A Statistical Predictive Study by the Support Staff of Technical Education in India

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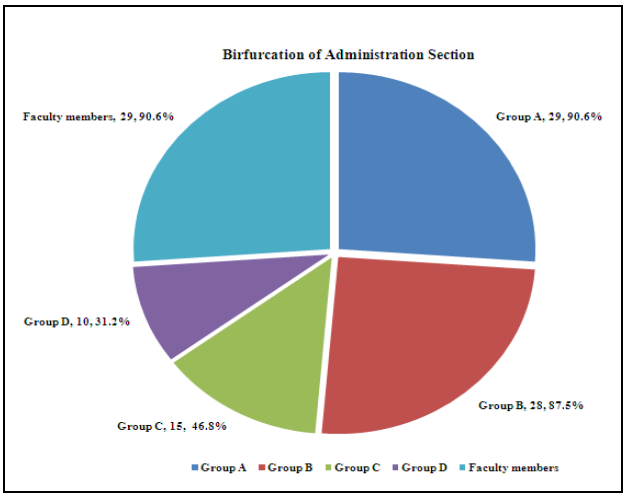
Summary
Recognizing the importance and need of Education in general & technical education in particular India has taken planned and systematic steps to establish Centres of Excellence in technical fields. They were Indian Institute of Technology (IITs) in 1950s followed by Regional Engineering Colleges, re-named as National Institute of Technology, (NITs in 2003) in each state as second level Institutions in 1960s. Afterwards, with the advent of information technology Indian Institute of information Technology (IIITs) were established in early 21st century. After a gap of about 40 years India decided to establish additional such Centres of Excellence. Very recently new IITs, NITs and IIITs are being established at various places of India. In an effort to find out the impact of various parameters of Human Resource Management and innovations on technical institutions, a comprehensive study has been conducted seeking the example of two technical institutions (T1 & T2). In the present study the important components such as administrative structure, selections of HR, satisfaction level, participation of staff in management, perks, automation of libraries and laboratories, etc affecting the Human Resource Management have been included and opinions were sought from the support staff of the two institutions (T1 & T2). In earlier two research papers the views of officers and faculty members of same institutions were analyzed to have perspective effect of the analysis on Human Resource Management. The present study will give holistic approach of completeness of Human Resources involved in shaping and reshaping alongwith further shaping the organizations. The deliverables of the observations by support staff reflect that T1 is comparatively better prone in using information communication technology (ICT) in different managerial aspects as compared to T2.

Key words:
Human Resource Management, Completeness, Satisfaction level, Technical institutions, Vertical & Horizontal growths

1. Introduction

In the present scenario of globalization there are no boundaries in the world. The cyberspace has over shadowed various other artificial classification of space, land, mobility and so on. The invent of importance of cyberspace is due to very quick development of technology with wonderful backup of Internet. In fact there is no productive system of human actions without penetration of internet in human life. In this situation it has become relevant to find out the adoptability and adaptability of recent technological tools of teaching, learning & delivery of education by educational institutions, in general and technical institutions in particular. In this background it was planned to study the effect of such impact on Human Resource Management in two Excellent Technical Institutions named as T1 & T2. The parameters expected to provide effect on HRM have been selected carefully and data were collected from three critical arms of HRM. They are officers, faculty members and support staff. The studies for the first two components have already been published [1, 2] recently.

To have the completeness of the study the data, on relevant parameters from the support staff (32 in both T1 & T2) was collected and analyzed statistically by depicting through pie-chart, graphics and line charts.



Technical Institute T1, Fig-1 (a)

Fig-1(a) shows different categories/levels of support staff in the administration of the two institutions. This is in response to the data for which 31 (96.8%) support staff of T1 said group A, another 31(96.8%) said group B. The group C, said 18 (56.2%), group D, 10 (31.2%) and 29 (90.6%) were officer-cum-faculty members.

