered as essential at all levels of education, and that this encompasses a broader framework comprising personal, social, professional, vocational, academic/cognitive skills, theoretical-practical knowledge, competencies, attitude and values so essential for an individual to comprehensively develop and contribute to individual progress and socio-economic-cultural development of a country.

21st century skills

- Cognitive
 - Non-cognitive
 - Occupational
 - Inter-personal
 - Social
 - Life
- (knowledge about; and what can 'do' with that knowledge)*
- (skills of planning, coordination, evaluation, control, innovation, social security)*

21st century skills

Professionalism.

Reliability.

Ability to cope with uncertainty.

Ability to work under pressure.

Ability to plan and think strategically.

Ability to communicate and interact.

Written and verbal communication skills.

ICT skills.

Creativity and self-confidence.

Self-management and time-management.

Willingness to learn and accept responsibility.

UK: Dearing Report on HE

•communication skills,

•numeracy,

•use of information technology, and

•learning how to learn.

Extended to include:

Communication in the mother tongue.

Communication in foreign languages.

Competencies in maths, science and technology.

Digital competence.

Learning to learn.

Interpersonal, intercultural, social and civic competencies.

Entrepreneurship.

Cultural expression.

Competencies

•Professional skills with:

-Learning competencies

-Social and life competencies

-Career competencies

Competencies

While specific competencies lead to doing a job effectively, broader competencies enable individuals to have wider employability skills, and skills of horizontal and vertical occupational mobility.

Employability:

- i) generic attributes *versus* sector/company-specific attributes, and
- ii) fulfilling the required criteria for getting a job *versus* developmental ability of nurturing attributes of future innovation and progress.

Qualifications frameworks (UK and related)

- Is *employer/stakeholder-driven*, and the individual students are required to confirm to the standards in order to enhance employability.

- There is *dominance of informal markets, without much credence to social policy and labour market regulations*. The qualifications framework defines required competencies or learning outcomes at each level, with full state regulation.

Qualifications frameworks (EQF and others)

- addressing VET holistically *within the system of education* and with due consideration to occupations and occupational mobility, and

- underlining *firm and comprehensive pathways between* school VET, higher education VET, and general higher education.

Qualifications frameworks (Sri Lanka/NVQF)

The TVEC has ensured strict quality assurance through self-assessment and continuous improvement. The competency standards focus on workplace performance (rather than the learning process), transfer of learning to workplaces, and ability to perform/do in a given context (i.e. task handling and management, problem solving, and application to new environments). A credit system is followed from level 5 onward, based on the European Credit Transfer and Accumulation System (where 1 credit = 25 notional hours).

{Except that there is linear progression from level 1 to level 7 vis-à-vis the University of Vocational Technology, *there is no instance of integration of and cross-exchange between VET and higher education.*}

Qualifications frameworks (EQF)-- knowledge-skills-competencies

- Based on the premise of *supporting lifelong learning, and educational and professional mobility.*

- While those of Croatia, Iceland and Poland *go beyond the EQF in terms of relevance and quality, those of France, England, Ireland also play a regulatory role for VET.*

- Now 'competencies' (including communication, social, professional) are replacing the traditional 'learning outcomes' – in the sense that these relate to self-directed use of all the aspects of human personality for study, work, individual growth, and professional behaviour.

- In quite a few countries like Netherlands, Norway, and Sweden, non-official qualifications/certifications awarded by enterprises are also included.

Germany (DSP)

- Dual-Studies Programme:** Bachelors and masters programmes can be studied along with in-company training. (vocational academics 16%, cooperative universities 20%, universities of applied science 59%, universities 3%).

- Integrated Work Practice:** A non-VET student is integrated with practice in a firm. Students with university entrance certificate but without any VET qualification study three-year degree along with contract with a firm.

- Integration of Occupation:** Students with initial VET and university entrance certificate enter tertiary education. There is also provision that a higher VET with *Meister* (Master craftsman) can enter into the bachelors programme of short duration.

