

Role of Skill Development in Higher Education in India

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Abstract: Skills and knowledge are the dynamic powers of economic growth and social development for any nation. Presently, the nation faces a demand and supply divergence, as the economy needs more 'skilled' workforce and also the managers and entrepreneurs than created annually. In the higher education sphere knowledge and skills are required for a diversity of employment needs in the services, education, health care, and manufacturing sector etc. Potentially, the target group for skill development comprises all those in the labour force, including those entering the labour market for the first time, those employed in the organized sector and those working in the unorganized sector. Thus, the quality of higher education brings skill development and provides sustainable livelihood to the stakeholders. India is the 2nd largest population and the 3rd largest higher education system of nation in the world. As such it is providing largest employment in the world thereby skills are playing significant role. As the proportion of working age group of 15-59 years will be increasing steadily, India has the advantage of "demographic dividend". Here it is emphasized that Skill Development is to focus on the youth of the country and providing a suitable induce to get the sustainable livelihood as per population largest. UGC and AICTE are the two higher bodies for non-professional and professional courses in higher education sector which are connection with Central Universities, State Public Universities, State Private Universities, Institution to be Deemed Universities, University-level Institutions includes Established under State Legislature and Institute of National Importance & Others, Autonomous Bodies, Government, Private-Aided and Private-Unaided Affiliated Colleges are treated as skill centres. This paper analyses the role of skills efforts in higher education system, initiatives of vocational education and training in universities and colleges under the UGC. National Skill Development Corporation was established with objectives to develop skills through to stimulate the creation of huge, quality and for-profit vocational institutions and provides funding for sustained and to impart vocational training initiatives. In order to develop the skills several reforms making necessary to improve quality of education, autonomy in universities and colleges for enhancing skill development.

Keywords: skills & knowledge, higher education, demographic dividend, skill development, education & training

1. Introduction

Every country develops its own system of education to express and promote its unique socio-cultural-economic identity besides meeting the challenges of time to leverage the existing potential opportunities. India is the 2nd largest population and the 3rd largest higher education system of nation in the world. At present, India is recognized as one of the youngest nations in the world with over 50 percent of the population under the age of 30 years. It is estimated that by about 2015, India will have 20 percent of the world's total workforce. In order to harness the full demographic dividend, India needs an educational system which is of high quality, affordable, flexible and relevant to the individuals, economy and to the society as a whole. The pressing need, therefore, is to empower and enable India's young population to sustain a livelihood throughout their lives requires that educational institutes and government look beyond traditional pathways of education, employability and employment. Strengthening of skill development and its linkages with entrepreneurship, entrepreneurship that advances beyond cities and towns towards rural areas, and provision of transitions from vocational to higher education are all avenues that hold immense promise. 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.

UGC and AICTE are the higher authorities in higher education in India for technical and non-technical education

and also funding agencies. They are categorized as Central Universities, State Public Universities, State Private Universities, Institution to be Deemed Universities, University-level Institutions includes Established under State Legislature and Institute of National Importance & Others, Autonomous Bodies, Government, Private-Aided and Private-Unaided Affiliated Colleges. There are split into different branches such as arts, social sciences, science and technology, agriculture and horticulture with research institutions which are providing opportunities for learning, advanced learning and leading in research up to post-doctoral. This paper analyses the role of skill development in higher education system, initiatives of vocational education and training in universities and colleges under the UGC. The National Skill Development Corporation was established with objectives to develop skills through to stimulate the creation of huge, quality and for-profit vocational institutions and provides funding for sustained and to impart vocational training initiatives. In order to develop the skills several reforms making necessary to improve quality of education, autonomy in universities and colleges for enhancing skill development.

2. Objectives of Study

- To study the role of skill development in higher education in India.
- To study the growth of higher education system in general and reforms for skill development in higher education in particular in India and

- To analyze the specific initiatives for skill development commenced by UGC.

3. Research Methodology

The present study is systematically made by collecting information from various sources like journals, research papers, annual reports, magazines and newspapers. The problem of various situations was observed keenly and the results were analyzed respectively.

4. Results and Discussions

1) Higher Education and Skill Development:

Quality of Higher education brings skill development and provides sustainable livelihood. The concerned apex organization called National Skill Development Corporation is introducing several issues of skills by identifying for creating opportunities and forcible development by performing skill centers. The attractable skills issues in 12th planning was identified nearly 20 such as IT & ITES, entertainment and media, healthcare, security, retail tourism, automotive construction etc. are highlighted which are fit for current needs and evergreen with needing solutions to solve demand. In India both government and private sectors have great opportunity to utilize man power especially when focus on immense of youth which are below aged 25. For overall development, quality of higher education, delivering quality education are key role. Similarly, for enhancing global economy and developing socio-economic conditions, higher education, skill trainings, vocational training etc. are key role by nation's competitions. As India has 50% of population below aged 25, the said parameters bring sustainable lively hood according to population ratio and fulfill employment demand.

