

Vol 5 Issue 1 Oct 2015

ISSN No : 2249-894X

*Monthly Multidisciplinary
Research Journal*

*Review Of
Research Journal*

Chief Editors

Ashok Yakkaldevi
A R Burla College, India

Flávio de São Pedro Filho
Federal University of Rondonia, Brazil

Ecaterina Patrascu
Spiru Haret University, Bucharest

Kamani Perera
Regional Centre For Strategic Studies,
Sri Lanka

Welcome to Review Of Research

RNI MAHMUL/2011/38595

ISSN No.2249-894X

Review Of Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Advisory Board

Flávio de São Pedro Filho Federal University of Rondonia, Brazil	Delia Serbescu Spiru Haret University, Bucharest, Romania	Mabel Miao Center for China and Globalization, China
Kamani Perera Regional Centre For Strategic Studies, Sri Lanka	Xiaohua Yang University of San Francisco, San Francisco	Ruth Wolf University Walla, Israel
Ecaterina Patrascu Spiru Haret University, Bucharest	Karina Xavier Massachusetts Institute of Technology (MIT), USA	Jie Hao University of Sydney, Australia
Fabricio Moraes de Almeida Federal University of Rondonia, Brazil	May Hongmei Gao Kennesaw State University, USA	Pei-Shan Kao Andrea University of Essex, United Kingdom
Anna Maria Constantinovici AL. I. Cuza University, Romania	Marc Fetscherin Rollins College, USA	Loredana Bosca Spiru Haret University, Romania
Romona Mihaila Spiru Haret University, Romania	Liu Chen Beijing Foreign Studies University, China	Ilie Pinte Spiru Haret University, Romania
Mahdi Moharrampour Islamic Azad University buinzahra Branch, Qazvin, Iran	Nimita Khanna Director, Isara Institute of Management, New Delhi	Govind P. Shinde Bharati Vidyapeeth School of Distance Education Center, Navi Mumbai
Titus Pop PhD, Partium Christian University, Oradea, Romania	Salve R. N. Department of Sociology, Shivaji University, Kolhapur	Sonal Singh Vikram University, Ujjain
J. K. VIJAYAKUMAR King Abdullah University of Science & Technology, Saudi Arabia.	P. Malyadri Government Degree College, Tandur, A.P.	Jayashree Patil-Dake MBA Department of Badruka College Commerce and Arts Post Graduate Centre (BCCAPGC), Kachiguda, Hyderabad
George - Calin SERITAN Postdoctoral Researcher Faculty of Philosophy and Socio-Political Sciences Al. I. Cuza University, Iasi	S. D. Sindkhedkar PSGVP Mandal's Arts, Science and Commerce College, Shahada [M.S.]	Maj. Dr. S. Bakhtiar Choudhary Director, Hyderabad AP India.
REZA KAFIPOUR Shiraz University of Medical Sciences Shiraz, Iran	Anurag Misra DBS College, Kanpur	AR. SARAVANAKUMARALAGAPPA UNIVERSITY, KARAIKUDI, TN
Rajendra Shendge Director, B.C.U.D. Solapur University, Solapur	C. D. Balaji Panimalar Engineering College, Chennai	V.MAHALAKSHMI Dean, Panimalar Engineering College
	Bhavana vivek patole PhD, Elphinstone college mumbai-32	S.KANNAN Ph.D , Annamalai University
	Awadhesh Kumar Shirotriya Secretary, Play India Play (Trust), Meerut (U.P.)	Kanwar Dinesh Singh Dept.English, Government Postgraduate College , solan

More.....



IMPLEMENTATION OF TQM PRACTICES IN MULTICOLUMN
PRINTING PRESS
(A SURVEY OF SOME SELECTED PRINTING PROCESS
IN NORTH KARNATAKA)



D. Sathyabhama

Research Scholar, Gulbarga University, Gulbarga.

