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A Study of ERP Implementation in Technical Educational Institutions for Quality Service and Employee Satisfaction

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ABSTRACT: ERP is a powerful tool which enables us for enterprise-wide information collection, interpretation, analysis and distribution. The organisational performance always depends upon the employee's satisfaction i.e. employees must enjoy their work and job rules.ERP can increase efficiency, revenue and profit but initial implementation require a team effort and many staff members may involve in the process. If any organisation opts for ERP first of all the selection, implementation and well-organised utilization of the right ERP package for benefits and satisfaction of employees is very important.Nowadays Technical Education Institutions are rapidly transforming their setup into employee benefits-orientedcultures and strive in providing them comfort. In this paper, an effort is put to find out the quality service of ERP and employee satisfaction in Technical Education Institutions of ODISHA.

KEYWORDS: ERP, TEIs, Employee Satisfaction, Quality of Service.

INTRODUCTION

In the present era a large customer requirement is for immediate and complex solutions, so ERP plays a major role in the industries. BaharYelken,(2005) stated that ERP plays an important role in the industries in terms of integrating all modules of the software packages to support multiple business functions.ERP software is used by large corporations around the world, recently[3]. It is used in the higher education sector by replacing management, finance and administration (Pallock and Conford 2005) [9]. With the changing environment now a day's most of the higher education sector has to tune the ERP system. There are many benefits to implementing ERP in Technical Education Institutions to operate more effectively and efficiently (Frantz et.al. 2002)[4]. The TEIs involve planning, administration and evaluation of efforts to incorporate data quality and service quality. Service quality is an important consideration for ERP implementation success (J.Vosburg et al. 2001)[10].

LITERATURE REVIEW

Now a day's data and information play a major role in improving the performance of any organisation. Management and decision-making become more effective in a business when huge data can be stored, sorted, synthesized and retrieved in a proper manner. No doubt ERP fulfils all these requirements to decrease human efforts, decrease the chance of error and increase employee satisfaction.

Hadeel (2014),ERP as software is used to manage huge amounts of data and information. It can be developed by athird party or in-house by the organisation. ERP has already beenimplemented in many industries and organisations such as manufacturing, health care, insurance, finance, marketing, human resources, etc [5].

Jyoti, Bhavya and Rajendra (2012), Presently the ERP isused by many Technical Education Institutions in the world, so the ERP market started focusing on Educational Institutions and it has shown rapid growth with the core module such as student admission process, student data management, course enrolments, attendance, course management, library system, alumni management, feedback system, research, etc [6].

Andrianto (2019) The ERP system has been adopted by Higher Education Institutions to cope with the changing environment. As a result, it replaced the existing information system to achieve more efficiency and accessibility for all members and improve the end-user performance by providing an ERP system [1].

Motwani et al. (2005) found that the success of ERP implementation requires close cross-functional cooperation in an organisation. The data or information entered by one department may be used by other departments even online. Thus employees may be

expected by their peers to use the ERP to make it more useful. Hence ERP is a major investment in an organisation and the ERP implementation may involve substantial organisational changes, top management support is a key factor of success with a clear vision [8].

Zhang et al.(2003) stated that ERP implementation processes are over budget while the success rate is only less. ERP implementation is expensive and complex, but once it is successfully implemented, significant improvements can be achieved such as quality information, avoiding redundant data, reduction of cycle time, and increased efficiency with reducing cost [11].

Abugabah and Sanzogni (2010) found that the ERP system has been introduced in many universities worldwide and the factors which are most important for user's performance and user's needs [2].

As we know that technology plays an important role in the day-to-day operations of Technical Education Institutions. Now a day's education is becoming more practical-oriented and stakeholder-focused. To stay in the present competitive world, technical education institutions are heavily investing in technological infrastructure for providing better service to their stakeholders (Murphy, 2004) [7].

OBJECTIVES OF THE STUDY

The main two objectives of this study are:

- To identify employee satisfaction by implementing ERP in the TEIs.
- To explore the service quality of ERP in the TEIs.

RESERACH METHODS

It is too difficult to measure the effort of ERP in TEIs theoretically; therefore a survey has been done by selecting some Technical Education Institutionsin Odisha. The primary data has been collected through questionnaires from different stakeholders, who are currently usingtheERP package in the TEIs. A sample of 218 respondents has been taken. The three techniques have been used to get the result (Demographic analysis, Analysis of each question and Hypothesis). The two hypotheses have been framed as follows:

1. H0: Employee Satisfaction by implementing an ERP system is dependent on qualification.
   H1: Employee satisfaction by implementing an ERP system is not dependent on qualification.
2. H0: ERP has not provided better service quality to the Employees.
   H1: ERP has provided better service quality to the employees.