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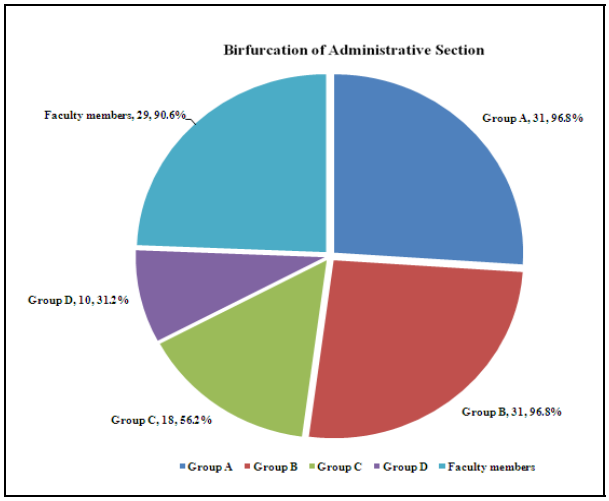
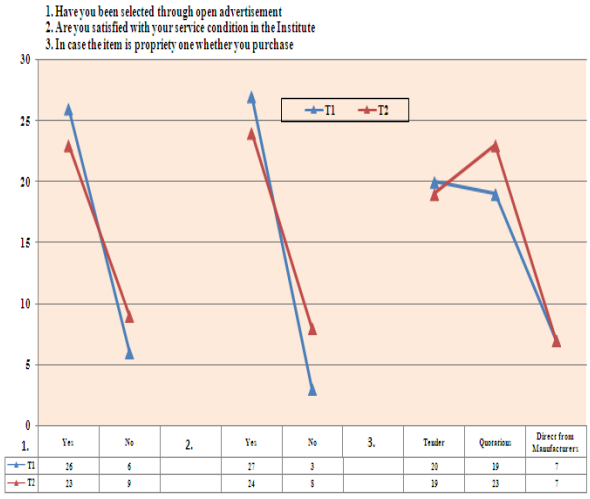


Technical Institute T2, Fig-1 (b)

Similarly **Fig -1(b)** for T2, 29 (90.6%) support staff said group A, 28 (87.5%) showed group B, 15(46.8%) said group C, and group D mentioned 10 (31.2%) and 29 (90.6%) were officer-cum-faculty members.

The system of modern management of institutions/offices originated from the hierarchical structure originated during British rule. This was for smooth functioning of the organizations. The institutions under present study also [3] follow similar pattern and therefore have various categories of human resources in its administration. The data reveals that in both the institutions the classification of human resource management is almost similar. It can be concluded that the technical education institutions in India follow same pattern of categorization of human resource management.

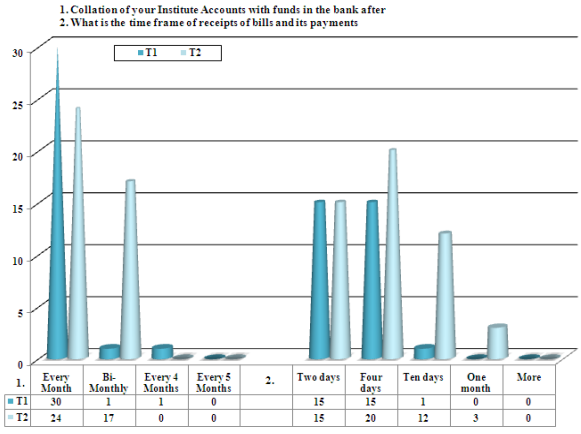


Technical Institute T1 & T2
Fig-2.1, 2.2, 2.3

Fig.2.1 shows the recruitment of the staff through open advertisement mode. This is in response to the data for which 26(81.3%) staff said 'yes' and 6(18.8%) staff said 'no' at T1, similarly, 23(71.9%) said 'yes' and 9 (28.1%) said 'no' in case of T2. The data reveals that at T1 only 81.3% claimed to enter the Institute through open advertisement whereas at T2, 72% staff claimed to enter the institute through this process [4]. It means at T1 more number of staff were selected through open advertisement. Rest of the staff might have been selected through other methods. This method obviously may be selecting the experienced staff from other Institutions through circulars or through other means on transfer or deputation basis.

