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ARE THE SERVICES DELIVERED EMPLOYABLE? A SCENARIO OF TECHNICAL EDUCATION IN RURAL INDIA

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ABSRACT

Purpose

One of the most appalling challenges in India is persistently rising unemployment, explicitly in the rural region. More than 20% of Indian youth between the ages of 15 and 24 years are "seeking or available for work," as per 2011 census data. There will be no peace and prosperity in the country unless jobless people get appropriate channel. In India deficiency of skills is among the main constraints for recruitment of Technical Education. Productivity of Technical Education in not entirely absorbed due to lack of skills required by the employers. Along with the ample arguments, taking place in recent times, regarding reformation in the productivity of Technical Education, this present study syndicates focus on services delivered and its impact on employability skills. The objective of this paper is to find out whether Technical Education institutes in rural part are keen to focus on the employability skills? The paper also focuses on distinguished skills required by the employer for recruitment. The study also emphases on the services offered by the Institutes and their correlation on skills development.

Design methodology

A quantitative research survey through a structured questionnaire for the students who are studying or have recently completed their Technical Education affiliated to the North Maharashtra University, Jalgaon was conducted which is situated in rural part of India.

Findings

The study discusses umpteen employability skills and explains how embedding services of technical education are correlated to the growth and development of employability skills. The study finds that these services results in comprehensive and cohesiveness of employability skills.

Research limitations

The survey is delimited to the Technical Education belonging to North Maharashtra University, Jalgaon and located in rural of India.

Practical implications

The institute of TE can be benefited by Integrated Service Model and its impact on the development of the employability skills. The institutes thus can concentrate most effective services. The employer can know what employment skills are embedded through the service delivered by the institutes.

Key words: Employability, Skills, Integrated Services, Technical Education.

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INTRODUCTION

The expansion of higher education (HE) participation in many Organization for Economic Co-operation and Development (OECD) countries in recent decades has led to increasing interest by researchers and policy-makers in the'education-to-work' transition of new graduates and the extent to which they are readily 'employable' [1].The higher education system has responded to the increased demand for engineers by massively expanding production of engineers. The number of students enrolled increased800 percent from 1998 to 2008, (MHRD, 2009). This quantitative expansion is widely received to have led to an average decline in the quality of the students entering, the teaching and, consequently, the quality of the graduating engineers [2].A record growth in intake of Technical Education only able to find more than 80% unemployable, reveals a national employability report by Aspiring Minds. As per the report there is no significant improvement in employment in the last five years. It is observed that English language along with issues in computer programing was the biggest problem [3].It is required that rather than opening more engineering colleges, the state needs to concentrate on improving education standards of current engineering colleges [4]. The study revealed that, of the 6 lakh engineers that graduate annually, only 18.43% of them are employable for the software engineer-IT services role, while just 3.95% are appropriately trained to be directly deployed on projects. For core jobs in mechanical, electronics/electrical and civil jobs, only a mere 7.49% are employable [5]. Many technical graduates in India are found to be unemployable due to their poor communication skills and lack of confidence. The survey results conducted by [6] have shown evidence of gap between the English professors' methodology and engineering students' confidence levels and also accentuate the importance of suitable training programs for required for students. [7].The dismal state of higher education in India ensures that they simply do not have adequate skills to be employed [8].The latest study conducted by the World Bank points out that 64% of the employs say that they are only a bit satisfied with the performance of the engineering graduates in India [9].According to [10], new and fresh engineering graduates these days confront with more "challenges and competitions" in getting employed compared to previous graduates. Reference [11] highlight the skills graduates need in order to manage their own careers and those that will enable them to continue learning throughout their working lives. In addition, the employability skills agenda is commonly defined to include 'Understanding of the world of work', which typically refers to knowledge about the ways in which organizations work, what their objectives are and how people in those organizations do their jobs [12].A range of new and specific technical skills is required to meet the demands of technology and of business. Also of importance is the greater emphasis employers put on personal and generic skills in all areas of work [13].