- Accompanying an Occupation:** Students without university entrance certificate, but with full-time job, study on their own and attend university seminars; firms provide paid leave for some higher education tasks as also provide for specialised work experience.

[21st century skills (responsible citizen, balanced individual, employability); teaching-learning which is outcome based (evidence, portfolio) and blended (theory, practical, self study, resource-based, ICT-pedagogy integrated).]

Austria (BHS (VET+HE))

- The BHS provides for vocational qualification along with certificate for access to higher education.(dual-apprenticeship)
- BMS: innovative school-based programmes for 2-4 years.
- While the BMS (govt) caters for the manufacturing sector, the BHS (private)serves the industrial sector and the service and knowledge economy.
- In case of BHS, a grade-8 graduate can enter higher education of 5-years study and obtain two certifications – Academic Baccalaureate (leading to further HE) and VET Diploma (leading to occupations).
- BHS graduates can apply to universities and of applied sciences who are credit-exempted for 1-2 semesters.

Switzerland

- The upper secondary system – general education through Baccalaureate Schools (4 years with about 21% students) leading to university entrance; and Specialised Middle Schools (for 3 years with 69% students) (IVET) leading to College of Higher VET and one-year specialised Baccalaureate leading to University of Applied Sciences. Of the second category, nearly 61% students go for Dual Apprenticeship (German part of the country) and 8% full time/part time for school-based VET (French part of the country).
- Nearly 76% of school students go for VET leading to either a job or entry to UASs.
- The Universities of Applied Sciences (UASs) present the best example of combining traditional processes of VET and HE, learning processes in both, and upper secondary VET and post-secondary HE

Review Lessons

- *Flexible framework* of horizontal and vertical mobility, with lateral entry and exit options, within vocational education and general education.
- *The skill development is not only to be seen as leading to some kind of 'job or work', but be clearly linked to sustainable 'occupations', and go beyond a competency model to a model of holistic society-citizen development as part of social policy.*
- *As against the dominating British and Australian models, the German, Austrian, Swiss and other European models provide for more pragmatic, socially cohesive, qualitatively richer, more life sustaining and life enriching models –VET & HE.*

Review Lessons..contd

- *The students must be provided with ample flexibility to accumulate credits through, on the one hand, by swapping formal education and training and work/occupational experience, and on the other hand, through a combination of mediated learning and blended delivery strategies.* Coupled with this, therefore, is a clear-cut and transparent skill and level-specific recognition/accreditation of prior learning/experience (RPL/APL) in a skill/competency hierarchy like NSQF and associated standards.
- *The skill and occupational sector cannot always be employer/entrepreneur-driven or market-driven. The government and civil society have a role to play for visualising it within the broader economic and social policy, and macro socio-economic development.*

India--NSQF

A National Vocational Qualifications Framework (NVQF) was developed by the Ministry of Labour and Employment, while the Ministry of Human Resource Development had developed a parallel National Vocational Educational Qualifications Framework (NVEQF).

Subsequently, due to non-congruence of these two schemes by two separate ministries, the Cabinet Secretariat created an Inter-Ministerial Committee which finally combined the two into National Skills Qualifications Framework (NSQF) in December 2013, and the National Skill Development Agency (NSDA) was created same year to coordinate skill development between the government and the private sector, and undertake quality assurance and policy research.

India--NSQF

•Many skill development programmes were being implemented much before the NSQF was in place, especially those offered by polytechnics, and industrial training institutes (ITIs). However, the NSQF provided national benchmarks across sectors, levels, and skill sets. All the formal (schooling, higher education, professional education) and non-formal streams offering VET are governed by these qualifications frameworks.

•The Government had formulated the National Policy on Skill Development (NPSD) in 2009 which was replaced by a new *National Policy for Skill Development and Entrepreneurship 2015* with more clarity on frameworks, objectives, and outcomes. One of the objectives was to link VET with formal education as well as with entrepreneurship education.