Fig.2.2 shows the satisfaction level of the staff with their service conditions. In this case 27(84.4%) staff said 'yes' and 3(9.4%) said 'no' at T1 and at T2 24(75.0%) staff said 'yes' and 8 (25.0%) staff said 'no'. Satisfaction of the staff is one of the crucial dimensions of human resource management. Interestingly in this aspect the staff saying 'yes' to the question were more in comparison to those who said 'no' in both the institutions. At T1 the percentage of staff asserting the item was a bit more than that of T2. Nevertheless, it can be concluded that HRM system of both the institutions is conducive to the staff [5]. However, there always remains a further scope for improvement in both the institutions.

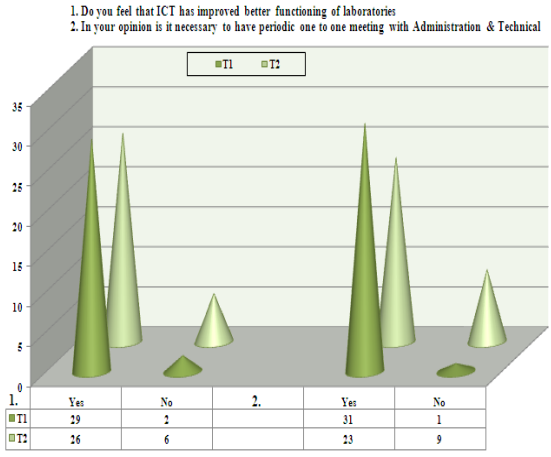
Fig.2.3 shows the mode of purchases in T1 & T2. The responses to the questionnaire reflects the T1 20 (62.5%) said that they purchase it through tender, 19(59.4%) said that they purchase through quotations and 7(21.9%) said that they purchase directly from the manufacturer. Similarly at T2, 19 (59.4%) said that they purchase it through tender, 23 (71.9%) said that they purchase it through quotations and 7 (21.9%) said that they purchase directly from the manufacturer. In both the institutions the majority of the staff said they purchase items on the basis of tenders and quotations called for specific items.



Technical Institute T1 & T2
Fig-3.1, 3.2

Fig.3.1 shows the frequency of collating the institute accounts with deposits in the bank. In this case T1, 30 (93.8%) staff said that it is collated every month; 1(3.1%) staff said that it is collated bimonthly, 1(3.1%) staff said that it is collated every 4 months, none of the staff said that it is collated [6] after 5 months. Similarly at T2, 24 (75.0%) staff said that it is collated every month; 17(53.1%) staff said that it is collated bimonthly, none of the staff said that it is collated every 4 months and similarly none of the staff said that it is collated after every 5 months.

Fig. 3.2 reflects the timeframe of receipts and bills alongwith its payment. This is in response to the data in which T1 takes 15 (46.9%) two days, 15 (46.9%) four days, 1 (3.1%) ten days, one month and more than one month 0(0%). Whereas T2 takes,15 (46.9%) two days, 20 (62.5%) four days, 10 (37.5%) ten days and 3(9.4%) one month and more 0 (0%). The analysis reflects less than 50% of bills are paid in two days in both Institutions. T2 takes more time in finalizing the payment as compared to T1 as expressed by majority of the staff. This may be because of size and age old traditions of T2 [7].



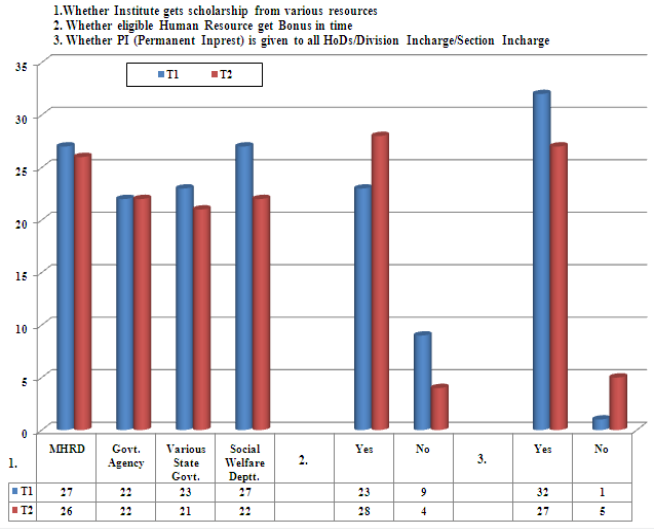
1.	Yes	No	2.	Yes	No
T1	29	2		31	1
T2	26	6		23	9

Technical Institute T1 & T2
Fig-41, 4.2

Fig 4.1 opinion of the staff was sought on the fact that whether ICT has improved better functioning of Laboratories. 29(90.6%) staff at T1 said 'yes' and 2(6.3%) said 'no' at T2 26 (81.3%) staff said 'yes' and 6 (18.8%) staff said 'no'.