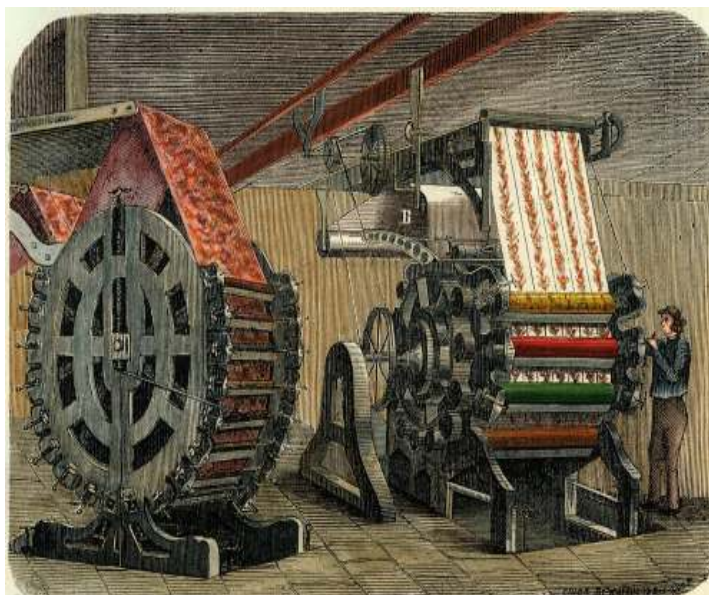
Co - Author Details :

S. Jayanna

Research Guide, Sri Krishna Devaraya University, Ballari.

ABSTRACT

Delivering products with a level of quality that meets customer requirements is essential to business success. Indeed, in this fierce competition of today's market, the level of quality needs to exceed what customers already expect, and at a competitive price. To achieve this, quality practices are very much important. The purpose of the present study is to identify quality practices in different fields and also to study the quality practices in printing press of North Karnataka and to suggest a simple theoretical model for the implantation of TQM by printing press.



KEYWORDS : *TQM Practices, Multicolumn Printing Press, Delivering products.*

INTRODUCTION :

The emergency of Total Quality Management (TQM) has been one of the major developments in management practices. TQM began to be introduced in the U.S around 1980's, primarily in response to severe competitive challenges from Japanese companies. The recognition of TQM as a competitive advantage is widespread around the world and has been growing fast and today very few companies can afford to ignore the term TQM (Dean and Bower 1994).

Today Quality is no longer the exclusive preserve or quality management; it is a corporate issue which affects every area of operations from board room to shop floor. Quality is a major future determined of success and variability for every company.

There are many definitions of TQM, Oakland (1993) defines "TQM is an approach to improve the effectiveness and flexibility of business as a whole" It is essentially a way of organizing and involving the whole organization, every department, every activity and every single person at every

level. Pfau (1989) defines "TQM is an approach for continuously improving the quality of goods and services delivered through participation at all levels and all functions of the organization" According to Mohanty and Lakhe (1995, 2002), "TQM is a pragmatic long term systems approach initiated and driven by the top management to bring about a total cultural change and interlink and integrate every one, every function, every process and every activity of an organization through cross functional involvement and participation of people to meet the dynamic needs of the customer and to create a loyal at the same time a diversified customer base". Tobin (1990) views "TQM as the totality integrated efforts for gaining the competitive advantage by continuously improving every facet of organizational culture".

From the last two decades the awareness of TQM has considerably increased and became a well-established field of research for academia (Yusof and Aspinwall, 1999; Arumugam et al., 2008). Numerous works have been done and still been undertaken on TQM practices and business performance. Many empirical studies have reported strong and positive results on the link between TQM practices and quality performance.

LITERATURE REVIEW:

Brah et al., (2002); Powel (1995), their study indicates that TQM adopting firms obtain a competitive advantage over firms that do not adopt TQM. Joiner (2007), Douglas and Judge's (2001) supports saying that the degree of implementation of TQM practices is positively related to business performance. Christos B. Fotopoulus and Evangelos L Posmars (2009) and Raj Kumar, Dixit Garg and T.K. Grag (2009), M Waqas Raja, Mahmood Ahmad Bodla, Shahab Alam Malik (2011) discussed the impact of TQM on business performance and found that there is positive impact like increase in profits, improved competitive position, improved performance and increased sales, while customer satisfaction is measured by decline in customers complaints, increase in loyalty, and customer retention etc.

Many works have been done on factor responsible for the success of TQM Saraph et al., (1989) proposed seventy eight items that were grouped into eight factors. To measure quality management, Wali et al., (2003) performed a comprehensive empirical study of quality factors in the Indian context and indentified twelve factors. The factors responsible for success of TQM vary across countries. The factors of TQM indentified and considered for this study are Top Management Commitment, Focus on Customers both internal and external, Employee Involvement, Team Work, Empowerment of Employees, Process improvement, Benchmark, Quality Measure.