India--NSQF

•The National Council for Vocational Training (NCVT) established in 1956 was reformulated as *National Council for Vocational Education and Training (NCVET)* with merger of NCVT and NSDA in 2018 *as a single regulatory oversight body for VET in the country*. Also, the National Skill Development Corporation (NSDC) which was regulating through the Sector Skill Councils will be housed in the NCVET.

India--NSQF

.The Indian framework comprises of Levels 1-10, each one with specific learning outcomes that a student has to pass irrespective of learning through formal, non-formal or informal means.

.The NSQF has provisions for recognition of prior learning (RPL) as well as comparability with such international frameworks.

.Four categories of competencies are defined for each of the 10 levels: professional knowledge (depth, breadth, kinds, complexity), professional skill (cognitive, creative, communication, interpersonal), core skill (job-based methods, materials, tools, instruments), and responsibility (relationships, management, accountability).

India--NSQF

. While the NSDA operationalises the sector-specific requirements of quality and standards, the sector skills councils (SSCs) for specific jobs/occupational/work sectors bring in industry-specific skill requirements and certification thereof. This is done through establishment of national occupational standards (NOS) and creation of qualification packs (QP) and curriculum packages

. The regulatory bodies for higher education and professional education like UGC, AICTE and NCVET specify the entry and exit parameters in terms of competencies. This facilitates both horizontal and vertical mobility, including lateral entry, meaning thereby the school, ITI and polytechnic graduates can enter into college vocational education like BVoc of UGC and/or general education offered by colleges (provided the school education boards and higher education regulators have provisions for this entry as per NSQF levels). Skill gaps, if any, shall be compensated by doing bridge courses specified for those skills.

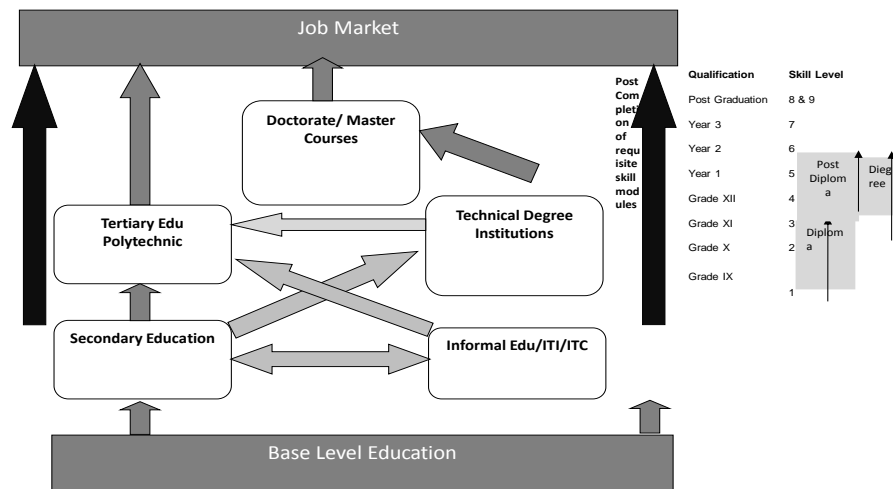
All government recruitment rules and qualification shall be aligned to the NSQF levels.

