

A study of existing administrative and infrastructural problems in collaboration with industry and institution in vocational technical education in Lucknow

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Abstract

The collaboration between industries and institutions is vital to guide the economic van of a country in right direction. The developed nations were fast enough to understand the significant impact of collaboration between the educations on the prosperity of the lives of their people, hence they have developed it into a system of links and relationships between various industries and institutions. The under developing countries too are now realizing its importance and planning to strengthen the cooperation of various industries and institutions the research carries the view of vocational and technical teachers, administrators and industry people with respect to the administrative, manpower, dimensions in collaboration between industries and institution.

Keywords: Vocational and Technical Education, Administrative Problem, manpower Problem.

1. Introduction

Development of a nation depends a lot on its educational systems. Education while inculcates many a humane and social traits in, it is also supposed to enable them to earn a livelihood for themselves. Hence, the development and solidarity of the nation rests on such type of education that enables to contribute to the national economy in terms of enhance productivity and improved services when we consider the present prevailing unemployment scenario and find youngsters in search of jobs even after graduation and post-graduation, we find general education failing in terms of utility and training of for career development. Traditional educational programmes have failed to prepare the right products for entry into the employment market. The courses are very much divorced from actual needs. The prevailing academic preparation is very theoretical and disregards the utility aspects. On the other hand, vocational and technical education (VTE) is likely to bridge the gap between the educational courses and the requirements of industrialization the underlining fact is that if the VTE is given greater emphasis at the school leaving stage a great many number and a good proportion of the young generation may be directed directly to the world of work instead of its futile canalization through higher education. In the recently released report of the working Group on Secondary and Vocational Education for 11th Five Year Plan (GOI, 2007), the expert group Recommends: "Industry-Institution collaboration should be established for identification of manpower, development of sector-wise skill profiles, Identification of courses, development of modular competency based Curricula and learning materials, experts for providing training, Workplace training/in-plant training (practical training, on-the- Job training and apprenticeship training), competency based Assessment of trainees by the assessors, competency based joint certification, sharing of resources and placement of student" (Pare 7.2.6.23). Educators and industry leaders have long expressed support of the proposition that only thought

involvement and participation of industry in occupational education programmes can the schools meet their obligations to industry the community the general public and the enrolled in these programmes the very inception of VTE in India is based on a partnership between education and other sectors of the economy and the services between the educational institutions and industry needless to say VTE in most Cases will have to be organized by sharing the facilities of professional Institutions besides engaging industry people on a part-time basis the involvement of professional experts in imparting vocational and technical training would bring them into closer collaboration with education activities and offer them opportunities to assess the problems involved in institutional training and appreciate the prospects of sharing the facilities in various Industries, agriculture farms, commercial concerns hospitals etc. with those In educational institutions for mutual benefits. Proper coordination and collaboration between industry and the educational institutions has been well desired in VTE for it to be educationally effective and socially useful the emphasis on developing industry-institution cooperation has stemmed from an obviously felt need by educators and industry people that vocational and technical courses which prepare individuals for employment must keep abreast of community trade and industrial trends and practices. There is a general unanimity among educators and industry leaders regarding the desirability and mutual benefits to be derived through cooperative efforts in development and conduct of VTE employers can gain desired training facilities, reduce their own training costs, and participate in the development of present and future employees. Labour gains a voice in the development of workers and in the development of training programmes, which meet the needs of members of their specific groups. The educational institutions benefit by offering courses of instruction and training programmes attuned to the needs of industry and labour and therefore play a more meaningful role in the community which hopefully

provides a board base of community support for VTE. On the whole there is a growing realization that the Inter relations between Educational institutions industry and other sectors of society depend largely Upon clear policies and guidelines set by the authorities there is also a Realization that the educational institutions cannot operate in isolation but Must do so in concert with other institutions particularly those directly Associated with the world of work for the successful achievement of Meaningful and responsive programmes. Chhabra 1996 ^[3] conducted a survey of polytechnics in the northern region of India during 1995-96 to assess the status of industry-institute-interaction under world Bank assisted project, and found that polytechnics were not providing consultancy to industry including material testing, calibration of instruments etc. and industry related project work for students was also almost neglected; whereas other activities were undertaken by the polytechnics in the northern region. Salooja (2003) ^[25] found inadequate Inter relations with the industry and to Career structure and other infirmities for the limited success in Vocationalization and suggests for a different approach (through open learning System) in implementing the vocational education and training programmes. In studying industries to determine the industrial training required, it is important to identify the problems and challenges of such a move so that a more scientific and philosophical policy could be adopted to bring to light variables, phenomena, processes and relationships that have not been thoroughly researched and, as such, deserve more intensive investigation (Alam *et al.*, 2009) ^[1]. Rashtriya 2010 found lack in awareness and motivation towards forging effective and mutually beneficial participative programmes. Both the groups appear to be confused as to what they can provide each other and what they can rightfully demand for. The factors to which both industry people and vocational teachers agree in remarkable unanimity reflect that, whereas most the VEP are running short of faculty teacher's initiatives for such programmes are generally not supported by education officers and school administration. On the other hand industry cooperation is not sought in either the formulation of vocational courses or evaluation of vocational students, leading to further alienation of industry people from such collaborative activities. Amu M.E.K and Christine O.A (2011) ^[2] investigated specifically the department of Vocational and Technical Education (VOTEC) of the University of Cape Coast and the inability of the department to link its students with industries, a requirement of the University Curricula to propel its graduates into the world of work. Based on data from 60 respondents from within the university and industry, this paper argues that even though there is awareness of the need for these linkages, the curricula does not adequately cover practices in the actual industries. The results have important policy implications for curriculum and training of students in the VOTEC department and other institutions that provide similar training.