2) Growth of Higher Education System in India:

At the time of independence, there were only 20 universities and 500 colleges in the country with 2.1 lakh students in the higher education system. As on 31.03.2019 there are 1047 Degree Awarding Universities / Institutions (Source AISHE portal and UGC 2(f) list of Universities) including IIMs, 41935 Colleges (Affiliated /Constituent / PG - Off Campus Centers / Recognized Institutions) (Source AISHE portal 2018-19) and Students Enrolment of 373.99 Lakhs in Higher Education. After independence, there has been a phenomenal growth in all these numbers. Now, it is a recorded fact that there is an increase of 52.35 times in the number of Degree awarding Universities/Institutes, 83.87 times increase in the number of colleges, and the students enrolment (37399388) has gone up to over 178.09 times in the system of higher education as compared to the figures of Independence Year of India. The phenomenal increase in enrolment of this order would not have been possible without the growth in the number of institutions of higher

learning, both universities and colleges in particular and increase in intake capacity of courses.

3) Gross Enrolment Ratio in Higher Education (18-23Years):

Gross Enrolment Ratio (GER) in Higher Education in India is 26.3% which is calculated for 18-23 Years of Age Group. GER for Male Population is 26.3% and for Females it is 26.4%.

4) Trends in Gross Enrolment Ratio (GER):

Gross enrolment Ratio has increased from 21.5 % in 2012-13 to 26.3 % in 2018-19. The increase is more under SC Category which has increased from 16.0 % in 2012-13 to 23 % in 2018-19. In case of ST Category, the GER has increased from 11.1 % in 2012-13 to 17.2 % in 2018-19 (Table-1).

Table 1: Gross Enrolment Ratio in Higher Education during 2012-13 to 2018-19

Year	GER
2012-13	21.50
2013-14	23.00
2014-15	24.30
2015-16	24.50
2016-17	25.20
2017-18	25.80
2018-19	26.30

Source: UGC Annual Report 2018-2019 (November, 2019) & AISHE Report: 2018-19 based on Actual Response

5) Universities / Institutions /Colleges

UGC as the apex body for coordinating and maintaining standards of higher education in the nation for technical and non- technical education and also act as a funding agencies. They are classified as Central Universities, State Public Universities, State Private Universities, Institution to be Deemed Universities, University-level Institutions includes Established under State Legislature and Institute of National Importance & Others, Autonomous Bodies, Government, Private-Aided and Private-Unaided Affiliated Colleges.

a) Universities / Institutions:

University and University Level Institutions i.e. the Institutions which are empowered to award degree under some Act of Parliament or State Legislature. Type of Degree awarding Universities / Institutions are: (1) Central Universities (2) State Public Universities (3) State Private Universities (4) Institution to be Deemed University (5) Institute established under state legislature (6) Institute of National Importance & Others. At the time of independence, there were only 20 universities and 500 colleges in the country with 2.1 lakh students in the higher education system. During the year 2018-19, UGC listed 51 Central Universities, 397 State Public Universities, 334 State Private Universities, 3 Institution established under State legislature and 126 Institutions Deemed to be University (Table-2).

Table 2: Type-wise Number of Universities * as on 31.03.2019

S. No.	Type of University / Institution	Number of Universities/ Institutions (as on 31.03.2019)	Number of Universities eligible for Central Assistance under Section 12(B) of the UGC Act, 1956 (As on 31.03.2019)
1	Central Universities	51	--
2	State Universities	397	228
3	State Private Universities	334	7
4	Institutions established through State Legislation	3	--
5	Institutions deemed to be Universities	126	39
Total		911	274

Source: UGC Annual Report 2018-2019 (November, 2019) & AISHE Report: 2018-19 based on Actual Response

*Universities/ Institutions listed by UGC

b) Colleges

Colleges means any Institutions, whether known as such or by any other name which provides for a course of study for obtaining any qualification from a University and which, in accordance with the rules and regulations of such university, is recognized as competent to provide for such course of study and present students undergoing such course of study for the examination for the award of such qualification.

These are the institutions established or maintained by or admitted to the privileges of the University. There are four type of colleges /institutions namely (1) Affiliated Colleges (2) Constituent Colleges (3) PG and Off Campus Centers and (4) Recognized Centers. During 2018-19 there were 41,935 Colleges in India, which comprises 38787 Affiliated Colleges, 1702 Constituent Colleges, 183 PG/Off Campus Centres and 1263 Recognized Centers (**Table-3**).