RESEARCH METHODOLOGY:

The objective of this study is to know the level of awareness of TQM in select Multi Color Offset Printing Presses of North Karnataka. To that end, a survey questionnaire was developed. A total of nine factors were proposed. A 5-Point Likert Scale was used with a score of 1=Not important; 2=Least important; 3=Important; 4=More important; 5=Most important for Tools; 1=Not aware of this, 2=Aware of it but not being considered; 3=Aware and being considered; 4=In use from 1 year' 5=In use for more than one year. The full survey, through mailed questionnaire and personal visits was carried out. As there are only fourteen multi color printing presses in North Karnataka, planned to have 100% census survey but only ten of them responded and one was shut down due to failure of machine and other there did not response. Only these ten responses were considered for the final study and 432 customer surveys has been taken to know what they really require from the printing presses and to what extent they are fulfilled.

SURVEY RESULT:

The level of implementation of Quality Management Practices.

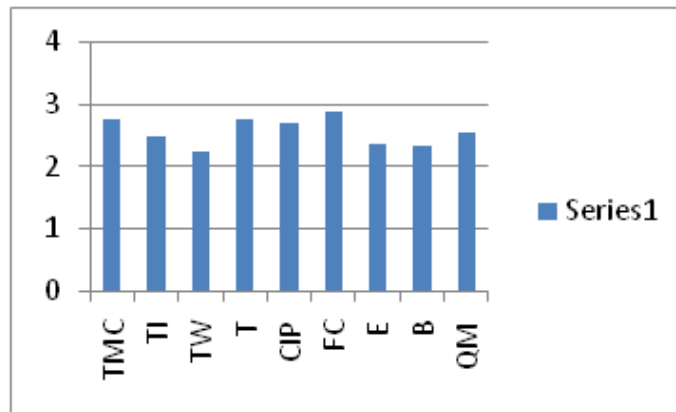
The study of implementations of TQM practices of considering nine success factors. Fig-1 and Table 1 shows a summary of the mean score of each item of the survey questionnaire. The mean score ranges from 2.2500 to 2.8800 which is very less than the level of TQM practices in other countries survey for SMEs, like Singaporean SMEs, score lies between 3.32 to 4.49 (Quazi and Padibio, 1998) and Malaysian SMEs lies between 3.067 and 3.654 (Quek E.E. & Shari M.Y. 2003).

Table 1) The mean of factors for implementation.

Factor	Item No.	Mean	Overall Mean
F1. Top Management Commitment	F11	2.4	2.7800
	F12	3.2	
	F13	2.4	
	F14	2.9	
	F15	3.0	
F2. Employees Involvement	F21	2.9	2.4833
	F22	2.3	
	F23	2.7	
	F24	2.2	
	F25	2.4	
	F26	2.4	
F3. Team Work	F31	2.4	2.2500
	F32	2.0	
	F33	2.1	
	F34	2.5	
F4. Training	F41	2.9	2.7660
	F42	3.0	
	43	2.4	
F5. Continuous Improvement Process	F51	2.4	2.7000
	F52	2.9	
	F53	3.0	
	F54	2.4	
	F55	2.7	
	F56	2.8	

Focusing Customer (both external & internal)	F61	2.8	2.8800
	F62	2.9	
	F63	3.0	
	F63	2.8	
	F65	2.9	
Empowerment	F71	2.4	2.3750
	F72	2.3	
	F73	2.5	
	F74	2.3	
Benchmark	F81	2.6	2.3250
	F82	2.4	
	F83	2.2	
	F84	2.1	
Quality Measure	F91	2.4	2.5500
	F92	2.8	
	F93	2.5	
	F94	2.5	

