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## Major review on possible strategies for bridging the employability skill gap in higher education and Internship dilemma and possible solutions for Higher Professional Education in India

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### ABSTRACT

It's certainly a difficult task to recognize, apprehend and evaluate the employability of a person. Employability is the ability of a man or woman to gain and maintain the work which he attained due to his/her capabilities. It is the competence of person to shift within the market work force and understand the capacity that is available in them. The key objective of the study is to identify the strategies or approaches to bridge the employability skill gap in higher education. The paper also highlighted the benefits of bridging the employability gap in Indian economy. The paper is based on the conceptual study. And the data has been collected from the secondary sources of information. On the contrary Education is the prime goal in 17 Sustainable Development Goals (SDGs) identified by UNO. Education immensely contributes to individual, societal, national or global happiness and prosperity that are expressed in terms of remaining 16 SDGs. Relevant training during the process of education plays a key role. Physical and mental skills are, therefore, the essential outcomes of education. Training, internship and apprenticeship are some of the ways to

train the students. This paper discusses feature of these tools, takes an overview of the practice, various approaches developed by regulatory bodies like AICTE, UGC, ACAR, MCI, etc., and presents challenges before the Higher Education Institutes in

India. A few recommendations such as better collaboration among the regulatory bodies, faculty training, student log-book for in-plant training, etc., have been made so as to optimally utilize training facility for enhancing employability of graduates. It is believed the paper is of interest to all concerned.

**Keywords:** Bridging the employability skill gap, sustainability development goals, higher education, strategy, approaches, enhancing employability

## Introduction

The current business environment focuses on development of strategic skills and work experience by giving importance to higher education for employability. Practice is the present day need for the development of the employees or the college graduates because practice will enhance their employability skills. Participation in the training process and obtaining the feedback from the stakeholders are helpful for the future skill development. Analyses current skill capability need and review of skill development policies, the challenges faced regarding skill development and solution for the same. The study also indicates the relationship between employment, education, and skill

development. The researcher used random survey method for data collection and has taken the 100 samples from the students who have taken STAR training from different NSDC (**National Skill Development Coordination Board**) partners in Lucknow. Data analysis was done through using simple weighted average and percentage method for the study. Education and training is a natural process in all living creatures save man. We do not find schools in case of other living creatures. Man being endowed with intellect has created several systems for his survival. Education is the most prime one. Education, formal, informal, distance or online, is essentially inclusive of training of both mind and physical body. Education is as old as man himself. In ancient times we had education and training facilities. As the time passes, newer and newer methods and approaches have been evolved. For example, workforce training became essential because of the factory system, an outcome of the first Industrial revolution. Factory needs different skills according to the nature of job and/or factory. This has given rise to the concepts like 'Work force Training and Development, apprenticeship, internship, job ready, industry ready or student READY (Rural and Entrepreneurship Awareness Development Yojana, etc. Education, therefore, is regarded as the prime sustainable development goal (SDG) among the 17 SDGs identified by UNO for the happiness and prosperity. The next Section presents an overview of such concepts practiced or evolved in manmade education and training system(s).

## Employability gap

Skill gap is the gap between employee's ability and employer's expectations of an organization. Competency gap is the big issue that is faced by the both employees and employers in today's environment. This gap occurs due to the initiation of new technologies and digitalization. The gap can also indicate a need for changing the recruitment methodologies; establish a career development platform, packages to encourage worker engagement. Working towards lowering talent gap can cause expert improvement, growth possibilities of merchandising for the involved employee, increase productiveness and will increase worker retention. Working towards reducing the competency gap can lead to the professional development, increase the productivity, increase the chance of promotion and increase the employee retention.

### Major Need for bridging the employability skill gap:

One of the main reasons of bridging the employability gap is lack of skilled and trained manpower. In order to control the unemployment it is necessary to provide the training and skill development program to both educated and uneducated groups. Bridging the employability skill gap through the various training and skill Development programs and initiatives could make India as a global hub for skilled manpower. **According to the report published in BW People.in**, skill gap is the difference between skills that employers want and skills their workforce offer. In today's fast moving world, employability skill gap is the main problem faced by the both employees and employers. This is because of adoption of digitalization and evolution of technologies. Reducing the skill gap can lead to professional enhancement, boosts efficiency, increase the chances of promotion and increases the employee retention.