SERVICESDELIVERED BY TECHNICAL EDUCATION

Educational services are personal and characterized by intensive, intellectual, emotional and/or physical participation of students in a service process. Reference [14] suggested constant collaborative activities between professors and student support services, such as the incorporation of support services or other supportive resources into class curriculum, class visits to support centers, or simply encouragement to take advantage of support services, promoted student involvement and subsequent connectivity. Motivation and

students' approaches to learning are dynamically related to each other [15]. Education or an Institute, for most students, is not only a time of academic pursuits but also an opportunity to explore or enhance themselves as social beings. In fact, while some students desire to finish college, they do not consider themselves to be ultra-academic beings and instead want to partake in endeavors that develop them socially [16]. Reference [17] detected academic and social integration to be influential on study performance. Greatest importance needs to be attached to extension work, as a learning and development instrument, for the benefit of community through students and teachers [18]. In fact, many university departments now use a mix of embedded and stand-alone teaching methods in their efforts to develop employability skills.However, as per the findings by reference [19] there is no evidence that the emphasis given by university departments to the teaching, learning and assessment of employability skills has a significant effect on either of the labour market outcomes considered here. In a findings of reference [20], theplacement officers of TE institutes feel that soft skills should be integrated with the existing curriculum.

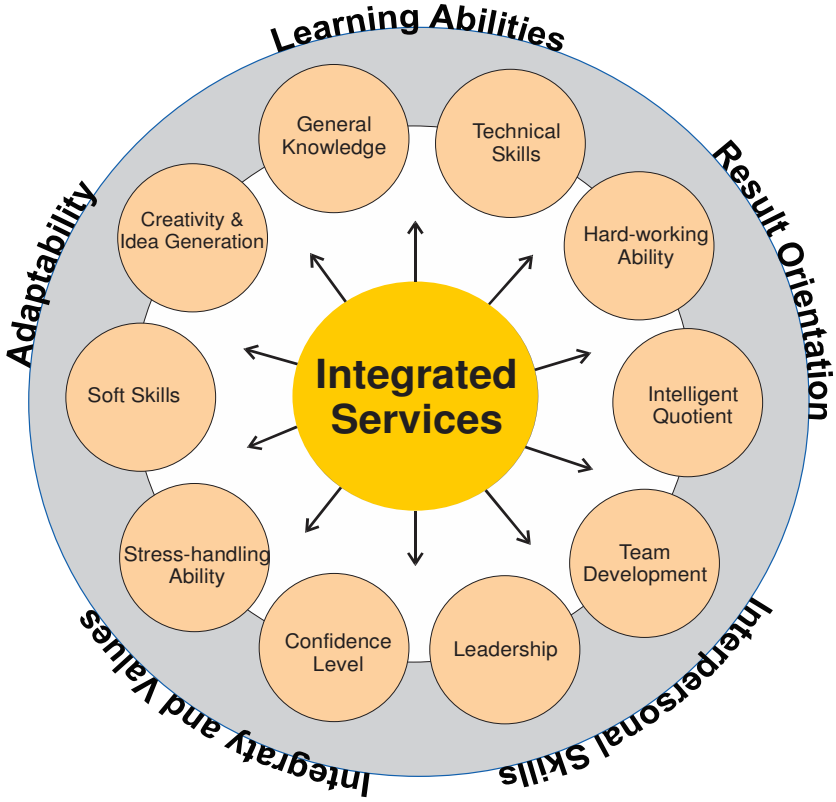
EMPLOYABILITY SKILLS

Employability skills are captured by training and not by teaching! Whilst Yorke and Harvey argue that, "alignment of higher education with workforce needs should be based on careful action by institutions to embed skills and attributes within instructional programs"[21]. Employability has been viewed differently by different people: 'a set of achievements skills, understandings and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy' [22]. 'Employability not only depends on whether one is able to fulfil the requirements of specific jobs, but also on how one stands relative to others within the hierarchy of job seekers' [23]. Production-relevant skills are assumed to be embodied in those individuals who have acquired quantity and quality of education, with a 'skills hierarchy' rising from the primary to the tertiary levels [24]. Drawing from extensive review of literature and employers' perspective in India, employability is understood to be a function of two basic factors: (a) academic qualification of an individual; and (b) the learning environment that helps him build certain generic skills [25]. Employability can be constructed as a responsibility of the individual [26] or institutions of higher education [27].Employability skills are general skills that are needed to get most jobs, but they also help you to stay in a job and work your way to the top. Vinayak Panase, a career advisor sees; Communication, Teamwork, Problem solving, Basic Numeracy, Leadership, Adaptability and Creativity are the basis for the recruitment in professional jobs [28]. Intelligence of the skills, is cognitive or intellectual abilities required to obtain knowledge, and to use that knowledge in a good way to solve problems that have a well described goal and structure [29].Result Orientation is the competency that consistently delivers required business results; sets and achieves achievable, yet