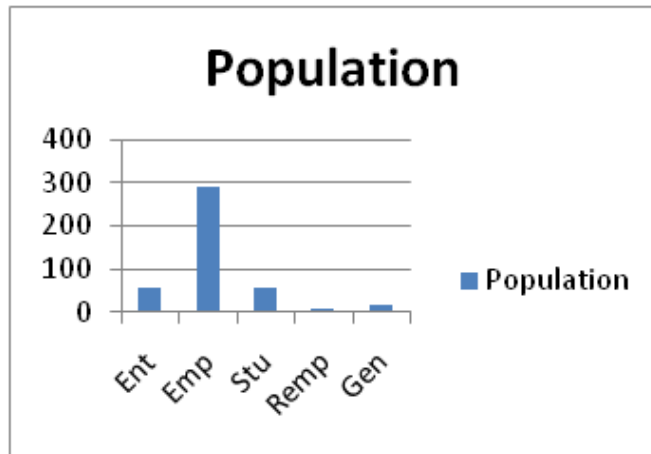
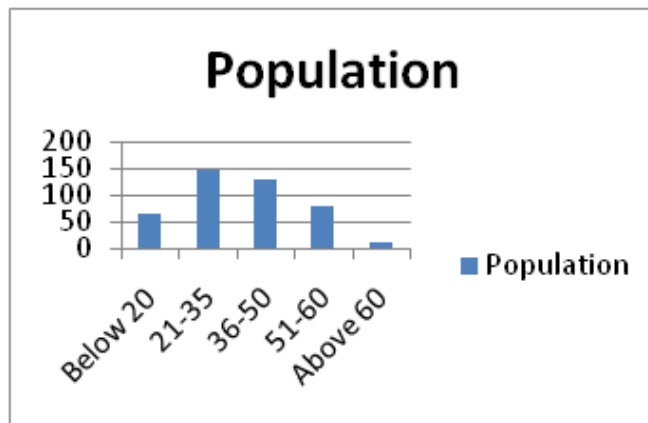
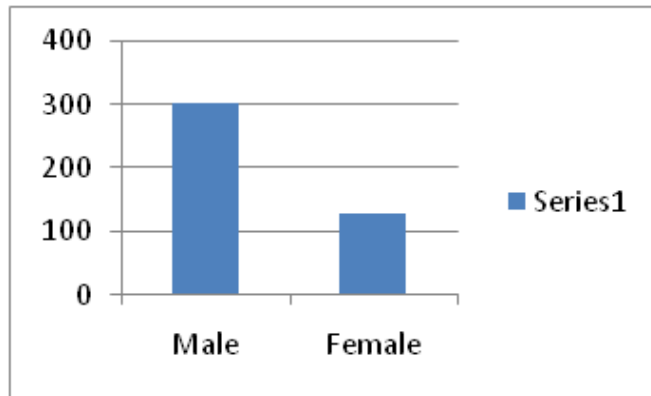
Fig. 1. The Mean of Factors Responsible for Success of TQM.



With the direct interaction with the proprietors, the researcher was able to collect the level of awareness of TQM. None of surveyed firms have separate TQM department, the proprietor or other incharge person takes the incharge quality check.

Satisfaction Level of the Customer:

To know the level of customer satisfaction that is to what extent the North Karnataka customers are satisfied with the facilities provided by the multi color printers or North Karnataka. Total 432 customers were surveyed and their feedbacks were collected by questionnaires, which had seven parameters & Likert scale method was used, of them taken 304 were male customer and 128 were female customers. 59 are entrepreneurs, 291 are employees, 56 are students, 8 are retired employees, 18 belong to general, of them 64 are below 20 years, 148 are from age group 21-35 years, 130 from 36-50 years, 79 from 51-60 years, 11 from >60.



Level of Customer Satisfaction

Sl.No	Parameter	Mean	Rank
1.	Proprietor interaction with customer	2.382	3
2.	Level of professionalism of staff	2.315	5
3.	Design Quality	2.370	4
4.	Quality of printed product	2.489	2
5.	Prices Charged	2.092	7
6.	Delivery of materials	2.495	1
7.	Response of staff	2.189	6

The survey results of satisfaction level of customer reveals that customers are happy will the delivery of materials though they are not so happy with design, prices and others, this implies that the North Karnataka Presses are lagging with Pre-press that is DTP operators skills. Proprietors interactions takes third rank that is proprietor is neglecting customers as he is not facing much competition as there are only countable multi color presses in and around nearby, response of staff with the customer has to be improved, prices charged are higher as the raw materials are to be procured from far places which incur them more cost.

Simple Theoretical Model :

Based on this survey carried, researcher had planned to propose a simple theoretical model considerably some of the TQM factors which researcher feels are important for the success of TQM in printing press.



Top Management Commitment

It is extremely difficult, if not Impossible, to Implement TQM without the commitment of the leaders of the organization. First & foremost leaders should understand what is commitment to TQM, means before introducing it to their organization they have to know that TQM is a way of life, not a program. It needs to do much harder task & know that TQM takes time to reap benefits. First it has to

study the philosophy of TQM, then develop a plan to implement, next calculate the financial investment required & then determine how long it will take to pay back.

Focus on the customer, both Internal and External

According to Herschel L. Apfelberg and Michael J. Apfelberg "Total quality management is driven by the realization that business success is dependent upon serving customer better than anyone else can" The external customer is one who buy the finished product like visiting cards, brochures, books, magazines etc. The internal customers are those who are the part of the process that goes into making the final product. Eg. sales request, designers, colour separation, printing plate, printing and finished product. Everyone in the loop from initial order to delivered product is supplier or a customer to someone else in the process. This is the first and foremost important concept to TQM as it requires total understanding of the needs of their customer and fulfill the needs of the customer whether internal or external. Any slippage in the steps can and usually does cause an inferior product to be manufactured.

