INDUSTRY - INSTITUTION PARTNERSHIP : IMPACT ON GLOBALISATION

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ABSTRACT

In this paper, it has been pointed out that the concept of globalisation is as old as man himself. The stock of the present concept of globalisation has been taken. Industrialization is widely accepted as a means of globalisation. Technical education plays a vital role in promoting effective industrialization. It has been advocated that a healthy and close partnership between industry and institute can turn a country globally competitive. However, this paper is confined to only a few vital aspects, such as, human resource needs, training strategies, resource sharing, etc., of such relationship. Some suggestions in respect of these aspects have been made. The paper, it is believed, can prove a thought provoking one and a useful guideline to all concerned.

INTRODUCTION :

The concept of globalisation is as old as man himself. Man with different motives has been striving from the time immemorial for globalisation. For instance, Aryas (who propagated the concept of "Vasudhaiv Kutumbakam" : a global family) and Budha monks have helped globlise their culture, communities like Turks and Mughals have gone for "Jihad" : spreading religion through wars, whereas, many European countries, like Spain, Portugal, Holland, Britain, etc. have been out to conquer the world through trading. Late Vinobaji Bhave propagated the concept of "Jai Jagat", whereas, communists advocate stateless state. Thus, the history of mankind is full of such several examples showing man's inner urge, in one or the other form, for winning globally. The next section highlights the present concept of globalisation.

GLOBALISATION - THE PRESENT SCENARIO :

The policies of privatisation, liberalization and globalisation have been advocated by the developed countries for turning the developing (underdeveloped) countries into developed ones. The so called "Washington Consensus" (a paradigm of development policy) has

been coined in 1990s to describe what the US Government, the IMF and the World Bank together have been recommending as an appropriate policy framework for development in the '80s and the early '90s (1). This Consensus assumes that good economic performance needs liberalized trade, macro-economic stability and getting prices right. However, time has proved that the policies so advocated are hardly complete and sometimes misguided and that making markets work need much more than that government getting out of the way. These, in fact, need such considerations as :

– An active government role in regulating the financial markets,

– Active policy for promoting competition,

– Facilitating transfer of technology,

– Providing specific measures essential to economic growth, and

– Enjoying transparencies.

A post-Washington consensus advocates a broader set of instruments and also the goals to be broader (2). Developing countries are required to seek sustainable and equitable development which ensures that all groups in society, not just those at the top, enjoy the fruits of development, thereby distributing equally the fruits of democratic development, to one and all. Experiences over the last two decades, however, on the contrary show that the World Bank and IMF cannot foist reforms on the unwilling countries through loan conditionalities. These organizations can give a general push in a particular direction to a country, but the country has to complete the journey herself. Liberalized trading and industrialization are expected to bring about economic reforms. This needs to be conceived only as a means of globalisation, but it is not an end itself which must be carefully noted. It is further widely accepted that industry - institute partnership (IIP) can play a vital role (through industrialization) in promoting a country's global competitiveness. Therefore, the technical education can contribute a lion's share in national economic prosperity and welfare. The next section summarizes the present status of technical education in India.

TECHNICAL EDUCATION IN INDIA - PRESENT SCENARIO :

The present form of technical education in India is an extension of technical education introduced and designed by Britishers to cater to their political and administrative requirements. Before independence, there were a very few engineering institutes located at such strategic important places as Karachi, Guindy, Pune, Roorkee, Sibpur, etc. After independence, however, engineering education started gathering momentum in the true national interest. Table 1 shows the growth of engineering education in India during the period from 1947 to 1991.

Table 1 : Growth of Technical Education in India (3)

Year	Degree Level		Diploma Level	
	Intake	Outturn	Intake	Outturn
1947	2,940	2,600	3,670	3,300
1991	40,000	32,000	80,000	55,000

Table 2 presents the statistics of the AICTE approved technical institutes as on 31st December 1995.