aggressive, goals; consistently complies with quality, service and productivity standards and meets deadlines; maintains focus on agency goals. Human intellectual competence must entail a set of skills of problem solving enabling the individual to resolve genuine problems or difficulties that he or she encounters and, when appropriate, to create an effective product and must also entail the potential for finding or creating problems and thereby laying the groundwork for the acquisition of new knowledge [30]. Learning ability is the ability of acquiring new, or modifying and reinforcing existing, knowledge, behaviors, skills, values, or preferences which may lead to a potential change in synthesizing information, depth of the knowledge, attitude or behavior relative to the type and range of experience [32]. In ethics, integrity is regarded by many people as the honesty and truthfulness or accuracy of one's actions. Integrity can stand in opposition to hypocrisy [33]. Interpersonal skills are the skills used by a person to interact with others properly. Good interpersonal skills are a prerequisite for many positions in an organization. [34]. As per the survey conducted by reference [35], core employability skills, communication skills, and professional skills are considered important for hiring. Among all skills, communication in English is among those most demanded [35].As per panel discussion [36], the institutes need to plug the gap in the first or second year by introducing foundation skills like English and logical ability etc. and internships must be effectively leveraged. As per reports of Wheebox, which is India's leading talent assessment company; Learning Abilities, Result Orientation, Interpersonal Skills, Integrity

and Values and Adaptability are main recruitment skills that are required by the industries; Engineering & Automation, Internet Based Industry, Telecomm. and Allied Industry, Service Industry, Core Sector and BPO/KOP Industry [37].

FRAMEWORKOF INTEGRATED SERVICES AND EMPLOYABILITY SKILLS

(Fig 1: Model of Integrated Services and Employability Skills for Technical Education, Self-Creation through Literature Review)



RESEARCH METHODOLOGY

The objective of this paper is to find out whether Technical Education institutes are keen to focus on the employability skills? And to find out integrated services offered by the Institutes that have correlation on skills development. A quantitative research through a survey was made. It comprised of a structured questionnaire sent through e-mail to the current-students enrolled and recently passed-out students belonging to the institutes of TE affiliated to North Maharashtra University. Sample size (n) was calculated at 95% Confidence Level for which Standard Normal Variate (Z) is 1.96 & at Standard Error (e) of 0.03 by $n=Z^2 (p)(1-p)/e^2$; where n = Sample Size to be used for this study, N = unknown population, p = Estimated Portion of Population N. For p = 90%, 'n' comes out to be 553. However, sample size of 664 was selected by quota sampling from technical institutes offering different programs in engineering, pharmacy and management &various students based on their location of native place and gender. The google form - questionnaire was sent through E-mail which comprised structured and closed ended questions measuring various services offered by TE Institute and its' relation with employability skills. Responses were obtained on a scale ranging from 0 to 5, where value zero is low weightage and value five is high weightage. The characteristics of the sample are described as below;

By Gender: Male: 454;Female: 210

By Native Place: District: 162; Taluka: 283; Village: 219

By Technical Educational Program: Engineering: 492; Pharmacy: 113; Management: 59