India--NSQF

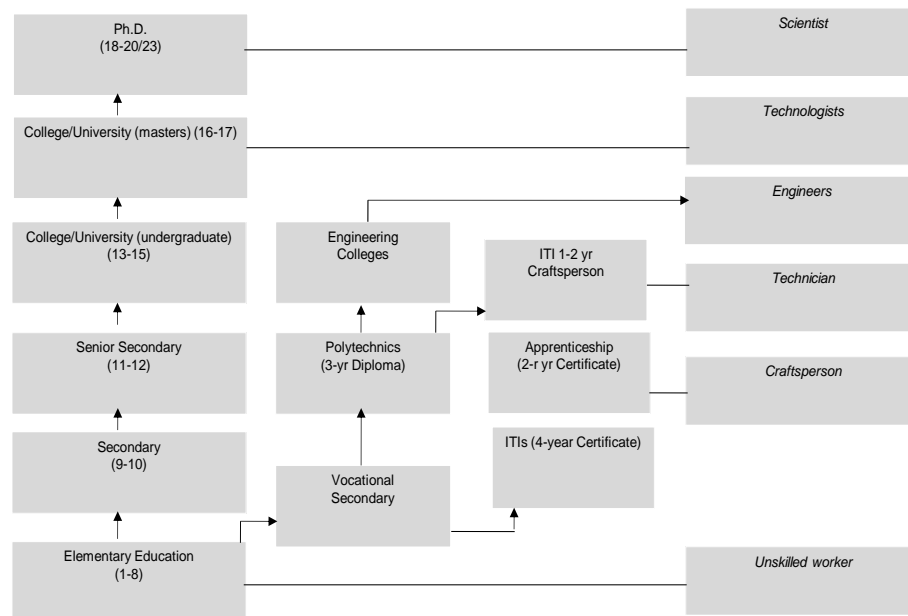
. While the secondary school included vocational subjects, the higher secondary education leads to a diploma, and the bachelors level leads to an advanced diploma, both certified by the Board of Technical Education. In this area, the considerable work undertaken by the National Institute of Open Schooling for on skill development in elementary, secondary and senior secondary levels needs to be underlined. Besides, the post-elementary it is and post-secondary Polytechnics continue to offer VET leading to lower technician-level jobs in the country.

•The secondary education certificate as well as the ITI certification lead to tertiary education of polytechnics and then to the job market, the secondary education also leads to technical degree institutions from where a graduate can enter either tertiary level polytechnic or to masters levels in specialised technical fields before entering the higher-level technical job market.

India—NSQF pathways



India—NSQF (TVET system)



India--NSQF

. NSSO data for 2011-12 showed that only 2.2% of the age group 15-59 years received formal vocational training and 8.6% non-formal vocational training. This, therefore, shows that while the figures are depressingly low, there is serious need as well as enough scope for people to be formally skilled in various vocational areas.

• The sponsored NSDC study for the country shows that during 2017-22, *there is an additional need for 103 million skilled persons in 24 high priority sectors, including in rank order, building construction and real estate, retail, beauty and wellness, logistics/transportation/warehousing, textile and clothing, furniture and furnishing, tourism and hospitality, handloom and handicraft.*

India—School vocational education

. The school level vocational education leads to either IITs (with additional apprenticeship training one can become a craftsperson), or to polytechnics (with additional apprenticeship training one can become a technician).

The polytechnic graduates can also enter engineering colleges to become engineers.

•In this sector, the NITI Aayog underlined that there are critical missing pieces of ‘pedagogy that focuses on teaching at the right level, outcome linked incentives, and a governance that enables the system to operate smoothly’ (Gol, 2017).

•Suggestions have been made to bring in outcomes-based teaching-learning with new tools for effective learning, and improving the existing governance mechanisms.

India—HE vocational education

• **UGC Bvoc/ Bskill:** as part of higher education based on skills development comprising multiple exit points of diploma, advanced diploma, and degree, with a mix of general education and skill development for specific job roles, and within the framework of integration of NSQF levels 5-7 with higher education.

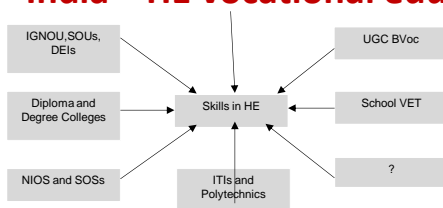
Community Colleges: a centrally-sponsored scheme was endorsed in 2012 conference of State Education Ministers to start 200 CCs from 2013-14. Since then, 157 CCs have been funded by the UGC and 107 CCs in polytechnics have been approved under NVQF of which 72 have been funded by AICTE (through polytechnics).

Continuing Education and Training: There are many agencies (government, private, and NGOs) which are offering crash/modular short-term skill development training to fill the skill-gaps.

Skills Universities: Team League Skills University (Gujarat), Rajasthan Skills University, Biswakarma Skills University (Haryana), Symbiosis Skills and Open University (Maharashtra).