## Literature Overview

### Basic Concepts

Bharatratna Sir M Visvesvraya says "When a young man leaves the institution after a course of training, he should be clean in speech and habits, with a correct sense of patriotism, loyalty to the country, aptitude for initiative, love for self-help, appreciation of the value of time, respect for law and order, and knowledge of the value of right thinking and right living, sufficiently well-equipped to fall into a position in some business or other calling and be able to support himself". Integrated education, therefore, is the call of the day. It includes such things as teaching-learning, Research and Development and Extension Education and provides training for acquiring skills both mental and physical. Thus, in essence, education helps promote educate, elevate and empowerment of an individual. Several approaches are used to make student employable. integrated (wholesome and complete) education has three components:

- Teaching & Learning;
- Research & Development; and

- Outreach Programmes, comprising Industrial Consultancy, Extension Education

The purpose of wholesome education is to hone the student to be employable, job seeker or job creator.

This can be squarely achieved by fixing the concepts like training, apprenticeship and internship that have different shades, objectives and modus operandi. Six differences between internship and apprenticeship can be summarized as given below:

1. Internship programs outnumber apprenticeships
2. Apprenticeships are of longer duration.
3. Apprenticeship offers more pay than that of an internship
4. Apprenticeship facilitates hands on training and classroom training is tied to the apprenticeship.
5. One will come out of the apprenticeship with a job.

Below Table 1 presents a comparison chart for training Vs. Internship

Basis for comparison	Training	Internship
Meaning	Training is a programme used by most of the companies and big organizations to improve the skills, performance ability of the employees for doing a specified job.	An Internship is a type of training in which the students of various colleges and universities get the real world experience about the workplace for a limited period of time.
For whom	Employees and Prospective employees.	Students
Duration	Depends on the company or an organization, but normally more than 6 months.	2-3 months.
Objective	Improving the employee's performance and productivity.	Gaining practical knowledge.
Payment	Training is always paid	Internship may or may not be paid.

Table 1: Comparison chart between training and internship

Training is a program organized by most of the companies for improving the skills, competencies, knowledge and the ability of the employees for performing a specified job. Training may be of different types like orientation, apprenticeship, job, vestibule, promotional, refresher training or internship. In-plant training is one that takes place in the industry or company, where one will get to learn something which happens in the real world. Further, a training undertaken by the company itself or an institute owned by the company is called industrial training. An internship is a kind of training in which the students of college and university get the practical experience of an occupation at the workplace. The main purpose of such training is to enable students to apply their theoretical knowledge in real life working situations and learn the workplace ethics. Internship model for medical sciences programs like MBBS,

BAMS, MS, etc., is a proven one.

Key Differences between Training and Internship Training is a program organized by the companies for their employees for improving their skill, performance and ability while Internship is a job training given to the students, giving them real world experience about the workplace.

- Rules and Regulations of the company are applied to the trainees but not to the interns. After the completion of the training, the trainees get job placement while no job is given to the Interns.
- The duration of training is normally more than the duration of the internship.
- The training can either be on the job or off the job, whereas internship is always on the job.

### Benefits of Training

- ✓ Builds employee's self-confidence.
- ✓ Increases employee's performance and productivity.
- ✓ Improves employee's morale and increases profitability
- ✓ Ensures satisfaction among the workers.
- ✓ Better chances/opening for promotion.

### Benefits of Internship

- Builds self-confidence of intern.
- Intern gains practical knowledge.
- Improves intern's workplace ethics.
- Enhances intern's skills.
- Improves intern's performance quality.
- Improves intern's communication skill.

### Sandwich Programmes

As mentioned above, for higher education internship term is normally used though it turns to be some sort of industrial training or in-plant training. Pune University, Pune, started B E (Metallurgy: Sandwich) programme of 4.5 years' duration in early 70's, followed by BE (Mechanical: Sandwich) 4.5 years, then all sandwich programmes in Metallurgy, Mechanical and Production were converted into 4 years program. In-plant training of 2 semesters was sandwiched in 8 semester's program. The author as Head of Industrial Engineering Department had an opportunity to introduce BE (Mechanical: Sandwich) and BE (Production: Sandwich), each of 60 intake, and ran the programmes successfully from 1993 to 2005 AD. There was also a practice that a few colleges used to send their students for industrial training for a short period of 2-3 weeks to nearby industry during vacation period.

### Industry-Institute Linkage:

Private Engineering Colleges entered into Higher Education sector by mid-80 and over the last three decades the number of colleges, student-intake and faculty has multiplied many folds. This has prompted Educationists and Policy makers to evolve such concepts as industry institute linkage, industry-institute partnership, industry parks etc. Waghodekar has identified 22 potential areas such as curriculum development, student growth, faculty quality improvement, seminar and projects, consultancy, R & D, etc., where industry-institute linkage can fetch dividend to both. Waghodekar has advocated industry-institute partnership for capturing global market through quality goods and services at affordable cost and further recommends pre-service training for faculty for preparing them to face the challenges of globalization, see Table 2.