DATA INTERPRETATION AND OBSERVATION

Table 1 Integrated Services and its Impact on Employability Skills

	Employability Skills										
Individual Mean	**3.230**	**3.349**	**3.581**	**3.558**	**3.507**	**3.330**	**3.533**	**3.580**	**3.440**	**3.831**	
Integrated Services	**General Knowledge**	**Intelligence Quotient**	**Technical Skills**	**Soft Skills**	**Team Development**	**Leadership**	**Confidence Level**	**Stress Handling Ability**	**Idea Generation**	**Hardworking Ability**	**Model F-value & p-Value**
Infrastructure & Technology	1.00 0.420	0.54 0.744	***2.60*** ***0.025***	***2.31*** ***0.043***	***2.78*** ***0.017***	***4.90*** ***0.000***	***4.03*** ***0.001***	***3.09*** ***0.009***	0.83 0.530	***3.03*** ***0.010***	18.88 0.000
Faculty & Teaching Learning Methods	1.00 0.417	2.19 0.054	1.70 0.132	1.03 0.398	0.72 0.608	2.10 0.063	1.19 0.310	***2.43*** ***0.034***	***5.13*** ***0.000***	***5.25*** ***0.000***	***24.06*** ***0.000***
Students Amenities & Recreation	1.29 0.266	0.91 0.474	0.88 0.493	0.32 0.899	***2.99*** ***0.011***	***3.72*** ***0.003***	***3.15*** ***0.008***	***5.02*** ***0.000***	***2.76*** ***0.018***	***3.48*** ***0.004***	***21.87*** ***0.000***
Campus Placements	***3.57*** ***0.003***	1.46 0.201	1.78 0.115	1.93 0.087	1.28 0.269	1.07 0.373	1.34 0.244	0.43 0.831	1.66 0.143	0.46 0.804	***22.62*** ***0.000***
Industry Interactions & Tie-Ups	0.59 0.705	0.80 0.551	0.30 0.911	1.04 0.393	1.07 0.377	***3.22*** ***0.007***	1.96 0.082	1.11 0.351	2.16 0.057	1.06 0.379	19.08 0.000
Library & Computational Facilities	1.06 0.379	0.29 0.918	0.90 0.484	0.62 0.683	0.45 0.814	1.29 0.268	0.98 0.427	0.16 0.977	0.43 0.827	0.58 0.716	18.17 0.000
Co & Extra-Curricular Activities	***5.00*** ***0.000***	***3.72*** ***0.003***	3.52 ***0.004***	2.17 0.056	0.88 0.493	1.08 0.369	1.61 0.156	2.02 0.075	***3.46*** ***0.004***	***2.72*** ***0.019***	17.12 0.000
Safety, Security & Medical Facilities	2.49 0.30	1.50 0.189	1.86 0.099	1.54 0.175	0.76 0.580	1.52 0.181	1.58 0.164	1.11 0.354	***3.03*** ***0.010***	0.65 0.665	18.20 0.000
Gradation, Accreditation & Recognition	0.33 0.895	0.72 0.611	1.16 0.328	1.86 0.100	1.17 0.324	***2.38*** ***0.037***	1.27 0.276	1.61 0.155	0.72 0.611	1.18 0.319	17.43 0.000
Alumni Interaction	0.59 0.707	0.42 0.838	0.90 0.480	0.42 0.838	***2.77*** ***0.017***	0.88 0.493	0.71 0.615	1.67 0.140	0.88 0.497	0.17 0.975	17.62 0.000
Soft Skills & Technical Skills	0.57 0.721	0.62 0.687	1.63 0.150	***6.60*** ***0.000***	***2.68*** ***0.021***	1.51 0.184	1.51 0.186	1.89 0.093	0.54 0.745	***2.26*** ***0.047***	***25.09*** ***0.000***
Sports & Cultural Activities	1.67 0.140	0.39 0.853	0.83 0.528	0.26 0.934	***3.82*** ***0.002***	***2.63*** ***0.023***	1.49 0.192	***2.25*** ***0.048***	***3.28*** ***0.006***	1.13 0.342	14.26 0.000
Research Activities	2.06 0.069	1.10 0.358	1.47 0.198	1.61 0.155	***2.69*** ***0.020***	0.82 0.524	***3.77*** ***0.002***	1.68 0.136	***5.60*** ***0.000***	***2.36*** ***0.039***	17.20 0.000
Finance & Scholarships	0.53 0.750	0.75 0.589	0.95 0.449	1.23 0.291	1.11 0.353	1.29 0.265	0.95 0.451	0.89 0.489	1.94 0.087	0.39 0.854	13.99 0.000
Campus Life & Discipline	***2.86*** ***0.015***	2.14 0.059	***3.81*** ***0.002***	1.43 0.212	1.90 0.093	***3.98*** ***0.001***	***2.64*** ***0.023***	***2.79*** ***0.017***	1.38 0.229	***6.60*** ***0.000***	***23.28*** ***0.000***
Model F-value & p-Value	12.96 0.000	14.12 0.000	13.53 0.000	***17.13*** ***0.000***	***15.14*** ***0.000***	***15.83*** ***0.000***	11.77 0.000	14.12 0.000	13.45 0.000	13.45 0.000	
	Regression Analysis: Integrated Services Vs Employability Skills Calculated by MiniTab 17 at 95% confidence level 2-sided. Cell contains F-value and p-value.										