Involvement of the entire organization

TQM is not just for the printing production process, it encompasses all the elements that go into making up a printing organization. It would be horrendous mistake to undertake TQM philosophy into printing organization without understanding the total relationship between departments from marketing and sales, designers i.e. Prepress, plate making and printing i.e. Press and binding and packing i.e. Postpress designing of the printed product.

It would be horrendous mistake because each one in the department has to understand their contribution to the printing process and their personal importance to customer satisfaction. If a job is rejected or customer asks for reduction of price or in the worst case if the customer goes to competitor for remake, it does not mean that the whole production is defective. There may be some defect which is not acceptable by the customer. This mean that any defect by any department may lead to defective production or customer dissatisfaction, and the whole production is rejected. TQM is putting together all the small elements so that the entire job is executed and the customer is satisfied.

Team Effort

As the final product usually requires more than one person to complete the job, it is important that a team effort be fostered. It is difficult to initiate teams into any company, however it is essential to initiate and sustain the team effort as this will allow for the development and maintenance of internal vendor and customer specifications. Other benefits of team efforts can include process improvement procedures, increased enthusiasm to implement what one has been part of developing and viewing the printing job as a total production and not just small elements.

Empowerment of Employees

Empowerment not only allows employees the opportunity to participate in their work but also necessitates that employees take ownership of their individual work areas and develop an ownership outlook towards their job. Empowerment means encouraging and training the work force to take responsibility for making decisions retaining to quality, productivity and service to the customer. The empowerment goal is to improve quality, productivity and service.

Process Improvement

Process improvement requires one to understand each step in the total operation of an organization and how these steps are interconnected. Some of the objectives of process improvement are to build quality into the product by looking for more consistent procedures, reducing inspection wherever possible, shortening the throughput time of printing jobs by analyzing those steps that are not value-added, and to be cost-effective by reducing waste and other non-additive components of the printing process.

Benchmark

Benchmarking is the process of measuring our companies' performance in each function and comparing that level of performance with the level of performance achieved by successful leaders. There are three types of Benchmarking.

- Internal benchmarking, which occurs when someone or a group is performing in a world-class manner that can be used by the entire organization as benchmark for process improvement.
- Competitive benchmarking, which occurs when a printing company is doing similar work and is worthy of being emulated in one or more of the areas of how it conducts its business.
- Generic (World-Class) benchmarking, which occurs when any organization that is not in the same field has attributes that can be emulated by the organization in order to become class.

One should always study how others do business so that one can compare their company's practices against others and continually work towards process improvement.

Partner with Supplier & Customer

Partnering means working together for the common good. Supplier partners are those who are always looking out and assisting the organization to become better by offering materials, supplies and services that can be depended upon. It is a win-win relationship that needs to be nurtured. The supplier can depend upon your business and in return you can be that your needs are being met by experts.

What is true of supplier partnerships is also true of customer partnerships. One need to be constantly vigilant in keeping abreast of customer's present and future needs. The question one need to be constantly asking is "what are our customers' competitors using by the way of printed matter?" & what new strategies in print media will make our customer more competitive?" This can be a win-win environment. Your customers do not have to continually look for new printers and you have steady customers. Spending time on activities of process improvement and not on the hunt for new suppliers and customers are the rewards of supplier and customer partnership.

Measure Quality

The following seven purpose of statistical process control describe the critical reasons for the use of SPC in the Printing Organization.

- To build quality into the process by preventing defects rather than detecting defects after they have occurred.
- To indicate the need for corrective action and enable to make sound decisions about what action to take.
- To monitor and evaluate the performance of the process continuously in order to know if it is deteriorating or improving.
- To provide directions and ideas for the improvement or the process.

- To provide evidence and quantitative proof of quality.
- To identify the sources of variation and the causes for defective goods & service.
- To determine process capability.

CONCLUSION:

Based on the survey conducted on multi colour printing press of North Karnataka to know the level of awareness and level of quality management practices in their firms, the researcher comes to conclusion that top management needs to understand the importance of quality culture, pre-press which includes DTP needs to be given proper training as it is starting link of printing process chain, the level of TQM implementation among these North Karnataka multi color printing press are for below compared to Singapore and other South Asian countries. Further, in-depth interview and survey has to be followed in order to verify and present them a TQM model and tools in an applicable way.