Thus in both the institutions the majority of staff feels that that ICT has an impact on functioning of the laboratories. But at T2 though a majority of 81% staff feels that it has an impact, a significant number i.e. 18.8% also feel that there is no impact of ICT on laboratories [8]. This may be because, T2 being an old institution the staff are more comfortable with the old technologies alongwith showing resistant to new changes.

Fig.4.2 gives the opinion of the staff on the issue of their periodic one to one meeting with administration. In case of T1 31(96.9%) staff said 'yes' and 1(3.1%) said 'no'; similarly at T2 23(71.9%) staff said 'yes' and 9(28.1%) staff said 'no'. To have one to one meeting is always fruitful and resolves several problems in an amicable manner. If there are periodic one to one meetings of the administration with the technical staff the administration as well as overall human resource management of the institution will be a successful model. In this regard, T1 seems to be better placed as almost 97% staff opined that there is one to one meeting with administration.



1.	MHRD	Govt. Agency	Various State Govt.	Social Welfare Deptt.	2.	Yes	No	3.	Yes	No
T1	27	22	23	27		23	9		32	1
T2	26	22	21	22		28	4		27	5

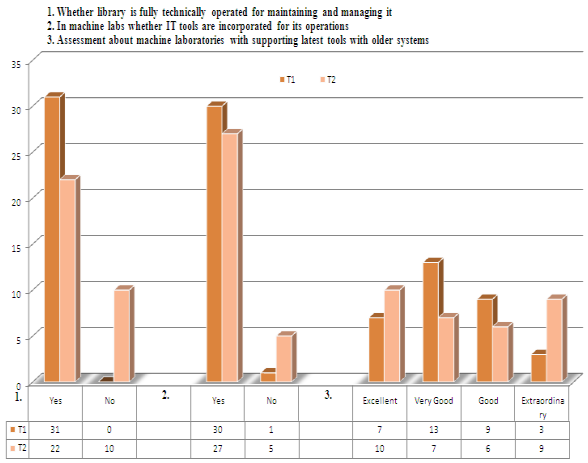
Technical Institute T1 & T2
Fig-5.1, 5.2, 5.3

Fig.5.1 shows the sources from where the institution gets scholarships. 27(84.4%) of staff T1 said that they receive scholarship from MHRD, 22(68.8%) said that they receive scholarship from Govt. agency; 23(71.9%) said that they receive it from various state governments and 27(84.4%) said that they receive it from social welfare department. Some of the staff opted all options. Similarly at T2 26(81.3%) said that they receive scholarship from MHRD, 22 (68.8%) said Govt. agency; 21(65.6%) said from various state government; and 22 (68.8%) said from social welfare department. It means that in both the institutions the scholarships are received from various sources [9].

Fig.5.2 shows the data on providing timely bonus to the eligible human resources. 23, (71.9%) of T1 said 'yes' and 9(28.1%) said 'no'; similarly at T2 28(87.5%) said 'yes' and 4(12.5%) said 'no'. Bonus is also incentive given to the human resources for good productivity done by them. This benefits both the human resource as well as the institution [10]. In this regard in both the institutions

majority of the staff 72% and 87% at T1 and T2 respectively said that the institution gives them bonus timely. It means that both the institutions keep their human resources in good humor and reward them for their productive work.

Fig.5.3 shows the availability of Permanent Imprest money to all Heads, Division incharges and section incharges. This is in response to the data for which 32((100%) at T1 and 27(84.4%) at T2 said 'yes' ; 1(3.1%) at T1 and 5(15.6%) at T2 said 'no'. This means that in both the institutions the Heads, Division incharges and section incharges are equipped with finances to deal with day to day financial petty transactions autonomously.