Need of the Study

A complete knowledge of VTE and its relationship with society in general and with industry in particular is essential to effective performance of Educational Endeavour's. Educational planners policy makers government Official, teacher principals, school administrators, professionals industry As well as agricultural, business people agree in

remarkable show of unanimity to the need for industry-institution cooperation in the development of Vocational and technical training courses in schools and technical institutions. The recommendations of various committees and commissions are Exponential on the subject national plans also lay emphasis on establishment of necessary Inter relations with the local industry business and trade so that VTE may be geared to meet the local and national demands. Undoubtedly industry-institution cooperation is an imperative of our Times. But how long can only paper work and lip service lead education to the desired goals the need is for introspection a deep search of root causes And action on the ground level with a missionary zeal through a Comprehensive national yet micro-level action plan. Many a studies conducted by various committees commissions, Government organizations as well as individuals express in favour of Establishing strong and worthwhile collaborative arrangements with the Industry people for the benefit of not just educational institutions in terms of improvement in the quality of training but also in terms of benefits to the Industry, from which the industry is deprived due to lacklustre training of The youth and also the status of such Inter relations in VTE in India is found to be Very inadequate whatever studies we find in this areas present more or less An overview of industry-institution Inter relations; and the basic problems causing Such poor Inter relations apparently remain to be attended. Given the present circumstances it is necessary to look into the whole Picture with a microscope. The need is to find out the reasons lying beneath. The need is for studies that focus on the entire range of such Inter relations, their Prospects and related problems and then only the whole scenario of industry- Institution Inter relations in VTE can be understood in real terms. The need is to Device a strategy that is able to promote such Inter relations on a sustained basis and is beneficial to the, schools, technical institutions, industry, Society and the national economy as a whole.

2. Objectives of the Study

In view of the above-mentioned considerations, the present investigation is proposed with the following objectives:

To identify the administrative problems of industry-institution collaboration in vocational and technical education in view of teachers, industry people and administrators.

To examine the infrastructural problems of industry-institution collaboration in vocational and technical education in view of teachers, industry people and administrators.

Hypotheses

Keeping in views the objectives of the study, the following null hypotheses are proposed to be formed:

There is no significant difference between the views of teachers, industry people and administrators in polytechnics with regard to the administrative problems affecting industry institution collaboration.

There is no significant difference between the views of teachers, industry people and administrators in polytechnics with regard to the infrastructural problems affecting industry institution collaboration.

Population of the Study

Keeping the mentioned objectives in view the study proposed herewith is intended to be explorative and analytical in nature.

The focus of the Study is on industries located in Lucknow district, vocational and technical courses being run by technical institutions – ITIs and polytechnics within the district limits of Lucknow district. Hence area-wise, the study is limited to the district limits of Lucknow only.

Sample and Sampling Technique

Where the data on behalf of educational institutions is will be collected from respective, teachers and administrators by simple random sampling technique. The sample on the institution side will contain all the Polytechnics existing in Lucknow district. However, the sample will consist of only those teachers and administrators who are directly concerned with vocational courses and persons in administrator. In totality the sample is most likely to contain approx., 100 teachers, 100 administrators from Polytechnics.

Research Tools

For fulfilling the objectives in hand, the following three self-made tools have been used while conduct of the study: Industry– Institution Linkages Problems Enquiry Schedule. Statistical Treatment.

Statistical Techniques

The data analysis has been done with the; help of very simple techniques – arithmetic mean and S D. However, for the purpose of assessing the significance of difference between two sample means, ‘t’ test has been used.

