

A questionnaire on survey of Enterprise Resource Planning (ERP) in Engineering Institutes

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Abstract: *Today ERP (Enterprise Resource Planning) is adopted by Universities & very high level institutions but many medium level Institutes are enable to decide upon proper implementation of ERP. ERP system, which evolved them from Manufacturing Resource Planning have many advantages , but some failures stories also. This paper reviews the factors effecting the ERP implementation in Engineering institutes. It also includes a survey questionnaire which takes all the factors in to count and before starting actual survey a pilot study for this questionnaire was done, which confirms its acceptance.*

Keywords: *Manpower, package, infrastructure, work culture, security, feedback.*

1. Introduction

ERP implementation becomes the basic need for an engineering institute because ERP system is an IT solution. It helps organization to access faster and accurate information. It also helps in decision making. In addition ERP has its roots in manufacturing resource planning. The institutes like Thapar University Patiala , Baba Farid College of Engineering and Technology Bathinda has implemented ERP successfully, But some medium level

engineering institutes like GZSCET Bathinda, MIMIT Malout , YCOE Talwandi Sabo, GTBKIET Malout, GRDIET Lehra Bega, AIET Faridkot wants to implement it. For these institutes before implementing ERP a survey of ERP is must.

2. Factor Categories

This questionnaire considers all the factors effecting implementing ERP in engineering institutes and most probably all these factors are taken according to their suitable priority. It includes major factors and all these factors are taken as questions which can be answered in five different ways (Strongly Disagree, Disagree, Neutral , Agree, strongly Agree) according to which ERP implementation can be measured.

3. Classifiers

According to the factors in the Questionnaire the respondents can be classified in broad six classifiers, these are following.

- (a) Students
- (b) Parents
- (c) Teaching Staff.
- (d) Non Teaching Staff
- (e) Administrative Staff
- (f) Management

4. Category Factor Variables

Manpower v3 (A periodic training of Employees & students is must)
 v9 (Employees and teachers should have good understanding of their internal student needs while selecting the ERP package)
 v10 (Need active Participation of Employees, teachers & students)
 v25 (The total man power in the college is also important factor)

Expenses, v2 (Will incurring huge expenses)

Infrastructure

& Work culture

v7 (Institute / University / college has to redesign the process)

v8 (Offers a world-class atmosphere)

v12 (Organization restructure should will be required)

v14 (Will require proper vendor selection e.g. like Kalinga Soft Inc.PeopleSoft, etc)

v13(will require healthy work culture in the university / Institute /College)

**Current
Process**

v5 (Current process review is prerequisite)

v6(Institute /University /college has to analyze their Non-value added activities

Security

v4 (Will pose security threat)

v35 (Reduce frauds and failure)

**Feedback &
Improvement**

v11(Provide proper feedback to the higher authority)

v26 (Parents can get proper feedback of their son / daughter at any place)

v27 (The top management authority can find easily which department require attention or focus)

v29(The top management authority can find easily which student require attention or focus)

v37 (Better guidance to students)

**Objectives
and Goals**

v15 (Will increase the efficiency of processes)

v16(Will reduce the paper work)

v17 (Facilitate timely flow of information)

v19 (Result in easy availability of information)

v20 (Will decrease work load and manpower requirement)

- v24 (That top management has to set clear objectives)
- v28 (Redundancy in the database will be reduced)
- v31 (Set more accountability of teacher)
- v32. (Set more accountability of student)
- v33. (Online attendance and online quiz test will be taken)
- v34 (More practical orientation)
- v35 (Internal audit possible)
- v38 (Replacement of class room teaching via online processes lecture plans, G D, PPTs, Debate topic etc)
- v30 (Better resource utilization)

- Satisfaction**
- v41(More satisfied Employees)
 - v42 (More satisfied Parents)
 - v43 (More satisfied Students)
 - v44 (More satisfied Management)

5. Conclusions

Before implementing ERP its survey and factors effecting ERP implementation is very much important. Because for ERP implementation some key factors play vital role. So for the ERP implementation these factors must be considered seriously in the engineering institutes after that small and medium level institutes have to take decision regarding ERP implementation.

References

1. Davenport Thomas, (2000), "Mission Critical", *Harvard Business Press*.
2. Boykin R. F., (2001) "Enterprise resource planning software: a solution to the return material authorization problem", *Computers in Industry* Vol. 45, pp. 99-109