Table 2: Pre-service training of faculty to meet global challenges [12]

Module No.	Title	Duration (weeks)	Nature of Training
I.	Induction trg.	10	General awareness of task traits. Examination, next module scheduling and break.
II.	Core on-job trg.	24	Class and inplant trg. with objectives set. Project assesement, next module scheduling & break.
III.	Selective trg. in three areas	11	Proficiency in 3 need based areas of specialisation.
		02	Examination, posting on successful completion of trg., and break.
Total:		50 weeks	

AICTE Internship Policy In 2018 AICTE has notified Internship Policy: Guidelines and Procedures. This is a detail document that specifies procedures for all involved in internship, i.e., students, faculty, industry, university, internship duration, frequency, credits, etc. See Tables 3 and 4.

Table 3: Credit framework and internship UG/Diploma level

Sr.	Schedule		Duration		Activities	Credits	
	College	Diploma	College	Diploma		College 14-20	Diploma 10-18
1	Summer vacation after 2 <sup>nd</sup> Semester	Summer vacation after 2 <sup>nd</sup> Semester	3-4 weeks	3-4 weeks	Inter/Intra Institutional activities	3-4	3-4
2	Summer vacation after 4 <sup>th</sup> Semester	Summer vacation after 4 <sup>th</sup> Semester	4-8 weeks	4-8 weeks	Industrial/Govt./NGO/MSME/Rural internship/innovation/entrepreneurship	4-6	4-6
3	Summer vacation after 6 <sup>th</sup> Semester	6 <sup>th</sup> Semester	4-8 week	3-4 week	Degree: Industrial/Govt./NGO/MSME/Rural internship/innovation/entrepreneurship.	4-6	3-4
					Diploma: Project work, Seminar (excluding credits for Advanced Courses)		
4	8 <sup>th</sup> Semester		3-4 weeks		Project work, Seminar (excluding credits for Advanced Courses)	3-4	

Table 4: Credit framework and internship/Industrial Project at PG level

Sr.	Schedule	Activities	Duration	Credits
1	Semester-II	Industrial project/Dissertation	20 weeks	10
2	Semester-IV	Industrial project/Dissertation	32 weeks	20



**Student –READY**

ICAR has recommended Rural and Entrepreneurship Awareness Development Yojana (READY) for B Tech (Food Technology) four years' UG programme. It consists of the following components:

1. Industrial visits
2. Experiential Learning Programme-I and II.
3. Seminar
4. Research Project
5. In-plant training.

Tables 5 and 6 present some provisions for Student-READY

Table 5: Constituents of Student READY programme

Sr. No.	Course No.	Course title	Credits	Semester
1	FPO-231	Student READY – Industrial Tour (I)	1 (0+1)	III
2	FPO-232	Student READY – Industrial Tour (II)	1 (0+1)	V
3	FPO-473	Student READY – Experiential Learning Programme – I	7 (0+7)	VII
4	FPO-474	Student READY – Experiential Learning Programme – II	7 (0+7)	VII
5	FPO-475	Student READY – Research Project	3 (0+3)	VII
6	FPO-476	Student READY – Seminar	1 (0+1)	VII
7	FPO-487	Student READY – Inplant Training	20 (0+20)	VIII
		<b>Total Credits</b>	<b>40 (0+40)</b>	

Table 6: Generalized layout for In-Plant Training

Sr. No.	Activities	Number of weeks
1	General orientation and on-campus training by faculty. Finalisation of industry for attachment	02
2	In-plant training : Industry attachment	14
3	Project Report Preparation, Presentation and Evaluation	04
	Total credits	20

**Project work and Internship for B.Sc. (Nursing):**

Maharashtra University of Health Sciences, Nashik ([www.muhs.ac.in](http://www.muhs.ac.in)) and Indian Nursing Council, New Delhi ([www.inc.in](http://www.inc.in)) are the regulatory Bodies for B Sc (Nursing) four years' programme. This programme gives due weight-age for Clinical practice in Hospital. Besides this, the student has to undergo Project work and internship in the fourth year of the program. As good as 30% weight-age goes to these activities. See Table 7.