Table 3: Type wise Number of Colleges /Institutions*: 2018-19

State	Affiliated Colleges	Constituent Colleges	PG/Off Campus Centres	Recognised Centres	Total (Col. 1 to 5)	Standalone Institutions
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Karnataka	3610	110	36	56	3812	1293
Total	38787	1702	183	1263	41935	10725

Source: UGC Annual Report 2018-2019 (November, 2019) & AISHE Report: 2018-19 based on Actual Response

• Colleges under section 2(f) & 12B of the UGC act 1956:

The UGC had notified Regulations for recognition of colleges under Section 2(f) of the UGC Act, 1956. The colleges are brought under the purview of UGC in terms of these Regulations as and when the proposals are received from the colleges for inclusion under the section 2(f) and they are found fit for inclusion as per the provisions contained in the Regulations. Apart from inclusion of colleges under Section 2 (f), the UGC includes the Colleges under Section 12B of its Act in terms of Rules framed under the Act. This makes the colleges eligible for central assistance from the Government of India or any organization receiving funds from the Central Government. As on 31.03.2019, the total number of colleges recognized under Section 2(f) of the UGC Act, 1956 was 12070 (2315 Colleges under Section 2(f) and 9755 Colleges under Section 12B) as compared to 11515 in the previous year (2153 colleges under section 2 (f) and 9362 under section 12B [Table-4]).

Table 4: Number of Colleges in India U/S 2(f) & 12B of the UGC Act 1956 (2018-19)

State	No. of Colleges		
	2(f) & 12(B)	2(f) (Not included under Section 12B)	Total
Karnataka	693	372	1065
Total	9755	2315	12070

Source: UGC Annual Report 2018-2019 (November, 2019)

6) Students Enrolment:

During the academic year 2018-19, there had been 373.99 lakhs students enrolled in various courses (Regular & Distance Education Programme) at all levels in Universities

/Colleges/Standalone institutions of higher education. Out of 373.99 Lakhs Students, there are 181.90 Lakhs Women Students, constituting 48.64%. The comparative trend of total enrolment of students at all India level from 2010-11 to 2018-19 is depicted in **Table-5**.

Table 5: All India Growth of Students Enrolment (2010-11 to 2018-19)

Year	Total Enrolment	Increase over the preceding year	Percentage increase
2010-11	27499749	--	--
2011-12	29184331	1684582	6.13%
2012-13	30152417	968086	3.32%
2013-14	32336234	2183817	7.24%
2014-15	34211637	1875403	5.80%
2015-16	34584781	373144	1.09%
2016-17	35705905	1121124	3.24%
2017-18	36642378	936473	2.62%
2018-19	37399388	757010	2.07%

Source: UGC Annual Report 2018-2019 (November, 2019) & AISHE Report: 2018-19 based on Actual Response)

• Level wise Students Enrolment:

Students enrolment position in Higher Education (Regular & Distance) programme for the academic year 2018-19 reveals that majority of students in the higher education system had been enrolled for a variety of courses at the under-graduate level. Out of the total enrolment of 3, 73, 99,388 students, a vast majority of 2, 98, 29,075 students are enrolled in Under Graduate that is a sweeping 79.8%. On the other hand, second to Under Graduate, 10.8% students are enrolled in Post-Graduation which is approximately 40.42 lakh students. There is a small share of 7.2% students enrolled at Diploma level in India that amounts to around 26.99 lakh students and out of this majority of students are enrolled in Teacher

Training, Nursing and Technical streams. However, a small share of 1.62 lakh and 2.24 lakh students are enrolled each at Certificate and PG Diploma levels, respectively, constituting

approx. 0.44% and 0.60% of the total share at each level (Table-6).

Table 6: Level-wise Students Enrolment (Regular & Distance) in Higher Education: 2018-19

Level	Male	Female	Total	% to Total
Ph.D.	95043	74127	169170	0.45
M.Phil.	11623	19069	30692	0.08
Post-Graduate	1761330	2281192	4042522	10.81
Graduate	15203346	14625729	29829075	79.76
Post-Graduate Diploma	121555	103156	224711	0.60
Diploma	1803208	896187	2699395	7.22
Certificate	75127	87570	162697	0.44
Integrated	138656	102470	241126	0.64
Total	19209888	18189500	37399388	100.00

Source: UGC Annual Report 2018-2019 (November, 2019) & AISHE Report: 2018-19 based on Actual Response

7) Out Turn /Examination Results 2018 (Universities and Colleges):

As per the response received in the Survey 64.74 Lakh Students have been Graduated and 15.00 Lakh Students Passed Post-Graduation level during 2018. The highest Number of Students have Graduated in Art Course. B.A Degree has been awarded to 19.99 Lakh students which is the highest among all programmes with percentage of male as 42.55%. B. Sc. is the Second major stream with 10.54 Lakh Students Pass Out followed by B. Com with 9.65 Lakh Students. 8.31 Lakh students have Graduated in Engineering and Technology Stream. In Medical Science stream, there are 2.26 Lakh Students who have been awarded Graduate Degree (Table-7).