DATA ANALYSIS & INTERPRETATION

The data has been collected from 218 respondents through questionnaire and analysis by SPSS21 and Eviews statistical software. The analysis has been divided into three phases. The first phase is the demographic analysis of respondents. The second phase is descriptive analysis and the third phase is to prove the hypothesis by Chi-Square Test.

The demographic analysis creates an idea about the composition of the respondents concerning age, profession, experience etc.

Table-1. Gender details

Gender					
		F Rate	%	Valid%	Cumulative%
Valid	Male	140	64.2	64.2	64.2
	Female	78	35.8	35.8	100.0
	Total	218	100.0	100.0	

Source: Primary data analysis by author

This table indicates that of the total sample of 218, about 64% of respondents are male members of theTEIs.

Table-2. Age details

Age group		F Rate	%	Valid%	Cumulative %
Valid	Bellow 25	18	8.3	8.3	8.3
	25 - 35 Years	68	31.2	31.2	39.4
	35 - 45 Years	23	10.6	10.6	50.0
	45 - 55 Years	73	33.5	33.5	83.5

	Above 55 years	36	16.5	16.5	100.0
	Total	218	100.0	100.0	

Source: Primary data analysis by author

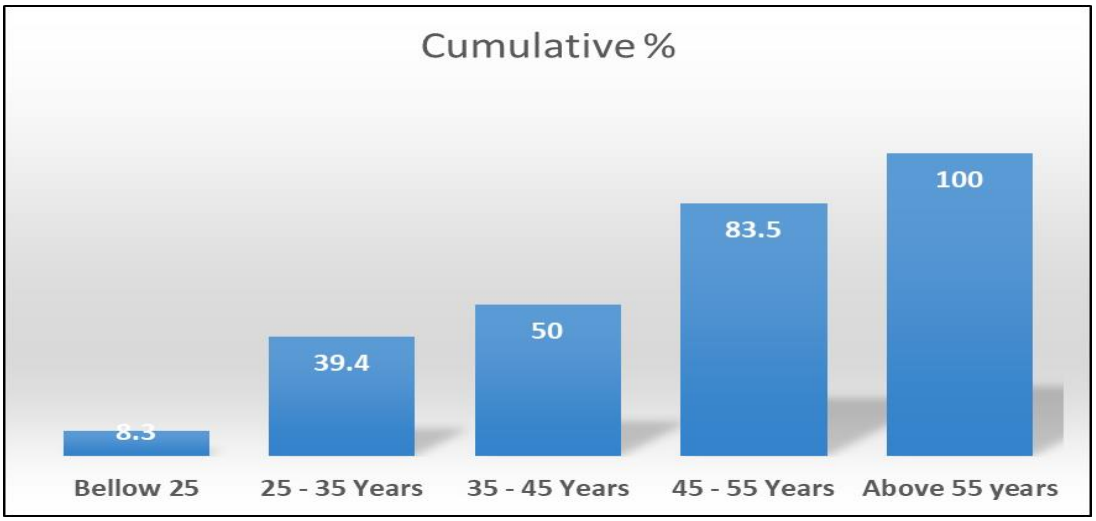

Figure 1. Cumulative Percentage of age group

This indicates that60% ofrespondents are belongs to two categories 25-35 years and 45-55 years. The too young people are less in numbers. This creates an assurance that our responses received will be consisting of the most active and reasonably experienced group of stakeholders.

Table-3. Designation details

		F Rate	%	Valid%	Cumulative%
Valid	Asst. Professor	83	38.1	38.1	38.1
	Associate Professor	17	7.8	7.8	45.9
	Professor	17	7.8	7.8	53.7
	Management Staff	44	20.2	20.2	73.9
	Support Staff	57	22.0	22.0	95.9
	Total	218	100.0	100.0	