Table 7: Project work and Internship for final year of B Sc (Nursing)

Project Work to be carried out internship		
Practical = 30 hours per week		
Internship (Integrated practice)		
Subject	p. Clinic Hours	Weeks
1. Midwifery & Obstetrical Nursing	240	5
2. Community Health Nursing-II	195	4
3. Medical Surgical Nursing (Adult & Geniatrics)	430	9
4. Child Health Nursing	145	3
5. Mental Health nursing	95	2
6. Reserach Project	45	1
Total	1150	24

### Some Challenges to be addressed:

In the previous Section a few models for internship like AICTE, Sandwich, INC, ICAR, etc., are presented. Each model is striving for integration of theory and practice, though the approaches advocate different mode of execution of internship or in-plant training. The Indian Higher Education, however, has been facing such challenging issues as:

1. How to increase employability of graduates? At present, it varies in the range 10-15%.
2. How to go about skill development? Job ready skills are hardly imparted in institutes.
3. How to meet affordable cost of education? Arrest skyrocketing tuition fees?
4. How to train faculty worthy enough for better outcome of internship?
5. .How to up-grade and up-date institutes for world class quality education?
6. How to handle hyper growth in number of institutes and students without affecting the quality of education, i.e., balancing quantity and quality?
7. How to move about for internationalization/globalization of education?
8. How to bridge the widening gap between industry and institute so that graduates employability can be increased?
9. How to bring all regulatory bodies like AICTE, UGC, etc., and Councils like INC, ICAR, MCI, CoA, etc, on a common platform so as to promote co-operation, collaboration and co- ordination among them in such matters as internship policy, integration of education, etc.?

### Suggestions

The following suggestions are made:

1. Better coordination, co-operation and collaboration among the regulatory bodies and Councils. Provide them a common platform.
2. Each model of internship presented in this paper has got its own strong and weak points. A consciousness can be built up to have a common model incorporating good points of each.
3. Faculty training: Pre-service, minimum of one year, and in-service training of minimum two months in industry and 2 refresher courses in a block of 2 years, see Table 2. [13-15].
4. Produce quality project/Seminar/Dissertation and in-plant Training of internship or perish.
5. There are over 1000 engineering colleges, 500 management institutes, 1500 polytechnics. In such a situation, AICTE



model appears to be infeasible as the number of students is too large to accommodate them both in industry and institute.

6. Quality of internship training can be controlled through such means as 'Log-Book' see Appendix "A".
7. In vocational training, the ITI certificate is held valid only after successful completion of one year or so apprenticeship training. Likewise, the degree needs to hold valid only after completion of at least 6 months training in industry.
8. Apprentice Act may be mandatory for industry.
9. The Director, State BOAT or his nominee need to be an ex-officio member of the Governing Body of Institute.
10. More emphasis on R & D, consultancy, industry projects, industrial visits, innovation, patenting, etc., may be given.
11. Training and Placement Cell, Entrepreneurship Development Cell and IQAC need to be activated with due spirit with good ROI.
12. Close association with Professional Bodies like CII, CSI, etc., is strongly recommended

## Conclusions

This paper tries to highlight the fact that economic policies in most of the world rarely considered education as investment for the future or as a key to development, and even less as a fundamental right of human beings. The repercussions of these policies at all levels of education systems in the world, with the exception of a few industrialized countries, have been sorely felt. Such repercussions include the worsening of teaching conditions; insufficient numbers of school establishments and increase in numbers per class, particularly in developing countries experiencing strong demographic growth; the loss of teaching quality often due to the qualification level of the teacher's and the material conditions in which they carry out their profession; and finally, the loss of relevance regarding the education programs themselves. This paper argues that due industrial training to students will help promote them to educate, elevate and empower so as

to turn them to be employable or be entrepreneurs. The context of Globalization of higher education needs to be inculcated from the angle of different important angles like, Socio-Economic, Political and Academic which pertains to the allocation of the Education resource and degree of efficiency in the same. Internationalization of higher education where in mutual sharing of knowledge, skills and research generally takes place with the objective of mutual benefit and also aimed at national and global development? In this, globalization process the issue of relevance of programmes is questioned in term of

relevance to whom? Globalization is an opportunity for those who are aware of the benefits due to their vigilance and inquisitiveness, which have proper access to the information. Every individual wants to lead a

complete and successful life with most of the amenities and basic necessities though only a few actually gets the affordability of availing them due to limited supply of resources insufficient for unlimited demands. The paper has highlighted some aspects of internship models like sandwich program, AICTE, ICAR, student- READY, Nursing, etc. It is also pointed out that for fruitful and productive outcomes of internship or in-plant training, partnership with

industry, professional bodies on one hand and industrial training of faculty on the other can fetch a big dividend for wholesome or integrated education. The present challenges posed before the Higher Education institutes like skill-gap, quantity vs. quality, affordable cost of education, globalization, etc., are enlisted. Some recommendations like a common platform for all regulatory bodies and Indian Councils, pre- service and in-service training for faculty, emphasis on R &D, industry projects and consultancy, Log-Book for trainees, etc., are also put forth. The paper, it is believed, is of interest to all concerned.

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