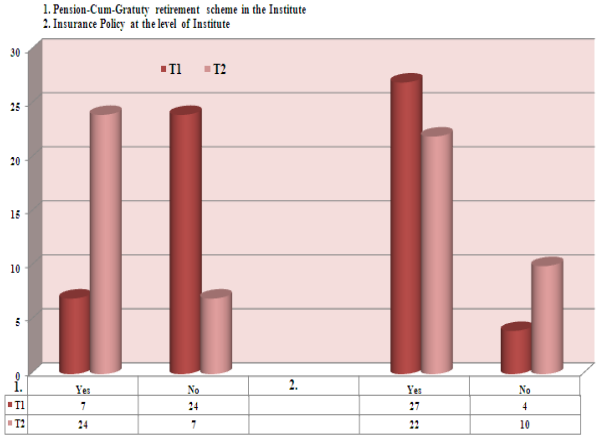
1.	Yes	No	2.	Yes	No	3.	Excellent	Very Good	Good	Extraordinary
T1	31	0		30	1		7	13	9	3
T2	22	10		27	5		10	7	6	9

Technical Institute T1 & T2
Fig-6.1, 6.2, 6.3

Fig.6.1 provides the existence of full technology in library for its operation, maintenance and management. Almost all 31(96.9%) staff said 'yes' at T1 and 22(68.8%) staff said 'yes' and 10 (31.3%) staff said 'no' at T2 for existence of latest technologies in library management. 21st century has advanced much ahead in computerization and digitization of libraries. Particularly in technical institutions the libraries should be very conducive and better accessible to the users. In this regard at T1 almost 97% staff said that the libraries are fully technically operated, maintained and managed [11]. But at T2 the percentage of staff saying 'yes' to this question is comparatively less i.e. only 69%. Therefore T2 needs further improvement.

Fig.6.2 reflects the incorporation of IT tools in machine labs. For this 30(93.8%) staff at T1 said 'yes' and 1(3.1%) said 'no'; similarly at T2 27(84.4%) said 'yes' and 5(15.6%) said 'no'. Nowadays there are many machines which are operated by IT tools. This increases the precision of the instruments and makes it smooth and convenient. All the institutions which are hi-tech generally use IT tools in their machine labs [12]. In this regard the data revealed by the 94% staff at T1 and 85% of T2 shows that the institutions incorporate IT tools in their machine labs.

Fig.6.3 reflects the assessment of the staff about machine laboratories with supporting latest tools with older systems. 7(21.9%) staff of T1 said excellent; 13(40.6%) said very good; 9(28.1%) said good and 3(9.4%) said extraordinary; Similarly at T2, 10 (31.3%) staff said excellent; 7(21.9%) said very good; 6(18.8%) said good and 9(28.1%) said extraordinary. Supporting old systems with latest tools is not always a successful proposition. Only some times it may work. Therefore it has its own advantages and disadvantages. That is why the response from the institutions under study were also mixed [13]. Almost equal percentage of staff in both the institutions opted for all the alternatives.



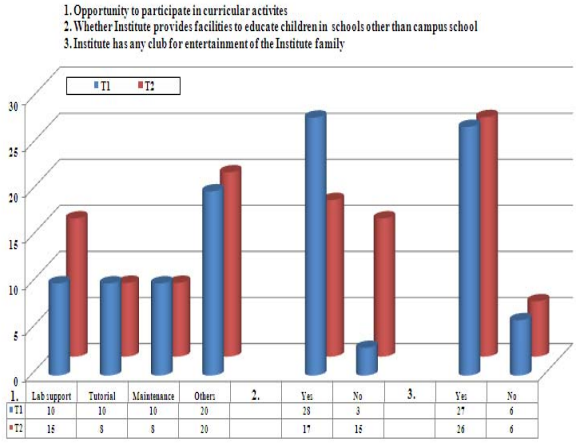
1.	Yes	No	2.	Yes	No
T1	7	24		27	4
T2	24	7		22	10

Technical Institute T1 & T2
Fig-7.1, 7.2

Fig. 7.1 depicts the existence of pension cum gratuity retirement scheme in the institute. 7(21.9%) of staff at T1 said 'yes' and 24(75.0%) said 'no'; similarly at T2, 24(75%) said 'yes' and 7(21.9%) said 'no'. Pension cum gratuity is one of the schemes of retirement of staff prevalent in the institutions. In this regard at T1 almost 75% staff said that it is not existing in their institute whereas 21% staff said that it is followed in their institute. In case of T2 the data is just reverse. It means that the scheme has been adopted by T2 and not adopted by T1.