Table 2 : Statistics of the AICTE Approved Institutes (4)

Level	No. of Institutes	No. of Courses	Intake
Degree	416	1991	1,01,451
Diploma	1029	4086	1,66,456

As a first step towards globalisation, a large number of self-financing (private or non-aided) technical institutes during early '80s have been promoted by both the State and Central Government of India. Especially, southern states like Karnataka, Tamilnadu, Andhra Pradesh and Maharashtra have taken a lead in establishing such colleges / polytechnics. For example, in Maharashtra alone, 103 degree engineering colleges have admitted over 25,725 students during the current academic year 1998-99. It is note worth that private engineering colleges in Maharashtra admit students over twelve times of those admitted in Government and Government - aided colleges. These colleges have taken the technical education to the door of masses. Moreover, these colleges have invested over Rs. 9,000 crore in building and over Rs. 11,000 crore in equipment, and have generated direct employment to the tune of 15,000 employees and indirect employment almost three times that of direct employment. Such an expansion of technical education has placed India in the third position in the world in respect of trained technical manpower. However, this has fetched a very limited competitiveness for India in the global market. In fact, on an average population wise in India, there are 0.1% engineering degree holders. Such averages in Maharashtra, Karnataka and Tamilnadu have been reported to be 0.3%, 0.4% and 0.5% respectively, whereas, in advanced countries like Germany, Japan, Korea, etc. this figure works out to be more than 15 times than that of India. According to the "human development report 1998" commissioned by UNDP and released in Hague on 9th September 1998, India in human development is ranked 139th among 174 countries. The ranking is done on the basis of overall health, general level of education, and the degree to

which an average person enjoys a decent standard of living. This low ranking can be attributed to a certain extent to the national policies set for both institute and industry in India. These are almost protected bodies and they hardly face any competitive situation for their survival. To overcome this sorry state of affair, India needs awakening and has to devise, through such strategies as public accountability (including commitment and involvement), open governance and simplification and standardization of procedures, her own self-reliant, self-managed and self-governed means to turn herself globally competitive. Marriage between industry and institute as seen in developed countries can be expected to take up the challenge. Thus, industry - institute relationship in view of the present form of globalisation need to be considered in an entirely different perspective. The following sections make an attempt in this direction.

TECHNICAL EDUCATION AS INDUSTRY PARTNER :

Technology transfer, research and development activities in hi-tech areas and innovative approaches to produce quality goods/services at internationally competitive prices and their delivery at right time, are some of the potent areas wherein institutes can contribute a lot to industry. Several approaches have been proposed for close liasion between industry and institute (5). In fact, if institute is run as a service industry, many of the problems related to IIP shall automatically vanish. Thus, a well-knit IIP mechanism from within can have an intense impact on globalisation. Advanced

countries have designed such a mechanism which is further strengthened on the basis of national pride and patriotism. Thus, IIP based on patriotism can take India a long way. Though several aspects of IIP mechanism can be considered, this paper is confined only to some such aspects as human resource needs, training strategies, resource sharing, etc. These are presented in the following sections.

HUMAN RESOURCE NEEDS :

Twenty-two components of IIP have been reported (5). Human is the very prime source which generates all other secondary resources, like, building, equipment and other infrastructure. Recruitment and selection of staff is the first step towards getting sound human resource. This calls for policies for right choices, right price, right need and right selection. The institute functioning is excepted to be value based. Institute is, therefore, required to define its own value statement, vision statement, mission statement, objectives and strategies to be adopted for individual and institute growth and development. Staff can be developed by making use of such concepts as :

– Systematically Adding Values Through Career Planning and Progression :

There appears to be an acute shortage in all technical institute only because there is neither set career planning nor progression for staff. Attempts to recruit teachers through Technical Teachers Training Institutes of deputing teachers under QIP / FIP programmes have brought a limited success to attract

talent to this profession. AICTE has recently introduced "catch them young" scheme, the success of which needs wait and watch. There are many unemployed engineers who do not opt to join the profession because of such reasons as low payment, no incentive for excellent performance, almost non-existing promotion channel, etc. The profession can be made attractive and appealing if industry comes forward to cash the staff talent for global competitiveness. Certainly, such mechanisms can be devised, say, by faculty exchange programmes, enhancing staff income to a large extent by assigning them real-life issues, etc. Can we imagine a teacher having his own mersedese car and a fat bank balance ?

– Internalizing the External Driving Values through Deputing Staff for Training, Paper Contest, Incentives, etc. :

Round the year a teacher is heavily loaded with non-academic assignments pertaining to examinations, admission, and other contingent works. In fact, a teacher can hardly enjoy a full vacation of 90 days in a year. Naturally, a teacher should be made free from all these non-academic assignments allowing him to imbibe certain values pertaining to academics and its application to industrial growth development. It needs continuing training and promotional activities, such as, encouraging staff for paper presentation / publication, taking turn key

projects, etc., which can fetch them name, fame and money. This calls for a careful design and implementation of an internal mechanism for motivating the staff to inculcate such driving values. Formation of quality circles, learning resource development cell, family welfare schemes, reservation in professional colleges for staff kids, free education to the staff kids, etc., are some of the means which can pay a rich dividend for promoting IIP.