Assessment of Integrated Services delivered by the TE Institute

Table 1 shows the mean of responses received on students' employability skills. It is observed that Hardworking Ability (Mean=3.831) is the highest development among all the skills, then followed by Technical Skills (Mean=3.581), Stress Handling Ability (Mean=3.580), Soft Skills (Mean=3.558) and Team Development (Mean=3.507).

Infrastructure and Technology have major impact on Leadership (F-value=4.9), Confidence Level (F-value=4.03), Stress Handling (F-value=3.09), Hardworking ability (F-value=3.03), Technical Skills (F-value=2.6), Soft Skills (F-value=2.31) and Team Development (F-value=2.78). Faculty and Teaching methods have found strong association with Creativity / Idea generation (F-value=5.13), Hardworking ability (F-value=5.25) and Stress Handling ability (F-value=2.43). Students Amenities and recreational facilities of institutes seems to be influenced more on Stress Handling Ability (F-value=5.02), Leadership (F-value=3.72), Confidence Level (F-value=3.15), Creativity/Idea Generation (F-value=2.76)and Hardworking Ability (F-value=3.48). Campus placement activity is having impact on only General Knowledge (F-value=3.57). Industry Interaction related service have found strong association with Leadership skills (F-value=3.22). Library and Computational Facilities does not have any relationships with the any employability skills. Co and Extra-curricular activities of the institutes have influenced strongly to gain General Knowledge (F-value=5.00), IQ (F-value=3.72), Technical Skills (F-value=3.52), Creativity / Idea generation (F-value=3.46) and Hardworking Ability (F-value=2.72). Supporting services i.e. Safety and Security and Medical facilities (F-value=3.03) is more effective on Creativity and Idea Generation. Gradation, Accreditation and Recognition is helpful in developing Leadership (F-value=2.38). Alumni Interaction activities is effective in Team Development (F-value=2.77). Soft and Technical Skill development programs are highly associated with Soft Skills (F-value=6.60), Team Development (F-value=2.68) and Hardworking Ability (F-value=2.26). Sports and Cultural Activities have relationship with Team Development (F-value=3.82), Leadership (F-value=2.63), Stress Handling Ability (F-value=2.25), Creativity and Idea Generation (F-value=3.28). Research Activities are associated with Team Development (F-value=2.69), Confidence Level (F-value=3.77), Creativity and Idea Generation (F-value=5.60) and Hardworking Ability (F-value=2.36). Finance and Scholarship support do not have any impact on any Employability skills. Campus Life & Discipline is effective on developing General Knowledge (F-value=2.86), Technical Skills (F-value=3.81), Leadership (F-value=3.98), Confidence Level (F-value=2.64), Stress Handling Ability (F-value=2.79) and Hardworking Ability (F-value=6.60)

Integrated Services provided by the institutes such as Soft and Technical Skills development program(F-value=25.09), Faculty and Teaching-Learning Methods (F-value=24.06), Campus Life and Discipline (F-value=23.28) and followed by Campus Placement activities (F-value=122.62) and Students Amenities and Recreation (F-value=21.87) are more powerful in developing employability skills in overall look.

EMPIRICAL FINDINGS

- General Knowledge is highly governed by Institutes' Co and Extra-Curricular activities (F-value=5.00) and then followed by Campus Placement activities, and Campus Life and Discipline provided by the institutes. For Campus Placement students are required to study more and doing so they acquire General Knowledge too. Co and Extra-curricular activities like paper / poster presentations, participation in technical symposium, seminar and workshops increase level of General Knowledge. Campus Life and Discipline with social-communal involvement advances General Knowledge.
- Intelligent Quotation (IQ) of students is highly associated with Co and Extra-Curricular activities (F-value=3.72) which involves paper / poster presentations, participation in technical symposium, seminar, workshops industry projects, visiting industrial tours.
- It seems that Co and Extra-Curricular activities again have the same effect on Technical Skills development. Providing better Infrastructure and Technology have an impact in developing Technical Skills. However, Campus Life and Discipline which provides good studious environment has more impact (F-value=3.81) with Technical Skill development.

