A FOCUS ON TRAGEDIC CONDITIONS OF GOVERNMENT POLYTECHNIC INSTITUTES IN JHARKHAND

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Abstract

Polytechnic institutions have played an important role in the field of technical education. Polytechnics have produced great engineers who rose to eminence due to their diligence and deep commitment to the profession. Polytechnic in India have been conducting 3 years diploma courses in various districts. [1] These are badly suffering as the department of technical education has failed to provide staff or even manage part time lecturers whose emolument is very uncertain. This problem is being faced in all other polytechnics in state of Jharkhand. This study has been carried out to assess the existing status of polytechnic in Jharkhand. It is focusing mainly on the shortage of staff, lecturers and facilities in most of the polytechnic institutes of Jharkhand. A suitable framework and its program of action will further enhance employment oriented flagship program of skill development of India/Jharkhand.

Keywords*: Polytechnic Education, AICTE Norms, Quality.*

Introduction

Rapid growth is necessary in the field of technical and vocational education to keep the GDP growth rate of the country above 10%. It has been observed that the progress of the Technical education is the transmission of civilization. Polytechnics in India offer diploma courses in engineering and technology, architecture, art, pharmacy and also offer different short term courses which provide technically qualified human resources to industry and help in socio-economic development of the country. The students graduating from these institutes are employed in all functional areas of production, quality control, installation, maintenance, servicing and marketing. The state board of technical education (SBTE) of Jharkhand is under administrative control of the department of Higher and Technical Education. [2] SBTE conducts diploma examination for award of certificates. It advises state government in carrying out technical and vocational courses as per demand of industry at competence levels. At present, there are 13 state run polytechnics in Jharkhand. The total enrolment in these 13 state run institutes is over 3000 for 13 courses.[3] These are as given below:-

1. Government polytechnic, Ranchi
2. Government Women's Polytechnic, Ranchi
3. Government polytechnic, Dumka
4. Government polytechnic, Dhanbad
5. Government polytechnic, Nirsa, Dhanbad
6. Government polytechnic, Bhaga, Sindri
7. Government women's polytechnic, Bokaro
8. Government polytechnic, Khutri
9. Government polytechnic, Koderma
10. Government polytechnic, Latehar
11. Government polytechnic, Adityapur
12. Government women's polytechnic, Jamshedpur
13. Government polytechnic, Kharswan

Objectives Of Study

The study of polytechnics has been carried out to assess the existing status of polytechnics in Jharkhand in different manners. It includes identification of academic gaps that would have to be

covered so that these institute can be upgraded to centre of excellence so as to meet the requirements of technically skilled manpower of Jharkhand in a better manner.

Methodology Of The Study

For achieving the aboce objetives, the following methodology has been adopted:-

- Review of literature from various information sources on the related issues such as internet surfing, periodical, books, reports, published national and international journals etc.

- Interaction and discussion with stkaeholders of Government polytechnic of Jharkhand , New Delhi and Mumbai

- Comparative statement of Polytechnic of above states

- Designing of framework and action plan for model polytechnic in Jharkhand

Result and Discussion

Problem and challenges of government polytechnic of Jharkhand are identified by researchers in this preliminary studies. Various parameters have identified in approval process handbook of AICTE for achieving its mandated objectives. There are 13 government run polytechnic existing in jharkhand located in various districts. These polytechnics have some common features in respect to the basic information and recruitement of staff, curriculum and finance.

The staff includes principal, lecturers (HOD, senior lecturer, teaching staff) part time lecturer, administrative staff(librarian, accountant, clerk, typist), technical staff(laborartory assitant, instructor) and maintenance staff. In all polytechnics in jharkhand there is one principal or acting principal, a handful of permanent lecturers without any head of department or senior leturer. As there is insufficient permanent teaching staff in each institute, several courses are being conducted with the help of part time lecturer. But there is stipulation about the maximum amount that may be paid to part time lecturer- Rs 12,500, which doesn't happen to cover the number of lecturers required for one course – 40 (at the rate of Rs 250 per lecture).

Table 1: Basic information of staff [4]

Sl. No.	Staff at	principal	HOD	Senior lecturer	Permanent teaching faculty	Part time lecturer	Administrative staff	Technical staff	Maintenance staff
1	Ranchi	1	NIL	NIL	12	10	13	19	29
2	Kharaswan	1	NIL	NIL	3	14	1	NIL	3
3	Dhanbad	1	NIL	NIL	1	25	17	4	NIL
4	Bhaga	1	NIL	NIL	NIL	27	2	1	4
5	Koderma	1	NIL	NIL	2	10	6	3	5
6	Adityapur	1	NIL	NIL	3	30	1	20	-
7	Dhanbad	1	NIL	NIL	9	30	12	12	-
8	Dumka	1	NIL	NIL	4	15	8	4	4
9	Khutri	1	NIL	NIL	NIL	30	6	7	1
10	Latehar	1	NIL	NIL	1	14	3	1	1
11	Jamsedpur	1	NIL	NIL	3	20	4	1	NIL
12	GWP Ranchi	1	NIL	NIL	3	12	5	2	NIL
13	Bokaro	1	NIL	NIL	3	15	4	2	NIL