3. Results and Analysis

The entire gamut of industry-institution linkages cooperation of industry people and educational functionaries - the teachers, principals and administrators. The purpose is obvious -

improvement in provision and conduction of VTE, resulting in better equipped and thoroughly trained workers for industries. While such workers are output of VTE at institution side, the same are input for industries. However, the scope and coverage of industry-institution linkages is not limited to the teaching-training activities only. It moves ahead to take into its fold all such activities that are helpful in bringing closer the two counterparts – industries and the VTE institutions for mutual benefits. While conducting this study, the researcher came across the various aspects and intricacies of VTE programmes and industry organizations. What follows in the next sections is an interpretation of the data collected during the course of this study. Here the researcher discuss the problems which are Administrative Problem, Infrastructural Problems the analysis of data shows in the table.

Problems of Industry-Institution Linkages in VTE at the institution Side Industry-institution linkages problems enquiry schedule was used to find out the problems of such linkages and their level of magnitude. The tool subdivides problems in six dimensions:

- A. Administrative Problems.
- B. Infrastructural Problems.

A: Administrative Problems

The views of teachers/instructors, principals and other administrators were sought on six administrative problems and their severity in terms of always, most often, often and never, and were further requested to mention other problems, if any. After administration of the tool, the picture that came out has been presented in table. The table shows quite explicitly significant differences in the severity of five problem areas between vocational schools and technical institution in view of their teachers and administrators.

Table 1.1: Scores Administrative Problems in Industry-institution Linkages in VTE in view of Teachers and Administrators

Administrative Problems		Vocational Teachers & Administrators (N = 44)		Technical Teachers & Administrators View (N = 108)		't' Value,	Composite	
		Mean	S.D.	Mean,	S.D. ~		MeannnnnnnI Mean	Rank
1-	Importance not being given to industry participative activities by institutional administrators	-22.73	8.45,	8.24	7.71,	9.83"*	12.43	5
2.	Lack of industrial experience among institutional administrators (principal, manager etc.)	22.27	6.42	13.06	9.22	7.01**	15.73	2
3.	Industry having no role in institutional functioning	23.41	7.76	13.8	8.83	6.65~*	16.58	1
4.	Rigid rules and formalities of institution	15.91	7.57	13.61	9.61	1.57	14.28	3
S.	Lack of work culture in institution	18.18	9.95	9.26	6.37	5.50**	11.84	6
6.	Lack of adequate publicity of expertise and facilities available in the institution	18.64	9.79	9.91	6.34	5.47**	12.44	4

** Significant at G.Glevel of significance (a = 0.01)

While in view of vocational teachers/administrators, three of these problems: Importance not being given to industry participative activities by institutional administrators (Mean score 22.73), Lack of industrial experience among institutional administrators (Mean score 22.27), and Industry having no role in institutional functioning (Mean score ~1) are quite severe hampering industry-institution linkages_in vocational schools; only two of these have a moderate effect on industry-

institution linkages in technical institutions. Two other problems (Lack of work culture in institution and Lack of adequate publicity of expertise & facilities available in the institution) also have a moderate effect on industry-institution linkages in vocational schools, but not in case of ITIs and polytechnics, as is evident from highly significant difference on these two items ('t' value 5.5 and 5.47 being highly significant).

However, both the types of teachers/ administrators encounter with rigid rules and formalities, and for them it is a moderate problem with the difference in mean scores (15.91 and 13.61) being not significant.

These findings contradict with that of Rathore (1993), as he reported lack of industrial experience among majority of teachers, and lack of awareness & motivation towards industry-institute interaction as factors inhibiting industry-institution linkages in technician education. Nevertheless, the present findings support his conclusions in case of schools having vocational courses at +2 stage. Such a difference in findings may be due to improvement in institutional functioning in polytechnics and ITIs with the passage of time over a period of approx 18 years.

The reason behind significant difference in severity of the mentioned problems may also be due to the fact that during the last five years or so, greater attention has been paid by the government on technician training, resulting in opening up of polytechnics and ITCs in private sector. And further that, a

few trades within the existing ITIs have been put under public-private partnership (PPP) or centre of excellence (COE) scheme, wherein an industrialist within the region has been made chairperson of that unit. This way the industry and ITIs /polytechnics are coming closer and the administrative problems have started coming down.

As regards other administrative problem, a few teachers in ITIs mentioned about lack of clerical support in institutional activities, but it was a problem found only in one or two Govt. ITIs.

B. Infrastructural Problems

Teachers and administrators were requested to express their views on seven infrastructural problems. Their responses bring to light a few of the ground level problems that hamper their daily routine activities and as a matter of fact, cause to be barriers in the way of effective industry-institution linkages. Table 4.2 is a depiction of their views on such problems.