ODL—IGNOU and NIOS: Many SD programmes for certificate, diploma, Bvoc, BEd VET.

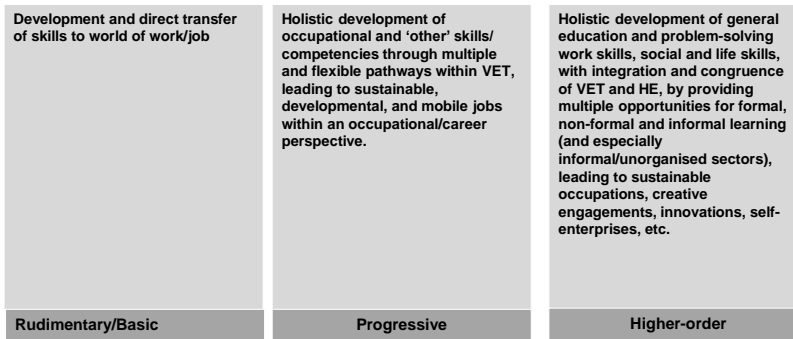
India—HE vocational education



• While each one is effective within their domains of work and are/ need to be NSQF-compliant, there is absence of seamless coordination and convergence between themselves, as also with the pathways of VET and HE.

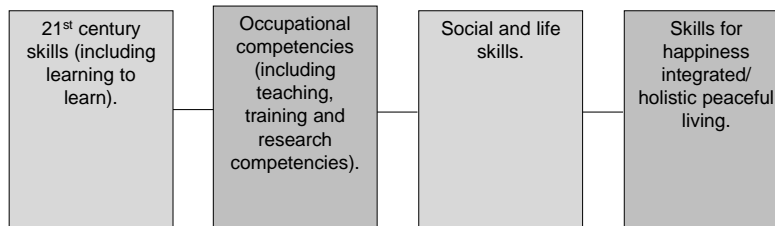
• Based on the existing strengths, a framework and guidelines need to be visualised and worked out in respect of: i) strengthening VET in its own pathways starting from unorganised sector and informal training to the higher professional and managerial levels; ii) coordination and convergence between VET and HE with entry/ exit/ RPL options; iii) provision of a NSQF-compliant 'system' of seamless, flexible, blended learning and resource-based and credit-based modular learning (combining self-learning, mentored distance/online learning, and F2F internship) with significant but appropriate use of ICT including the national platform of SWAYAM, within the broader framework of 'lifelong learning'.

India—HE vocational education framework



. The framework needs to consider a flexible pathway-- starting from a qualifications framework which is 'basic' (direct transfer of skills to world of work), to a framework which is 'progressive/ developmental' (holistic competencies development through multiple pathways within VET), and to a framework of 'higher-order' (holistic competency and social and life skill development with convergence of VET and HE .

India—HE vocational education framework



- The **skills sets** in any level of skill development needs to include all four types of skills: personal skills, occupational skills, social skills, and life skills. Cognitive and non-cognitive skills are embedded in these skills.
- The **institutional mechanism** includes development and availability of a basket of level-wise and sector-wise skills modules (compatible with NSQF as also skills beyond the framework), which are credit-based and modular, through a variety of delivery strategies—F2F, hands-on/ internship, self-study, distance learning, non-formal mechanisms.
- There is a need for built-in, seamless, need-based **support mechanisms** in place: (standard-compliant) institutional F2F support, learning centre/ work centre support, online support, non-formal and informal support by service providers

India—HE vocational education framework

Varieties of Skills	Institutional Mechanisms	Support Mechanisms
<ul style="list-style-type: none"> Personal Occupational Social Life Skills 	<ul style="list-style-type: none"> Basket of skills modules, level-wise and sector-wise and social and life skills. Credit-based modules available through a variety of delivery strategies – F2F, hand-on, self-study, distance learning, online learning (through may be SWAYAM), non-formal accredited institution/ agency. 	<ul style="list-style-type: none"> F2F formal institutional support. Distance learning study centre support. Online support through national platform. Non-formal and informal support by service providers, NGOs, communities. Alignment and accreditation by respective regulatory bodies. Curriculum, resource development, and assessment by joint body of SSCs and academic institutions.