– Promoting the Values for Organization Through Appreciation and Recognition of Staff :

This is almost lacking in the Indian education system. Teaching job by nature is a creative one. It is neither of stereo type nor of prescriptive type. The institute - values can be protected and maintained only by its staff alone. In fact, there are no set norms for teacher's input / output measurement. Appreciation and recognition of staff is miserably missing in India. For example, non-teaching departments, like, defence services, B and C, etc., have inbuilt provision for such appreciation in terms of, say, promotion to the next higher post if academic qualification is improved, or release of three increments if an excellent performance is displayed by an employee.

Unfortunately, in the present wave of globalisation and the information explosion era, there appears to be no sound national policy in respect of planned changes commensurate with

the present scenario, manpower planning and its development in emerging hi-tech areas, industry - institute relationships in global perspective, etc. Unless these human resource needs are not met speedily, globalisation can pose formidable problems before India which are now being faced by some other countries, like, Japan, Malaysia, Indonesia, Russia, etc. Human resources, therefore, can be developed with 3D approach as stated below :

–   Academic excellence in the areas of global importance;

–   Effective teaching using such means as multimedia, paperless examinations, virtual class-room, etc.; and

–   Excellent blending of academic with real-life issues pertaining to international environment / status.

To achieve this, several avenues reported earlier, such as, student - oriented strategies, students charter, Total Quality People, Industrial - park, entrepreneurship development, faculty exchange programmes, consultancy, instituting quality manual, and institute - wide quality control, etc., need to be explored in their true spirit and sense (5). The above discussion indicates that for meeting the human resource needs effectively, sound training strategies for staff development can prove rewarding. The next section highlights some of these.

STAFF DEVELOPMENT TRAINING STRATEGIES :

In view of the earlier discussion, it is crystal clear that a teacher's role in technical education is very significant and vital (6). For instance, a teacher is expected to, say, himself involved in such activities as related to get curriculum development, industry orientation, promoting communication skill among students, examination reforms, etc. (7). In the present era of information technology / explosion, teacher's training can be recognized as a on-going continuous process. Its two components identified are (8,9) :

–   Pre-professional (pre-service) training; and

–   In-service professional training after every three years.

Table 3 present a proposed pre-service training programme of three modules with 50 weeks duration. (Table on next page)

As mentioned earlier several training programmes under TTTC, TTTI and World Bank projects have been executed. But these programmes have fetched a very limited success on account of several reasons, such as; no proper identification of week (need based areas for training, inventory of staff having potential for training in certain areas maintained, mis-match between the training facility made available and trainee's aptitude, training as a ritual, training goals not well defined, poor training supervision and assessment, indifferent attitude of industry, poor funding, etc. It is really ridiculous that a fresh graduate is directly put on the task without giving him any training related to his job / profession. In fact, almost for all other cadres (except that of teachers) right from, say, carpenter to IAS/IFS, etc., on job training of suffi-

Table 3 : A Proposed Pre-service Training Programme (8).

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

cient duration, say, 6 months to two years or more is considered to be essential before an employee is put on the actual job followed by regular in-service periodical training. Staff training in technical education is, therefore, strongly advocated to meet the challenges of globalisation. This will turn staff to be more accountable, responsible and ready for exploiting the global opportunities. Thus, providing proper pre-service and in service training is one of the essential needs of staff. However, especially in case of developing countries both human and training resources cannot be made available to the fullest extent simply because of some inherent constraints pertaining to availability of finance, good trainers, excellent training infrastructure, etc. Resource sharing can help resolve this issue to a great extent. The next selection deals with this aspect.

RESOURCE SHARING :

Institute needs to be an enterprising winner rather than a no hope loser. The proverbs, like, "unity is strength", and "small is beautiful" clearly indicate that there is no substitute for team work. Team work means sharing resources among the team members. These members share goals, culture, learning, effort, and information. Inculcating this type of sharing mindset among staff can turn the institute a global winner. The AICTE approach encourage multi-use of facilities represents this resource sharing culture (10). Networking of institutes and industry based upon the principle of small group working has also been proposed (7). The capital investment done in building, equipment, library, gymkh--ana, etc., can most effectively be utilized by avoiding duplication of resources. University / State area can be