3. Markus M. L, Axline S., Petrie D, Tanis C, (2000), "Learning from adopter's experience with ERP: problems encountered and success achieved", *Journal of Information Technology*, Vol. 15, pp. 245-65
4. Kale P. T., Banwait S. S., Laroia S. C., (2007), "Review of Key Performance Indicators of Evaluation of Enterprise Resource Planning System in Small and Medium Enterprises", XI Annual International Conference of Society of Operation Management, India Leon A., (1999), "Enterprise Resource Planning", *Tata McGraw-Hill*.
5. Siriginidi S. R., (2000), "Enterprise Resource Planning in re-engineering business", *Business Process Management Journal*, Vol. 6 (5), pp. 376-91.
6. Rao S. S., (2000), "Enterprise Resource Planning: business needs and technologies", *Industrial Management and Data Systems*, Vol. 100 (2), pp. 81-86.
7. Yen D. C., Chou D. C., Chang J., (2002), "A synergic analysis for Web-based enterprise resource planning systems", *Computer Standards & Interfaces*, Vol. 24 (4), pp 337-46.8) Levy Margi, Powell Philip, (2006), "Strategies for growth in SMEs: The role of Information and Information Systems", *Information Processing and Management: an International Journal*. Vol 42..
9. Munjal Shefali, (2006), "Small is beautiful: ERP for SMEs", http://www.domainb.com/infotech/itfeature/20060601_beautiful.htm.
10. Pandian T. K., (2006), "Big issues in ERP for small units", *Business Line*.
11. Shehab E. M., Sharp M. W., Supramaniam L., Spedding T. A., (2004) "ERP: An integrative review", *Business Process Management Journal*, Vol. 10 (4), pp 359-86.
- 1.2 Garg Venkitakrishnan, (2006). "ERP Concepts and Practice", *Prentice Hall India*

13. Suhong Yang (2010) 'A research on Teaching Evaluation by Students Based on Voting Paradox Model Method', 2nd *international Conference on Education Technology and Computer(ICTE)*.
14. Wu Junqi, Peng Yuqiu, Zhengbing Hu (2010), 'Effective Using Educational Resource for Improving Teaching,' 2nd International Workshops on Educational Technology and Computer Science.

Annexure:**Enterprise Resource Planning Survey Questionnaire**

Please take a few minutes to fill out this survey on the timeliness and quality of the service you received today. Welcomes your feedback and your answers will be kept confidential. Please complete this survey and return it to Er. PARDEEP MITTAL Associate Professor & Head IT , Baba Farid College of Engineering &Technology Bathinda (Pb)151001.

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DO YOU THINK THE ERP HAS FOLLOWING BENEFITS					
V1 (Should be in Institute/University/College)					
V2 (Will incurring a huge expenses)					
V3 (A periodic training of employees is must)					
V4 (Will pose security threat)					
V5 (Current process review is prerequisite)					
V6 (Institute/University/college has to analyze their Non-value added activities)					
V7 (Institute/University/college has to redesign the process)					
V8 (Offers a world-class atmosphere)					
V9 (Employees and teachers should have good understanding of their internal student needs while selecting the ERP package)					
V10 (Need active participation of employees and Teachers)					
V11 (Provide proper feedback to the higher Authority)					
V12 (Organization restructure should will be Required)					
V13 (Will require healthy work culture in the University/institute/college)					
V14 (Will require proper vendor Selection e.g. like PeopleSoft, Oracle &SAP)					
V15 (Will increase the efficiency of processes)					
V16 (Will reduce the paper work)					

WHAT ARE THE VARIOUS REQUIREMENTS OF ERP IN YOUR OPINION					
V17(Facilitate timely flow of information)					
V18(Will enhance the transparency in the system)					
V19 (Result in easy availability of information)					
V20 (Will decrease work load and Manpower Requirement)					
V21 (Will require a large number of student's Database)					
V22 (It will consume a lot of time)					
V23 (The top authority must understand how data is flowing between various departments)					

AFTER IMPLEMENTING ERP WHAT ARE THE ISSUES AND CHALLENGES INVOLVED					
V24 (That top management has to set clear Objectives)					
V25 (The total man power in the college is also important factor)					
V26 (Parents can get proper feedback of their son/daughter at any place)					
V27 (The top management authority can find easily which department require attention or focus)					
V28 (Redundancy in the database will be reduced)					
V29 (The top management authority can find easily which student require attention or focus)					
V30 (Better resource utilization)					
V31 (Set more accountability of teacher)					
V32 (Set more accountability of student)					
V33 (Online attendance and online quiz test will be taken)					
V34 (More practical orientation possible)					
V35 (Reduce frauds and failure)					
V36 (Internal audit possible)					
V37 (Better guidance to student)					
V38 (Replacement of class room teaching via online processes)					
V39 (Better institutional reputation)					
V40 (Enhance marketing of the institute)					
V41 (More satisfied employees)					
V42 (More satisfied Parents)					

Personal Information**By Student:**

Name of Institute: _____
City: _____ Gender: _____ Age: _____
Name (Optional): _____ Stream: _____ UG/PG: _____
Contact no. (Optional): _____ Date: _____

By Staff:

Name of Institute : _____
City: _____ Gender: _____ Age: _____
Name (Optional): _____ (Lecturer/Assistant Professor / Associate Professor/Professor/Administrative Staff)
Department: _____ Contact No. (Optional) _____
Date _____