Table 7: Level-wise Out-Turn / Pass Outs: 2018 (Universities and Colleges)

(Data based on Actual Response received in AISHE 2018-19.)

Level	Out-Turn/Pass Out		
	Men	Women	Total
Ph.D.	23765	17048	40813
M.Phil.	7829	17958	25787
Post Graduate	637265	862799	1500064
Graduate	3042301	3432414	6474715
Post Graduate Diploma	79047	80650	159697
Diploma	465467	318447	783914
Certificate	35576	39782	75358
Integrated	17593	13957	31550
Grand Total	4308843	4783055	9091898

Source: UGC Annual Report 2018-2019 (November, 2019) & AISHE Report: 2018-19 based on Actual Response

8) Faculty Strength:

The number of total teachers at University level is around 1.90 Lakh out of which 63.35% are male and 36.65% are female. At college (Affiliated/Constituent) level, the number of teachers is 10.62 lakh with 56.84% male teachers. In Standalone Institutes, total number of teachers is 1.53 lakh with 58.31% male teachers. Looking at female per 100 male teachers, there are 58 teachers at University level, 76 and 71 female teachers per 100 male teachers at College and Standalone Institutions, respectively (Table-8).

Table 8: Designation wise Distribution of Teaching Staff in Universities and Colleges: 2018-19.

Designation	University Teaching Departments/Constituent Units/ Off Campus Centres		Affiliated Colleges and Constituent College		Grand Total	
	Total	Women	Total	Women	Total	Women
Professor & * Equivalent	35221	8460	83235	22940	118456	31400
Reader / Associate Professor	27697	8794	122460	46437	150157	55231
Lecturer / Assistant Professor	109667	44223	752434	330867	862101	375090
Tutor/Demonstrator	7412	4101	39489	25403	46901	29504
Temporary Teachers	7720	3274	65074	33006	72794	36280
Grand Total	187717	68852	1062692	458653	1250409	527505

* Includes Directors, Principals and Senior Teachers who are equivalent to Professors. Excludes Visiting Teachers.

Source: UGC Annual Report 2018-2019 (November, 2019) & AISHE Report: 2018-19 based on Actual Response

9) Reforms in Higher Education for Skill Development:

The theme included in 12th year plan of UGC deals with skill development and focus on demographic dividend. Young population in India is asset but between 18 and 24 age groups is only coming to 12 to 15 percent in higher

education thereby making reforms necessary for skill development for current demand. Presently skill development scenario of the country facing some inherent short comes due to improper relation between industrial needs and skills teaching are unrecognized industry training courses in skill training institutes. Similarly general

education also faces lacks of quality of teachers, study material, education facilities in interior areas, school dropout rate etc. The problems were maximum at rural, interior villages because of these are getting least priority with insufficient facilities. The government is being put effort to reform in higher education as identifying the major difficulties and its strength. In order to reforms the said parameters, it is identified the premier role of ICT in education and delivering the expected results. At present days ICT based education made compulsory and expanding to all institutes in both secondary and higher education as well as in all subjects.

a) Skill Development Initiatives by UGC:

The 12th Five Year Plan Document of the Planning Commission has also laid a special emphasis on expansion of skill-based programmes in higher education. The UGC is implementing three schemes viz. Community Colleges, B. Voc. Degree Programme, and Deen Dayal Upadhyay Centres for Knowledge Acquisition and up-gradation of Skilled Human Abilities and Livelihood (KAUSHAL) under NSQF. The UGC guidelines for Curricular Aspects, Assessment Criteria and Credit System for Skill based Vocational Courses have defined credits for specific NSQF levels which may utilize as a tool for equivalence to the academic qualifications at par with equal number of credits awarded by any institution in related specializations. It also recommends setting up of Community Colleges (CC) to serve multiple needs including;

- Career oriented education and skills to students interested in directly entering the workforce;
- Training and education programmes for local employers;
- High-touch remedial education for secondary school graduates not ready to enroll in traditional colleges, giving them a path to transfer to three- or four-year institutions; and
- General interest courses to the community for personal development and interest.

b) Activities/outcomes of Skill Development scheme during 2018-19:

Model Curriculum for Skill based Courses:

The UGC, in consultation with NSDC and concerned Sector Skill Councils (SSCs) has developed Qualification Pack (QP), National occupational standard (NOS) based Curriculum in 45 potential trades. These courses being offered / proposed to be offered may also serve as option of Skills basket for Ability Enhancement Courses and Skills Enhancement Courses under Choice Based Credit System (CBCS).