Fig.7.2 shows the opinion of the staff on whether there should be insurance policy at institution level. This is in response to the data for which at T1 27(84.4%) said 'yes' and 4(12.5%) said no; at T2, 22(68.8% said 'yes' and 10(31.3%) said no. Providing sense of security to the human resources is a very crucial dimension which needs to be taken care by the Human Resource Management System of any institution [14, 15]. Studies show that the output of the human resource increases with taking care of

such measures. Now a days there are so many group insurance schemes which can be beneficial to both organization as well as human resources. In this regard almost 84.4% staff at T1 is of the opinion that there should be insurance policy at the level of the institution whereas at T2 69% staff are in favour of it. Being a welfare measure a large majority of staff at both the institutions are in favour of it.



1.	Lab support	Tutorial	Maintenance	Others	2.	Yes	No	3.	Yes	No
T1	10	10	10	20		28	3		27	6
T2	15	8	8	20		17	15		26	6

Technical Institute T1 & T2
Fig-8.1, 8.2, 8.3

Fig. 8.1 deals with the extent of participation of the staff in curricular activities. At T1, 10 (31.3%) said that they participate to support in lab activities; 10(31.3%) said that they participate in tutorial activities; 10(31.3%) said that they support in maintenance activities; and 20 (62.5%) said they extend support in other activities [15]. Similarly at T2,15(46.9%) said that they participate to support in lab activities; 8(25.0%) said that they participate in tutorial activities; 8(25.0%) said that they support in maintenance activities; and 20(62.5%) said they participate in other activities [16].

According to Maslows hierarchy of needs human beings should have to know their actual potential. If the staff is involved in curricular activities firstly they get motivated and secondly they would understand the work involved in the institution. The data in this regard shows that at T1 as well at T2 the majority of staff is involved in curricular activities like laboratory, tutorial, maintenance etc [17].

Fig.8.2 shows the facilities of educating the wards of the staff in the schools other than campus schools. 28 (87.5%) staff of T1 said that there is such facility whereas 3 (9.4%) said that there is 'no' such facility. Similarly at T2, 17(53.1%) staff said that there is such facility whereas 15(46.9%) said that there is no such facility. Welfare and education of the wards of the staff are the important aspects of Human resource management in any institution. At T1 the human resource management seems to be more concerned regarding these aspects as almost 87.5% staff reported that the education of the children in the schools other than campus schools is taken care of. At T2 this aspect is taken care of to some extent. [18].

Fig.8.3 mentions the existence of club facilities for the family members of the staff. This is in response to the data for which 27(84.4%) of T1 said 'yes' and 6(18.8%) said 'no' and at T2, 26(81.3%) said 'yes' and 6(18.8%) said 'no'. Clubs are a source of some entertainment and recreation to the staff and their families to refresh themselves after days hard work and release some stress [19]. Progressive and modern institutions generally provide these facilities. In this regard at T1 as well as at T2 almost more than 80% staff said they have this facility which means that both the institutions are making efforts to provide recreational and stress releasing facilities to the staff [20].

2. Conclusion

The paper specifically deals with very important and purposeful components in managing the institutions under study. The selections of Human Resources are made after proper opportunities given to all aspirants across the country & abroad. Both institutions T1 & T2 select the best ones out of several applications. The paper also deals the administrative structure giving various categories or levels of support staff in managing effectively academic, administrative, technical and finance sections.

In both institutions almost same patterns are being followed. The service conditions of any Institution are important aspects which give satisfaction level of employees. In both cases satisfaction is better. They have also opportunities for participatory role in managing the system. The Support staff accepted that additional perks in addition to pay are provided to them. It was also found that libraries and laboratories of both institutions are automated using ICT. In some of the cases T1 has edge over T2 in application of latest technology for human resources management.

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