Table 2: strength in different institutes in Jharkhand Polytechnic

Sl. No.	Polytechnic at	Training & development programme for faculty	Industry – institute - interaction	R&D	Voational courses	Training and placement activities	Conferene, seminars and exhibition	Internal resources generation (IRGS)	Internet facilities
1	Ranchi	-	-	-	-	-	Yes	-	Yes
2	Kharaswan	-	-	-	yes	-	-	-	-
3	Dhanba	-	-	yes	-	Yes	-	-	-

	d								
4	Bhaga	-	yes	-	-	Yes	-	-	-
5	Koderma	-	-	-	Yes	-	-	-	-
6	Adityapur	Yes	-	-	-	-	Yes	-	-
7	Dhanbad	Yes	-	-	-	-	-	-	-
8	Dumka	-	-	-	-	-	-	yes	Yes
9	Khutri	-	-	-	-	-	-	yes	Yes
10	Latehar	Yes	-	-	-	-	--	-	-
11	Jamsedpur	-	-	-	-	-	-	-	-
12	GWP Ranchi	-	-	-	-	-	-	yes	yes
13	Bokaro	-	-	-	-	-	-	yes	yes

Table 1 shows the basic information of staffs of all the polytechnic. Table 2 shows about the strength of the college. The student teacher ratio is nearly 27:1. In various polytechnics, Regular training is organised by national institute of technical teacher training training & research (NITTTR), Kolkata for the faculty development. Polytechnics have been modernised by world bank aassisstance and state plan in past but no satisfactory impovement has taken place as per AICTE norms. Substantial land of government polytechnic- ranchi has been encroached. Student amenities are not adequate in many of the polytechnic.There is no performance appraisal of the faculty and no TPO cell is functioning well in some polytechnics. There is more emphasis on classroom instruction and less stress is on field work and in plant visits. Lack of staff quarters is also a problem. There is no place to organise seminar and exhibition. There are shortage of staff and permanent faculty. Equipments in laboratories and workshops of all the polytechnics need to be upgraded. The college campus of Koderma looks like a deep forest but it can be converted an ideal place for teaching-learning in green environment. There is lack of transport facilities to polytechnic away from urban market and industrial/mining clusters. Proper transport facilities for students and teachers will catalyst training and field work vocational inputs. Many of the buildings of college and boundary are damaged and broken. There is a need of up gradation of laboratory instrument. There is acute need of academic and infrastructures as per AICTE norms. There is no any academia-industry interface or placement environment. Part time lecturer is paid very less amount. There is no any training program and development for PTLs. Polytechnics are also lacking of supporting staff to maintain equipment. There is absence of

internet facility in many polytechnics. The major issue with the undeveloped polytechnics is the low payment to part time faculty.

Problem With Part Time Faculty

All kinds of Colleges rely upon part time faculty to teach student. A full course load for lecturers teaching at most colleges is sixteen hours per week. Depending on the faculty, their salary ranges between 80,000 and 1, 50,000 a month. A part time faculty person teaching same sixteen hours earn about 12,500 a month which is 15% of salary of regular faculty. Full time faculty are also required to research, publish and serve on society, but many part time staff do that as well in the hope of one day moving up the academic ladder. The difference is that they have to do it on their own time and on their own Diem. It is estimated that more than half of all undergraduates are taught by part time faculty. The core of the teaching is being done by the most unfortunate precarious academic laborers so called PTLs in Jharkhand, without them, the academic model of college would collapse. [5] If the government wants to see the excellent academic performance of students then the salary of part time faculty should be increased as it is given in polytechnics of Bihar. A minimum fixed consolidated amount per month will be psychological booster of PTLs in making the polytechnic as vibrant institutions throughout the session, not as dead institutions.

Non – Jharkhand Government Polytechnic

Some polytechnics of Jharkhand along with the three reputed polytechnics in New Delhi and Mumbai were visited to understand the differences in their functioning and how these polytechnics are being managed. These polytechnics are as follows:

Government polytechnics:

1. Pusa Polytechnic, New Delhi
2. Govind Ballabh Pant Polytechnic, New Delhi
3. Government Polytechnic, Mumbai

These well reputed polytechnics has well maintained infrastructure in terms of laborartries, hostel failities and amentities for students and staff. The amentities of students inludes student cell or an association representing the students to organise to arrange and participate in co curricular activities like debates, essay competition, quizzes, group disussion, organisation of eye & blood donation amps and annual events like sports-day, science-day.awards and scholarships are used to reognise the merit and achievement of students like that being done in Shri