Academia-Industry Collaboration:

The Skill Development Schemes have Academia Industry Collaboration, providing suitable platform for industries in academia, which otherwise could not materialize in a desired manner even with lot of policy efforts.

- Adani Power Industries (Tiroda-Nagpur)
- National Stock Exchange (Ahmedabad)
- Volvo-Eicher Commercial Vehicles Ltd
- Yamaha Automobiles – Two Wheelers
- Dainik Bhasker – Media Sector
- Nagaon Paper Mills, Hindustan Paper Co. Ltd. Assam

- ISTV TV Channel, Imphal
- Babina Healthcare and Hospitality Ltd.
- Adhira – Accutech CNC Products, Pvt. Ltd. and
- Arun Hitech Engineering – Foundry Equipment

10) Type of Courses and Awards:

There will be full time credit-based modular programmes, wherein banking of credits for skill and general education components shall be permitted so as to enable multiple exit and entry. The Plan Document also states that Community Colleges will be located to facilitate easy access to underprivileged students and such colleges could either be established as affiliated colleges of universities or as entirely autonomous institutions. Govt. of India, in pursuance of the decision of Cabinet Committee on Skill Development in its meeting held on 19th December, 2013 issued a notification for National Skills Qualifications Framework (NSQF).

Under the National Skills Development Corporation, many Sector Skill Councils representing respective industries are being established. One of the mandates of Sector Skill Councils is to develop Qualification Packs (QPs) / National Occupational Standards (NOSs) for various job roles in their respective sectors. It is important to embed the competencies required for specific job roles in the higher education system for creating employable graduates.

The National Skills Qualifications Framework (NSQF) organizes qualifications according to a series of knowledge, skills and aptitude. The NSQF is defined from level 1 to 10 and these are deciphered as follows: Level 1 is for unskilled worker, levels 2 and 3 are for semi-skilled worker, level 4 is for skilled worker, level 5 is for supervisor, level 6 is for supervisor's supervisor, level 7 is for first level management, level 8 and 9 correspond to middle level management and so on.

National Occupational Standards (NOS) define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also are able to do. These standards can form the benchmarks for various education and training programs to match with the job requirements. Just as each job role may require the performance of a number of tasks, the combination of NOSs corresponding to these tasks form the Qualification Pack (QP) for that job role. The NOSs and QPs for each job role corresponding to each level of the NSQF are being formulated by the respective Sector Skill Councils (SSCs) set up by National Skill Development Corporation (NSDC) with industry leadership. The curriculum, which is based on NOSs and QPs, would thus automatically comply with NSQF.

11) Institutional Mechanisms for Skill Development through Higher Education

The skilling of youth at higher education level has three tier approaches being implemented in the country; the first one is to incorporate skill component in the regular higher education courses, second is to offer full-time skill based Degree / Diploma courses with major skill credits, and third is to offer short-term skill based courses, orientation and finishing schools. Following are institutional mechanisms

implemented for the successful incorporation of skill development based vocational education and training in university and collegiate education system:

- Multiple Entry and Exit Options.
- Skill Basket for Choice Based Credits in General Education.
- Credit Banking System.
- De-linked Course Duration.
- Outcome Based Assessment.
- Input and Output Based Credit Criteria for General Education and Skills Respectively.
- Institutional Collaboration for Credit Transfer.
- NOSs Based Delivery of Skills for National Recognition.
- Finishing schools.

12) Levels of Equivalence in Academic and Vocational Programmes

As the CBSE and many other school boards are initiating skill based vocational courses with certification at NSQF Level 4 for students completing 10+2, there may be three types of learners getting admission to first semester of skill-based courses under NSQF:

Category 1: Students who have already acquired NSQF certification Level 4 in a particular industry sector and opted admission in the skill based courses under NSQF in the institutions recognized under CC/B. Voc. Degree

programme/Deen Dayal Upadhyay KAUSHAL Kendras in same trade with job role for which he/she was previously certified at school level.

Category II: Students who have acquired NSQF certification Level 4 but may like to change their trade and may enter into skill-based courses in a different trade.

Category III: Students who have passed 10+2 examination with conventional schooling without any background of vocational training.