REFERENCES

1. Arumugam, V, Ooi, K.B, and Fong, T-C, (2008) "TQM Practices and Quality Management Performance- an Investigation of Their Relationship using Data from ISO 9001: 2000 Firms in Malaysia", *The TQM Magazine*, Vol. 20, No. 6, pp. 636-650.
2. Brah, S.A., Lee, S.L.- and Rao, B.M. (2002) "Relationship between TQM and Performance of Singapore Companies", *International Journal of Quality and Reliability Management*, Vol. 19 No. 4, pp. 356-379.
3. Dean and Bowen 1994 *Management Theory and Total Quality: Improving Research and Practice through Theory Development*. The Academy of Management Review. Vol. 19, No. 3, Special Issue: "Total Quality" (Jul., 1994), pp. 392-418
4. Douglas, T.J. and Judge, W.P. (2001), "Total Quality Management Implementation and Competitive Advantage: The Role of Structural Control and Exploration", *Academy of Management Journal*, Vol. 44. No. 1, pp. 158-169.
5. Fotopoulos, C.B., and Psomas, & Evangelos L Pamaris (2009), *The Impact of Hard and Soft TQM Elements on Quality Management Results*. *International Journal of Quality and Reliability*, 26(2), pp. 150-163.
6. Joiner, T. A. (2007), *Total Quality Management and Performance: The Role of Organization Support Co-Worker Support*. *International Journal of Quality and Reliability Management*, 24 (6), 617-627.
7. M. Waqas Raja, Mahmood Ahmad Bodla, Shahab Alam Malik (2011)- *Evaluating the Effect of Total Quality Management practices on Business Performance; A Study of Manufacturing Firms of Pakistan*, - *International Journal of Business and Social Science*, Vol. 2, No. 9.
8. Mohanty and Lakhe (1995) *TQM in the Service Sector*
9. Oakland (1993) *Total quality management (second edition)*
10. Pfau, L.D. (1989). *Total Quality Management gives companies a way to enhance position in global marketplace*. *Industrial Engineering*, 21(4), 17-21.
11. Powell, T.C. (1995). *Total quality management as competitive advantage: A review and empirical study*. *Strategic Management Study*, 16(11), 15-37.
12. Quazi, H. A. & Padibjo, S. R. (1998) *A journey toward Total Quality Management through ISO 9000 certification-A Study on Small and Medium-Sized Enterprises in Singapore*, *International Journal of Quality and Reliability Management*, 15(5), pp. 489-508.
13. Quek Eng Eng and Sha'ri Mohd Yusof (2003) "A Survey of TQM in the Malaysian Electrical and Electronic Industry", *Total Quality Management*, 14 (1), pp. 63-77.
14. R. R. Lakhe, R. P. Mohanty, *Handbook of Total Quality Management* Jaico Publishing House, 2004

15. Rajkumar, Dixit Garg & T.K. Grag (2009), "Total Quality Management in Indian Industries: Relevance, Analysis and Directions", The TQM journal, Vol. 21, No. 6, pp 607-622.
16. Saraph, J. V., Bensol, P. J. and Schroder, R. G. (1989), An instrument for measuring the critical factors of quality management, Decision Sciences, 20, pp. 810-829
17. Tobin, L.M., (1990), The new quality landscape: TQM, International Journal Of Systems Management, VOL. 41, No. 11, pp. 10-14.
18. Wali, Deshmukhm and Gupth (2003), Critical Success Factors of TQM: A Select Study of Indian Organizations. Production Planning & Contract, 14(1), 3-14.

Publish Research Article

International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper, Summary of Research Project, Theses, Books and Books Review for publication, you will be pleased to know that our journals are

Associated and Indexed, India

- ★ Directory Of Research Journal Indexing
- ★ International Scientific Journal Consortium Scientific
- ★ OPEN J-GATE

Associated and Indexed, USA

- DOAJ
- EBSCO
- Crossref DOI
- Index Copernicus
- Publication Index
- Academic Journal Database
- Contemporary Research Index
- Academic Paper Database
- Digital Journals Database
- Current Index to Scholarly Journals
- Elite Scientific Journal Archive
- Directory Of Academic Resources
- Scholar Journal Index
- Recent Science Index
- Scientific Resources Database

Review Of Research Journal
258/34 Raviwar Peth Solapur-413005, Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.ror.isrj.org