Bhagubhai Mafatlal Polytechnic, Mumbai. There is continous industry academia interface. This is maintained through organisation of workshops, seminars and conferences. Recruitement is a periority area of all well functioning polytechnics. This involves creating a database of students and companies, industry-academia interface, holding of job fairs, and a full time officer who takes are of training. These non-jharkhand polytechnics are developing with the following strengths of which some are enlisted below:-

- Continuing education programme for working class.
- Programmes for person with disabilities (PWD).
- Programmes are accredited by national board of accreditation (NBA).
- Updation of curriculum is based on scientific model.
- Sandwich pattern of diploma course & inplant training.
- Workshops and seminars are organised on regular basis.
- Laborartry infrastructure.
- Involvent of industry experts in development of curriculum & evaluation of students.
- Multipoint entry and credit system.
- Industry institute interaction
- Well equipped computer laboratories.
- CDTP as a nodel centre for DRDA works as done in Polytechnic at Portblair
- Joint venture with skill sector councils
- Liaison with professional bodies like- institution of engineers, ISTE etc.

Benchmarking With Model Polytechnic

A model polytechnic has been designed in Table: 3 after studying the practices in non-Jharkhand polytechnics. Each polytechnic in Jharkhand has been evaluated vis-à-vis the model polytechnic and shortcomings are identified. The model polytechnic has been developed after taking into consideration the standards specified by AICTE and the practices prevalent in the non-Jharkhand polytechnics. Accordingly, a phased action plan has been suggested for each polytechnic.

Table 3: benchmarking with Model Polytechnic

Parameters	Gov. polytechnic(existing)	Model polytechnic (proposed)
Course up gradation	Syllabus was last updated in 2010.	Once every three years.
Student teacher ratio	30:1	1:12 or 12:1
Performance appraisal of faculty	Yes	Should be carried out every year
Training and development	Yes	Should be carried out annually
Campus recruitment	<10%	100%
Infrastructural area	less	Should be well equipped as per AICTE norms. The computers should be well maintained on a regular basis.
Administrative area	less	As per AICTE norms
Student amenities	Less	As per AICTE norms
Vocational courses	Computer operation & programming, software engineering, computer hardware, web designing, automobile, house wiring, mobile phone maintenance.	Should cater to the needs of the community/industry. Should take stakeholders feedback on the design of the courses.
Part time course for working executives	-	Should be designed keeping in mind the needs of the executives/staffs.
Industrial & field visits industry institute interaction	-	Requirement should be devised jointly with representatives of industry and the faculty. Should be conducted on a regular basis.
Training & placement cell	-	Should provide career guidance & counseling for students. Also organize job fairs, industry-students interactions for placement purpose.
R & D activities/consultancy works	-	Should be carried out preferably jointly with the industry to foster more industry-institute interaction.
Institute magazines	No	Should be published on quarterly basis.
I.R.G. scheme	Partial	Should be implemented properly
co-curricular and extra-curricular activities	No	Part and parcel of student life. Honorarium shall be paid to PTLs for such works also.

Action Plan

Phase wise implementation:

A phased approach is suggested as action-plan for up-gradation of the polytechnics in Jharkhand. The steps which ought to be carried out immediately and which can be done within a year are identified in phase I. steps which need longer duration are given in phase II.

Phase I

1. Recruitment of staff and faculty.
2. Review and up gradation of curricula
3. Training and placement cell.
4. Job-fair.
5. Faculty development.
6. Workshops, seminar and exhibition.
7. Involvement of students in co-curricular activities and extra-curricular activities are to be continuously conducted for personality development. PTLs shall be assigned such tasks also.

Phase II

1. Up gradation of infra structure equipment and instruments.
2. Establishment of the institute as centre of excellence and IIT/BIT as a mentor for nearby polytechnc.
3. Polytechnic to be made local extension centre of appropriate technology.
4. Adoption of polytechnic by corporate industrial houses as their HRD wing

Conclusion

1. Lack of adequate faculty and staff seems to be common problem. This is reflected in poor-student-faculty ratio.
2. To attract good technically qualified candidates into teaching, recruitment of faculty needs to be augmented with performance assessment and career progression of faculty members.
3. There need to be focus on adequate infrastructure
   - Improvement in quality and quantity of machinery, equipments and instruments in workshop and laboratories is required.
   - There is lack of hostel facilities for students, residential facility for students
   - Improvement in the library facilities and computer facilities
   - Lack of proper transport and medical facilities for faculty/stave.

- Lack of language lab

4. Maintenance of existing facilities is a lacuna in majority of the institute.

5. Education through ICT have to go with digital India for effective teaching leaning environment and societal needs

6. There needs to be more industry- academic interface both for knowledge transfer and up gradation of courses.

7. Serious efforts are required towards placement activities for the passing out of students. This has to be done through improvement in institute-industry interface along with a permanent training and placement cell managed by a permanent officer or a faculty member.

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