The institutions / community college / KAUSHAL Kendras have curriculum and arrange for skill intensive training / teaching for the learners belonging to the category-2 and 3 mentioned above during the first six months who are assessed and certified for NSQF Level 4 of skill competency by concerned SSC at the end of first semester. However, learners belonging to category-I do not require such certification as they were already having NSQF level 4 certificates in same industry sector / job role required for specified skill credits. All the learners continuing Diploma courses or further are treated at par from second semester onwards. Students may exit after six months with a Certificate (NSQF Level 4) or may continue for diploma or advanced diploma level courses. An academic progression for the students in vocational stream is illustrated below (Fig. 1):

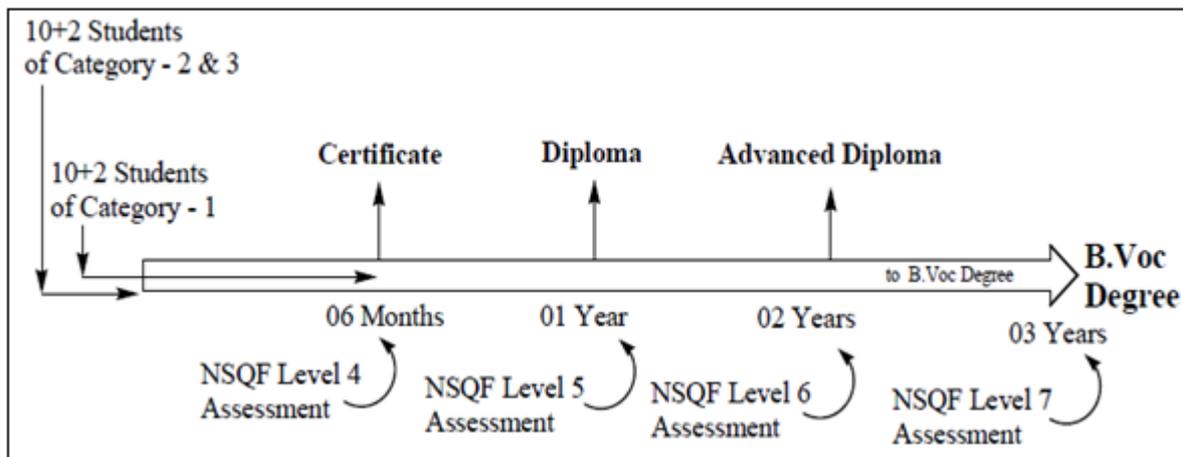


Figure 1: Vertical Mobility and Multiple Entry / Exit Options for Learners

These courses also provide for vertical mobility to the students with vocational subjects. In addition, UGC has also communicated to all the Universities to provide horizontal & vertical mobility to the students of vocational stream at 10+2

level in various courses at undergraduate level. The Fig. 2 depicts qualification flow and vertical and lateral mobility options for the learners in skill development-based education.

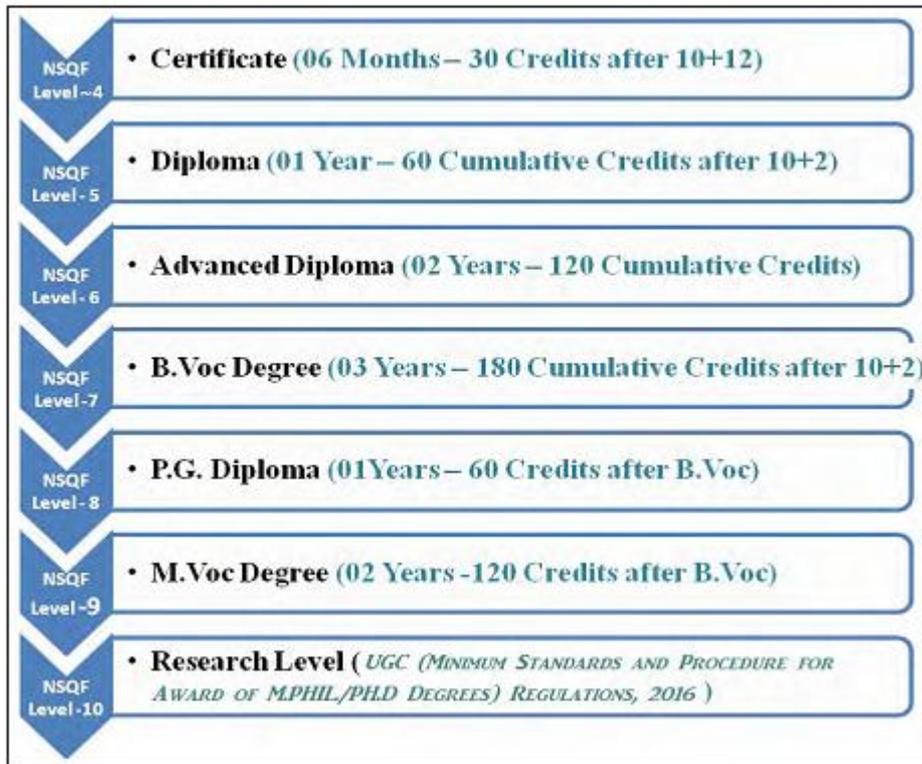


Figure 2: Qualification Flow and Lateral / Vertical Mobility in Skill based Courses
Source: UGC Annual Report 2018-2019 (November, 2019)