Source: Primary data analysis by author

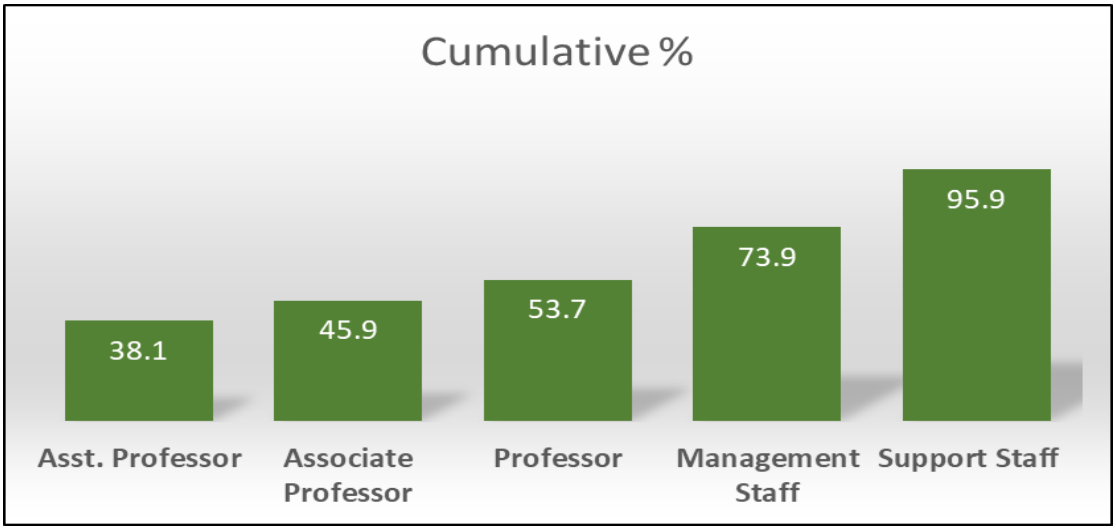

Figure 2. Cumulative Percentage of designation group

This indicates that the young professor and the management staffs and the support staffs are more interested in the technological up-gradation of the higher educational technical institutions. This also reflects that young professors are more inclined toward the teaching-learning process based onthetechnological platform.

Table-4. Experience details

		F Rate	%	Valid%	Cumulative%
Valid	Below 5 years	79	36.2	36.2	36.2
	5 - 10 years	35	16.1	16.1	52.3
	10 - 15 Years	26	11.9	11.9	64.2
	15 - 20 years	70	32.1	32.1	96.3
	Above 20 years	8	3.7	3.7	100.0
	Total	218	100.0	100.0	

Source: Primary data analysis by author

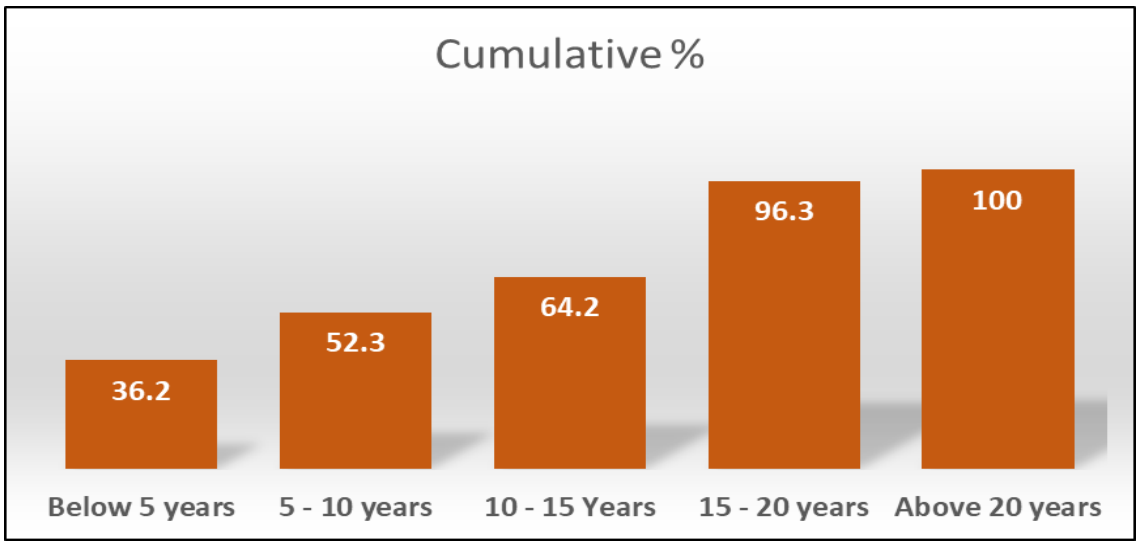

Figure 3. Cumulative Percentage of experience

It indicates that thosebelow 5 years ofexperience persons are more associated with technical Education Institutions. The second category is 15-20 years which indicates that the composition of respondents is quite balanced and will give a better opinion.