Table 1.2: Scores of Infrastructural Problems in Industry-institution Linkages in VTE in view of Teachers and Administrators

Infrastructural Problems		Vocational Teachers & Administrators (N = 44)		Technical Teachers & Administrators (N = 108)		‘t’ value	Composite View	
		Mean	S.D.	Mean	S.D.		Mean	Rank
1.	Lack of necessary facilities to contact far-flung industrial concerns	16.82	10.29	15.65	8.78	0.66	15.99	5
2.	Lack of transport facilities for students' mobility to the enterprises	24.09	7.26	21.85	7.75	1.69	22.50	1
3.	There being no industrial activity related to Courses in the vicinity	21.59	9.63	15.65	8.23	3.59**	17.37	4
4.	Size of institutional building being small	5	6.65	3.24	5.61	1.55	3.75	7
5.	Lack of equipment and materials in laboratories	18.18	8.7	7.78	8.46	6.74**	10.79	6
6.	Lack of continuous electricity Supply in the	26.59	4.79	15.74	7.88	10.36**	18.88	2
7.	Institution Lab. equipment being solete from industrial view-point	25.45	5.04	14.54	9.21	9.35**	17.70	3

Whereas size of the institution building is virtually not a problem (mean scores being 6.65 and 5.61 respectively), lack of transport facilities (mean scores 24.09 and 21.85) is a severe problem for both the vocational and technical institutions. In fact none of the institutions has its own transport abilities us, van etc.) And students' mobility to the enterpnses IS ampere severely due to 'remoteness of industry' (Chhabra, 1996) [3]. Lack of necessary abilities contact far-flung industnal concerns has also been cited as a no derate problem (with mean scores 16.82 & 15.65), though most of the each cars and administrators never mind using their personal mobile phones) such important activities. These findings are in consonance with that of other (1993) when he mentions lack of transport facilities and UP project assistance to the faculty to approach and interact with industries located. Indistinct places.

Significant differences on other four problem areas - lack of industrial activity related to courses in the vicinity ('t' value 3.59 being highly significant), lack of equipment and materials in laboratories ('t' value 6.74 being highly significant), lack of continuous electricity supply in the institution ('t' value· 10.36 being highly significant), and Lab. equipment being obsolete from industrial view-point ('t' value 9.35 being highly significant) - show that the problems in vocational institutions are more severe than in case of technical institutions. Sachet

(2007) stands supported by these findings, as he termed lack of course-related industrial activity in the vicinity as a problem.

Though, lack of continuous electricity supply and obsolete lab-equipment are pervasive problems in almost all educational institutions, such a difference in view is understandable considering the facts that ITIs and Polytechnics in the government sector obtain regular grants allocation for equipment and a few of these institutions are located in the industrial area. Lack of equipment and materials in laboratories being a greater problem for vocational schools as against technical institutes may also be for the reasons that all these vocational schools are aided schools and do not obtain recurring grants for lab equipment, whereas, on the other hand, quite a good number of technical institutes are relatively new and do not depend on government grants.

4. Findings of the study

The Problem undertaken for the present study itself focuses on three areas of industry-institution linkages in VTE: its problems and strategies. Hence, findings of this study are as follows:

1. Industry having no role in institutional functioning.
2. Lack of industrial experience among institutional administrators (principal, manager etc.).

3. Rigid rules and formalities of institution.
4. Lack of necessary facilities to contact far-flung industrial concerns, and
5. Lack of equipment and materials in laboratories.
6. Lack of financial arrangements for industrial excursions of Teachers.
7. Lack of budgetary provision for industry-participative activities, and Govt. grants not being provided for industry-participative activities,
8. Lack of adequate stipend for students during industrial training.
9. Lack of funds/financial arrangements for maintenance of equipment & Materials.
10. Teachers feeling uncomfortable in use of modern teaching/training Methods.
11. Lack of industrial experience among teachers/trainers.
12. Lack of teachers' training for industry-participative activities.
13. Mismatch of courses with the needs of the enterprises,
14. Confusion regarding the activities in which industry can be helped.
15. Rigid bureaucratic controls which leave little scope for even minor changes in students' evaluation method.
16. Reluctance of teachers to make efforts other than the assigned duties.
17. Lack of confidence among industry-people towards industrial training Capabilities of teacher.
18. Lack of vocational aptitude among students.
19. Negative attitude among industry-people towards participative activitie with educational institutions.
20. Negative attitude among teachers toward industry-participative activities.

5. Conclusion

Since the aim of VTE is to provide education and training for acquiring positive attitudes to work, practical skills, understanding and knowledge of occupation I various sectors of economic and social life; linking VTE with the economic life of the society is a necessity and this link should form the basis for appropriate course designed and institutional mechanism. The researcher found no difference in view of male and female and rural and urban teachers and administrators and industry people regarding the selected problem. This shows that selected problem affects the industry institution linkage. There is a need of hour that there has to be strong collaboration between industry and institution. So that both can work hand in hand.

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