- Soft skills are directly related to Soft and Technical Skills (F-value=6.00) programs provided by the institutes followed by Infrastructure and Technology. Some institute might have language laboratory and professional agency to train on soft skills.
- Team Development is an ability to work in a group effectively to achieve a certain goal. Team may be a group of students or/and faculty linked together to participate in Co and Extra-curricular activities, Soft and Technical Skill development programs, Sports and Cultural activities or Research Activities. Team Development is also associated with the Infrastructure and Technology and Amenities and Recreation provided by the institutes wherein students in group work together and interact on a common platform such as Library, Canteen, Hostels, Auditorium Hall etc. It is found that students have more impact of Co and Extra-curricular activities (F-value=3.82) in developing their Team Development skills.
- Leadership is act of direction, guidance and controlling overall members towards achieving objective. Leaderships qualities are highly associated with Infrastructure and Technology(F-value=4.90), and then is supported by Students Amenities and Recreation, Industry Interactions & Tie-ups, Gradation, Accreditation and Recognition, Sports and Cultural Activities and Campus Life and Discipline.
- Confidence Level is associated with Infrastructure and Technology (F-value=4.03), followed by Students Amenities and Recreation, Research Activities and Campus Life and Discipline.
- Stress Handling Ability is in strong relationship with Students Amenities and Recreation (F-value=5.02) followed by Infrastructure and Technology, Faculty and Teaching-Learning Methods, Sports and Cultural Activities and Campus Life and Discipline.
- Creativity and Idea Generation is highly associated Faculty & Teaching Learning Methods Research Activities (F-value=5.13) trailed by Research Activities (F-value=5.60), Students Amenities and Recreation, Co and Extra-curricular activities, Safety, Security and Medical Facilities. Safe and secured campus provides students to concentrate on their study more with secured and insured life and equipment as well. Also, peaceful mind and brain generates creative ideas. Research activities ignite brain for thinking.
- Hardworking Ability is highly linked Campus Life and Discipline (F-value=6.60), followed by with Infrastructure and Technology, Faculty and Teaching-Learning Methods, Students Amenities and Recreation, Co and Extra-curricular activities, Soft & Technical Skills programs, Research Activities.
- Overall Integrated Services provided by the institutes shows that Soft Skills (F-value=17.13), Team Development (F-value=15.14) and Leadership (F-value=15.83) qualities of students are highly influenced and effective with the integrated services provided by the institutes.
- When considered specific skills, the students have gained Hardworking Ability (Mean=3.831), Technical Skills (Mean=3.581), Stress Handling Ability (Mean=3.580), Soft Skills (Mean=3.558) and Team Development (Mean=3.507).
- Services which are related to staff and faculty have an impact on developing Employment Skills. On the other hand, services or facilities provided by the management like; Infrastructure and Technology, Students Amenities and Recreation, Safety and Secured campus, Sports and Cultural facilities and Campus Life and Discipline are also very important for development of Employability Skills.These facilities create vibrant campus and a platform for the engagement of students activities. Alumni and Community/People also have relation with the development of Employability Skills through Alumni Interaction and Campus Life respectively provided by the institutes though indirectly.

CONCLUSION

Education is a prerequisite to employment for most people in our society. As we know the face is index of mind, similarly tongue is the index of thought. Oral performance of the learners is always paramount importance of today's competitive and communicative world especially the students who hail from the rural areas face the problems of spoken communication due to the lack of exposure, confidence, skills and the cultural barriers. With the highest youth population in the world, India faces its greatest opportunities as well as challenges. 70% of this population is rural population. India is slated to become the world's youngest nation by 2022 and this population bulge not only provides for a huge pool or manpower but also draws unparalleled focus towards making this talent pool employable. The Government of India through its initiatives; such as Make in India, Smart Cities, Digital India and Strat-up India are working towards

making India a global economic capital. Skill development is an essential catalyst for the success of each of these initiatives. The present study showed that other than institute members, employability skills are also affected by the community or surroundings. Students must involve in colleagues, alumni and community interaction. After all employability skills are not taught and they are learnt. Students seeking Technical Education should stop buying degrees, infrastructure or placements. Instead, they should demand comprehensive learning and training including employability skills. It is a worth enough to quote "as you sow, you reap" which means Educators and Service providers must think about employability skills as a shift from teaching to training, from after-thought to proactive action, from discretionary indulgence to mandatory and embedded services. It will boost rural employment of India and will direct contribute to the economy of the nation as well.

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