13) Governance and Regulatory Reforms in Higher education for skill Development:

The Government is undertaking the major changes that establishing universities, large universities are divided into local manage centers, well infrastructure reputed universities changed into universities or cluster universities, colleges can unite as multidisciplinary education bring changes for effective autonomy and governance to the education institutions presently. Further there will be lot of demand for impart training infrastructure on vocational institutions. Academic leadership also need as university level should be reform.

Further, the council made conditions for skills in planes of higher education, sharing of resources between universities, reforms between governance and academic lead as per the institution level, performing evaluated and research studies, using available data sources etc. shows more autonomy.

Putting inputs on higher education should be more and attractive then skills will be developed. The universities should be divided on the basis of required opportunities such as research based, skilled based, language based, teaching and education based etc. and also that should be managed as regulations, funding and governance. Skill development funding is morely restricted to public providing trainings and that paid to financing as encourage good quality in training (Table-9 to Table-11). The students providing fee directly to treasuries thereby trainings to be weak at the same time financial incentive make efficiency and encourage dependence. Therefore, we have to search innovative mechanism to create funding in skill development in this regard.

5. Summary

Table 9: Scheme wise Status of Skill Development Schemes under NSQF in 2018-2019

Name of the Scheme	No. of Institutions	No. of Beneficiary Institutions	No. of Students Enrolled	Grant Sanctioned (Rs. In Crore)	Grant Released (Rs. In Crore)
Community Colleges	172	090	12000	35.05	27.74
B. Voc. Degree Institutions	330	195	22000	120.67	103.08
DDU KAUSHAL Kendras	028	18	4000	15.42	11.78
Total	530	303	38000	171.14	142.60

Source: UGC Annual Report 2018-2019 (November, 2019)

Table 10: Number of Skill Development Centres (NSQF) (University / College) as on 31.03.2019

Name of the Scheme	No of Institutions		
	Existing	New	Total
Community Colleges	109	172	281
B. Voc. Degree Programme	116	330	446
DDU KAUSHAL Kendras	64	28	92
Total	289	530	819

Source: UGC Annual Report 2018-2019 (November, 2019)

Table 11: Year wise details of Grant Released for the Scheme of CC, B. Voc. And DDU KAUSHAL Kendras (Rs. in crore)

Scheme	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Community Colleges	4.28	35.89	33.36	22.68	19.24	27.74
B.Voc Degree Institutions	--	80.64	31.87	10.00	14.55	103.08
DDU KAUSHAL Kendras	--	--	98.70	8.93	3.15	11.78

Source: UGC Annual Report 2018-2019 (November, 2019)

1. Specific Initiatives for Skill Development Commenced by UGC:

It has been a long-felt necessity to align higher education with the emerging needs of the economy so as to ensure that the graduates of higher education system have adequate knowledge and skills for employment and entrepreneurship. The higher education system has to incorporate the requirements of various industries in its curriculum, in an innovative and flexible manner while developing a holistic and well-groomed graduate. The UGC has launched the scheme on skills development based higher education as part of college/university education, leading to Certificate, Diploma, Advanced Diploma Degree and further Advanced Studies and Research Level. The following are the Major initiatives of UGC in the field of skill development in higher education in the country.

A. Scheme of Community Colleges: The Community College Scheme is to offer low-cost high-quality education locally, which encompasses both traditional skill development as well as traditional coursework, thereby providing opportunities to the learners to move directly to employment sector or to move to Higher Education sector. It offers a flexible and open education system which also caters to community-based life-long learning needs. It has a synergistic relationship between Community, Community Colleges (CC) and the Job market. The CCs offers knowledge-skill mixed programmes of different durations depending on the need of local industry leading to a certification at various levels of NSQF starting from Certificate to Advanced Diploma Level. Presently, there are 248 institutions spread over 28 States / UTs catering the need of 83 trades of different industrial sectors in the country.

- **Eligibility for admission :10+2 or equivalent**
- **Scholarship :1000/- p.m. per student**

B. Voc. Degree Programme: The UGC has launched scheme on skills development based higher education as part of university / collegiate education, leading to Bachelor of Vocation (B. Voc.) Degree with multiple exits, such as Diploma/Advanced Diploma under the NSQF. The B. Voc. programme is focused on universities and colleges providing undergraduate studies which would also incorporate specific job roles and their National Occupational Standards along with broad based general education. This would enable the graduates completing B. Voc. to make a meaningful participation in accelerating India's economy by gaining appropriate employment, becoming entrepreneurs and creating appropriate knowledge. UGC has launched a scheme on skills development based higher education as part of college/university education, leading to Bachelor of Vocation (B. Voc.) degree with multiple exits such as Diploma/Advanced Diploma under the NSQF. There are 187 institutions spread over 27 States / UTs catering the need of 85 trades of different industrial sectors in the country.