. To facilitate skill/competency development in students of higher education (whether general, professional, technical, or vocational), sets of skills need to be carefully identified and nurtured. This shall obviously include, but will go beyond, the skills and competencies mapped in the NSQF. As a further explanation, four sets are listed below for a comprehensive skill framework, each one of which need detailing, as also more can be added to these as per contexts and needs.

HE vocational education framework—additional considerations

Structure:

This requires policy specification as well as strategisation (both horizontal and vertical) across general education–vocational education–professional education–lifelong learning for seamless support, understanding, and facilitation. For instance, in case of hospitality and tourism occupation, a host of ancillary/subsidiary/peripheral trades (like transport, traditional wellness, logistics, hotels and restaurants, traditional arts and crafts, public law and order, public administration, police and security, private individual attitude and behaviour, historians and guides, banking, among others need to seamlessly support it (as per the competency/skills standards) to make this occupation successful.

While this is generally the case in many countries, in India the situation needs intervention. This is just one example to show how integrated support and mobility are crucial structural elements to consider and set right.

HE vocational education framework— additional considerations

Curriculum Design, Course Content, Learning Resources:

Some initiation has been made, for instance, in choice-based credit system of UGC, blended learning by UGC and AICTE, Pandit Madan Mohan Malviya National Mission for Teaching and Teaching (including the reformative Teaching-Learning Centres), among others.

It requires flexible attitude and ability to design competency-based curricula, especially the matching between the content and skills in-operation. This needs to be a mix of short-term professional competencies and long-term competencies toward employability and occupational mobility. Interweaving theory-practice and/ or building theory around skills strategies need to be decided.

Both pedagogic innovation and the labour market need to gel well. Irrespective institutions involved in the formulation and implementation of skilling in HE, what is required is development and availability of standards- and skill-compliant curricula, multiple-media courses/ modules, and learning resources (including OERs and MOOCs) for institutions and students to pick/ choose from.

HE vocational education framework— additional considerations

Assessment and Evaluation Strategies:

Such a formulation needs to go beyond the traditional forms of testing and assessment, to include innovative methods evaluating self-responsibility, cooperative and collaborative learning, conformity as well as creativity, problem-solving, and tendency for innovation. Evidence-based evaluation in the context of skilling in higher education requires portfolio development and personal development plans. Besides the mechanisms of assessment and evaluation, what is further required is a seamless system of aligning assessment with theory-practice/ internship, and with the networked system of assessment rubric. ICT could play a significant role in this network.

HE vocational education framework— additional considerations

Quality Assurance Agencies:

At present QA agencies in higher education, technical education, and VET are independently doing assessment and accreditation within the existing fragmented formulation. It is intended, and crucially so, to have a coordinated and seamless quality assessment/ assurance/ accreditation across the regulators, including the NCVET. This, therefore, presupposes a newly developed system for Skilling & HE.

HE vocational education framework— additional considerations

Regulators:

As noted above, the current regulators are independently regulating their domains. The UGC is yet to develop a system/ mechanism for seamless and networked VET and Skilling in HE. The NCVET, as a new regulator for VET, could play the role of nodal coordinating agency for the three focus areas listed at the beginning paragraph of this document.

HE vocational education framework— Expert suggestions

This write-up is intended to address a framework and guidelines for:

- i) facilitating the operationalisation of more effective VET;*
- ii) skilling for general higher education;*
- iii) congruence and mobility between VET and HE; and*
- iv) a resource-based, blended system and mechanism to operationalise and support such skilling in HE.*

Expert comments and suggestions are solicited on how this can be further visualised and addressed, including alternative formulations, based on which further concretisation in the Framework/ Guidelines shall be made.

[It may be noted that the intention of the write-up was deliberately not to get into the details of operational nitty-gritty of each of the schemes and institutional mechanisms.]