Table-5. Qualification details

		F Rate	%	Valid%	Cumulative%
Valid	Under PG	9	0.04	0.04	4.1
	PG	75	0.34	0.34	15.6
	M. Phil	38	0.17	0.17	42.2
	Ph. D.	68	0.31	0.31	73.4
	D. lit	28	0.13	0.13	100
	Total	218	100	100	

Source: Primary data analysis by author

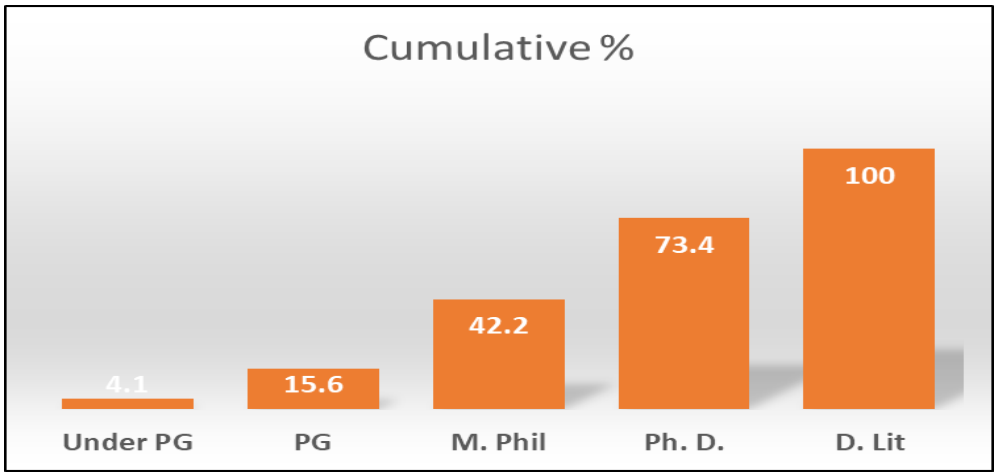

Figure 4. Cumulative Percentage of Qualification

This indicates that amajor part of the respondents qualifies equivalent to PG in their respective disciplines. The Ph. D. holders are the next highest number of qualified respondents. The composition of the qualifications is also quite balanced.

In the descriptive analysis, a detailed discussion has been made on the characteristics of the questions of the questionnaire. This exercise will help us to understand the relative importance of each question for the respondents. The first set of questions was for accessing the status of the organisational culture of the respective higher educational technical educations. The descriptive data analysis for hypothesis one is listed below.

Table- 6. Descriptive of "Our ERP increases stakeholder satisfaction"

		F Rate	%	Valid%	Cumulative%
Valid	"Strongly Disagree"	31	14.2	14.2	14.2
	"Disagree"	52	23.9	23.9	38.1
	"Neutral"	28	7.8	7.8	45.9
	"Agree"	56	32.7	32.7	77.6
	"Strongly Agree"	51	20.6	20.6	97.2
	"Total"	218	100.0	100.0	

Source: Primary data analysis by author

The data in the above table reveals that the majority of the respondent (32.7% agree and 20.6% strongly agree) that the ERP has helped increase stakeholder satisfaction.

By taking the above data in the chi-square test, it has been observed that the chi-square statistic is 4.5218, the p-value is 0.9976 and the level of significance is 0.05. The result is not significant at $p<0.05$. Hence the alternative hypothesis is accepted. It represents that Employee Satisfaction by implementing anERP system is independent of qualification.

Table- 7. Descriptive of "Our ERP provides better service quality"

		F Rate	%	Valid%	Cumulative%
Valid	"Strongly Disagree"	28	12.8	12.8	12.8
	"Disagree"	49	22.5	22.5	35.3
	"Neutral"	29	13.3	13.3	48.6
	"Agree"	50	22.9	22.9	71.6
	"Strongly Agree"	62	28.4	28.4	100.0
	"Total"	218	100.0	100.0	

Source: Primary data analysis by author

The data in the above table reveals that the majority of the respondent (22.9% agree and 28.4% strongly agree) that the ERP has helped in providing better service quality to the stakeholders.By taking the above data in the chi-square test, it has been observed that chi-square statistics is 11.2753, the p-value is 0.7921 and the level of significance is 0.05. The result is not significant at $p<0.05$. Hence the alternative hypothesis is accepted. It represents that ERP provides better service quality to the stakeholders of the Educational Institutions.

CONCLUSION

Looking into the growing competition every organisation is required to change its tools and techniques as per needs of the market and customer. This survey has been done by taking pieces of information from 218 respondents from different Technical Educational Institutions in Odisha. The analysis is done in three phases, the first phase is the demographic analysis of respondents. The second phase is descriptive analysis and the third phase is to prove the hypothesis by Chi-Square Test. The result shows that this indicates that the young professor and the management staffs and the support staffs are more interested in the technological up-gradation of the higher educational technical institutions. This also reflects that young professors are more inclined toward the teaching-learning process based on the technological platform. According to the chi-square value it has been proved that Employee Satisfaction by implementing an ERP system is independent of qualification and ERP provides better service quality to the stakeholders of the Educational Institutions.The ERP is software, which is used for better quality service and management activities within the institutions. ERP not only provide valuable information to the users, but it also provides better satisfaction to the employees in their workplace. Now a day's ERP is an asset for every educational institution in NAAC, NBA and ISO accreditation process.

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