- **Eligibility: 10+2 or equivalent**

Knowledge Upgradation Centers for Skilled Human Action and Learning: The UGC in its meeting held on 22nd September, 2014 approved the guidelines for establishment of Knowledge Upgradation Centers for Skilled Human Action and Learning (KUSHAL) in universities and colleges during 12th Five Year Plan. These centers will offer programmes from Certificate to Research level. 100 such Centers are proposed to be established during 12th Plan in universities/colleges recognized under section 2(f) and 12 (B) and receiving General Development Assistance from UGC. These Centers will also coordinate between the Higher Education System and Industry to work as Centers of Excellence for Skill Development in specialized areas. They will also network with other KUSHALS and Universities and colleges imparting Vocational Education under the scheme of Community Colleges and B. Voc. degree programme. There are 65 institutions spread over 23 States / UTs offering courses in 65 trades.

Credit Framework for Skill Development Based Vocational Courses: UGC guidelines for Community Colleges / B. Voc. Degree programmes and of KUSHALS provide for credit-based modular programmes, wherein banking of credits is permitted to enable multiple exit and entry. Specific credit-based assessment and award system has been incorporated giving sixty percent weightage to the skill component and forty percent weightage to general education component. A comprehensive credit framework for skill development based vocational courses has been formulated in consultation with NSDC and is being incorporated in the revised guidelines to be placed before the Commission for approval in the next meeting.

MoU with NSDC: UGC has signed a MoU with National Skill Development Corporation (NSDC) for skill development based vocational courses under the ambit of UGC. The Under this MOU, the NSDC will ensure timely completion of post training assessment & certification of skill component through NSDC approved Sector Skill Councils, extend expertise and experience in the field of skill training, assessment and industrial requirements. NSDC will also provide valuable help in facilitating employment of learners and On-the-Job-Training (OJT) to the learners trained by Community Colleges under the ambit of UGC. NSDC will provide access to Community Colleges and to UGC to SDMS (Skill Development Management System) to manage the electronic coordination among all the stakeholders – Sector Skill Council (SSC), Institutions, UGC and NSDC.

Development of 'Model Curriculum' of the Various Trades for Courses Approved under NSQF by UGC: The UGC-NSDC Coordination Committee constituted under the

above MoU is in process of developing the curriculum of skill component of the courses approved by UGC based on identified job roles in alignment to Qualification Packs and National Occupational Standards developed by Sector Skill Councils. The model curriculum of general education subjects will also be developed by the UGC and made available on UGC website to provide guidance for curriculum development to the institutions offering courses under the scheme of Community Colleges / B. Voc. Degree programmes.

6. Conclusion

India is one of the largest higher education systems divided as central universities, state universities, deemed universities, university-level institutions includes autonomous bodies, government, private-aided and private-unaided affiliated colleges are sources for imparting skill training in technical and non-technical methods. India still lacks internationally far behind universities such as Oxford, Cambridge, and Harvard. For India to set about making gains from the seeming liability of its vast population, the demographic potential of its youthful population must be tapped. An ecosystem must be created that enables the skilling and education of youth and generates opportunities for self-employment/ employment/ entrepreneurship. Rural youth must constitute a vital part of the outreach since the majority of our population still resides in rural areas. The New Education Policy is on its way and it may have proper directions for the integrating the skills in higher education and academic equivalence to the skill-based courses. The UGC being apex regulatory body has taken many initiatives for making higher education skill based for employability enhancement and harnessing demographic dividend of the country. The National Skill Development Corporation is introducing the issue of skills going through creating capacity, opportunity and output come driven work force by skill councils. Indian higher education is overcoming inherent deficiencies and going to new reforms. Certain parameters are identified in Higher education such as education quality; delivering lecture, employability etc. are still need at present days. Problems are faced by Higher educations which are lack of industry recognition to the skill training courses at the Government training institutes which are ICT tools in education, learning materials etc. which should be reformed. The farmed Council responsible for coordinating among universities planning development in universities, education at various sectors, colleges are transformed into universities or college-cluster universities, some large affiliating universities are bifurcated to local managed bodies, colleges can be farmed as multidisciplinary education institutes, Affiliating universities with CPDC etc. make effectively to autonomy and governance to the college will horn the skills.

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