suitably divided into certain zones or units, say, three districts make one unit. The colleges in this unit can playfully allocate their available resources in terms of, say, funds, library, equipment, faculty, etc., among themselves so as to develop a few areas of excellence in each college. Thus, these centres of excellence can cater the need of all these colleges - members. This can avoid duplication of infrastructure and the best facility available at a particular centre can be suitably made available to one and all, thus maintaining the high quality of instructions. A proper load -schedule can optimise the utilisation of these centres. The team members in turn can subscribe reasonable service charges for utilization of facility at other centre. Students can be conveniently moved from one centre to another as per schedule set. It can be easily guessed that the cost incurred in utilizing facilities of some other centre is economically viable and the funds thus released can be used for developing a few centres of excellence in each college. Industry can certainly come forward in a big way to help some colleges in enriching their resources, like, laboratories, staff training, industry projects, industry -park, etc. In short the concept of resource sharing can advantageously be used in all the five area mentioned earlier, namely, goals, culture, learning, effort and information.

The scope of this paper is confined only to three important interrelated IIP aspects, namely human resource needs, training strategies for staff development and resource sharing : the three vital IIP areas which when properly integrated can play a significant role in attaining the national ultimate interest, i.e., economic prosperity and welfare. It is expected that such a fruitful design of IIP can take India a long way on the global level as MNCs. Education system and industry through such planned IIP changes can meet the challenges of the 21st century (11, 12).

SCOPE FOR FUTURE WORK :

To meet the challenges of globalisation is really a hard task for developing countries like India. Unless developing countries do not build their own mechanism to ward off the evil effects of globalisation, these countries, it is feared shall be dominated by the powerful countries. Therefore, there is a wide scope for analyzing the would-be - effect of globalisation on IIP and devising a mechanism protecting the developing countries from such evils. This is a potent area for future research work.

CONCLUSIONS :

In this paper it has been pointed out that the concept of globalisation is as old as man himself. History shows several motives behind the process of globalisation. This paper advocates that designing IIP commensurate with the present wave of globalisation : an external force, is not desirable for the obvious reasons. On the contrary, it is proposed to design IIP in such a fashion that India will be a global winner, having her own large share in global trading. The paper highlights the presents concept of globalisation put forth in early '80s. It is basically based on liberalized trading. Industrialization plays a vital role in trading. Industrialization can be effec-

tive if technical education in a country is of high quality. Quality of education can be enhanced through a close industry - institute relationship. For IIP, integration of three areas, namely, human resource needs, training strategies for staff development and resource sharing has been proposed and briefly discussed. It is proposed that through sound planned IIP changes, developing countries can be global winners, and dominance of MNCs over the developing countries can be checked. Otherwise, globalisation can prove a curse for the developing countries. Scope for future work is also presented. The suggestions made in this paper, it is believed, can prove thought provoking and also as a useful guideline to all concerned.

REFERENCES :

1. Sengupta A, 1998, Market Mechanisms : Government Role in Asian Crises, the daily Times of India, 6th August, p.10.

2. Aiyar S S A, 1998, A Post -Washington Consensus, the daily Economics Times, 10th August, p. 8.

3. Anon, 1994, University news, 10th October, p. 19.

4. Anon 1997, All India Directory of Approved Institutes (Degree and Diploma Programmes : 1996-97), New Delhi : AICTE, p. 429.

5. Waghodekar P H, 1992, Institute - Industry Linkage : Today and Tomorrow, Journal Engineering Education, Vol. V (3), Jan. pp. 29-35.

6. Waghodekar P H, 1988, The Technical Education : The Role of Teacher, Journal Engineering Education, Vol. (3), Jan. pp. 15-19.

7. Waghodekar P H, 1988, On Some Aspects of Institution - Industry Interaction, Journal Engineering Education, Vol. I (4), June pp. 48-51.

8. Waghodekar P H, 1994, Professional Training for Technical Teachers, Journal Engineering Education, April pp. 25-30.

9. Waghodekar P H, 1990, Training of Engineering Teachers : A Normative Theory Approach, Industrial Engineering J. XIX (4), April, p. 1.

10. Anon, 1995, Norms and Standards, New Delhi : AICTE, p. 13.

11. Waghodekar P H, 1986, Challenge of Education : A Meditation,, Journal Engineering Education, Vol. I pp. 21-27.

12. Waghodekar P H, 1990, Educational Technology in 2000 AD, Proceedings of the 23rd Annual International Conference of All India Association for Educational Technology (AIAET), New Delhi, 31st Oct. - 4th Nov.

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