

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT & MANAGEMENT

I
J
R
C
M



A Monthly Double-Blind Peer Reviewed (Refereed/Juried) Open Access International e-Journal - Included in the International Serial Directories

Indexed & Listed at:

Ulrich's Periodicals Directory ©, ProQuest, U.S.A., EBSCO Publishing, U.S.A., Cabell's Directories of Publishing Opportunities, U.S.A.

Open J-Gate, India [link of the same is duly available at Inlibnet of University Grants Commission (U.G.C.)],

Index Copernicus Publishers Panel, Poland with IC Value of 5.09 & number of libraries all around the world.

Circulated all over the world & Google has verified that scholars of more than 1866 Cities in 152 countries/territories are visiting our journal on regular basis.

Ground Floor, Building No. 1041-C-1, Devi Bhawan Bazar, JAGADHRI – 135 003, Yamunanagar, Haryana, INDIA

<http://ijrcm.org.in/>

CONTENTS

Sr. No.	TITLE & NAME OF THE AUTHOR (S)	Page No.
1.	EFFECTIVENESS OF PAY-FOR-PERFORMANCE AND FIXED-PAY PRACTICES: AN ASSESSMENT OF PAY SATISFACTION, COMMITMENT AND TURNOVER INTENTION <i>PRINCY THOMAS & DR. G. NAGALINGAPPA</i>	1
2.	ROLE OF CORPORATE GOVERNANCE ON PERFORMANCE OF PRIVATE COMMERCIAL BANKS IN BANGLADESH: AN ECONOMETRIC ANALYSIS <i>DR. MD NAZRUL ISLAM, MOHAMMAD MASUD ALAM & MOHAMMAD ASHRAFUL FERDOUS CHOWDHURY</i>	6
3.	IDENTIFYING OPPORTUNITIES, CHALLENGES AND INFRASTRUCTURE REQUIREMENTS FOR ESTABLISHING SECONDARY MARKETS IN ETHIOPIA <i>KANNAN SIMHAKUTTY ASURI & LETENAH EJIGU</i>	12
4.	A NOVEL BANKRUPTCY PREDICTION MODEL BASED ON SUPPORT VECTOR DATA DESCRIPTION METHOD <i>ALIREZA DEHVARI, FEZEH ZAHEDI FARD & MAHDI SALEHI</i>	17
5.	ANALYSIS OF FACTORS INFLUENCING EXPORT VOLUME: THE NIGERIAN EXPERIENCE <i>KAREEM, R.O, OKI A.S, RAHEEM, K.A & BASHEER, N.O</i>	24
6.	A MODEL FOR ORGANIZING, MEASURING, ANALYZING STUDENTS' KNOWLEDGE AND PERFORMANCE <i>ROY MATHEW</i>	32
7.	DETERMINANTS OF CUSTOMER LOYALTY AND SUBSCRIBER CHURN OF MOBILE PHONE SERVICES IN GHANA <i>JACOB NUNOO & CHRISTIAN KYEREMEH</i>	38
8.	FACTORS AFFECTING CUSTOMERS' ATTITUDE TOWARDS INFORMATION TECHNOLOGY ADOPTION IN COMMERCIAL BANKS OF ETHIOPIA: A CASE STUDY OF SELECTED BANKS IN MEKELLE CITY <i>ZEMENU AYNADIS</i>	42
9.	EFFECTIVE USE OF TRAINING FEEDBACK FOR REINFORCEMENT OF LEARNING AND EMPLOYEE DEVELOPMENT <i>AJAY KR VERMA, SUDHIR WARIER & LRK KRISHNAN</i>	53
10.	IMPACT OF DEMOGRAPHIC VARIABLES ON FACTORS OF JOB SATISFACTION OF EMPLOYEES IN PUBLIC SECTOR: AN EMPIRICAL STUDY <i>DR. RIZWANA ANSARI, DR. T. N. MURTY, NILOUFER QURAIISHY & S A SAMEERA</i>	62
11.	SUBSCRIBERS' ATTITUDE TOWARDS DTH SERVICES <i>M. J. SENTHIL KUMAR & DR. N. R. NAGARAJAN</i>	69
12.	ISSUES AND CHALLENGES INDIAN BUSINESS: VISION 2020 WITH THE REFERENCE OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs) IN INDIA <i>DR. M. L. GUPTA, DR. SHWETABH MITTAL & PRIYANKA GUPTA</i>	73
13.	ENHANCING JOB SATISFACTION OF SOFTWARE PROFESSIONALS: THE RELEVANCE OF EMOTIONAL QUOTIENT <i>V. ANOOPKUMAR & DR. R. GANESAN</i>	82
14.	A SURVEY ON CONSUMER ATTITUDE TO CHOOSE AND USE VARIOUS TELECOM SERVICES <i>V. BALAKUMAR & DR. C. SWARNALATHA</i>	88
15.	COUNTERPRODUCTIVE WORK BEHAVIOUR (CWB) AND LOCUS OF CONTROL (LOC) AMONG MANAGERS <i>DR. RISHIPAL & PAWAN KUMAR CHAND</i>	94
16.	CORPORATE GOVERNANCE FAILURES IN INDIA - A REVIEW <i>KAISSETTY. BALAJI & DR. Y. VENU GOPALA RAO</i>	98
17.	SIGNIFICANCE OF INCLUSIVE GROWTH IN INDIAN ECONOMIC DEVELOPMENT – A STUDY <i>DR. T. C. CHANDRASHEKAR</i>	103
18.	A STUDY ON EMPLOYEE JOB PERFORMANCE (A COMPARATIVE STUDY OF SELECT PUBLIC AND PRIVATE ORGANIZATIONS) <i>S.FAKRUDDIN ALI AHMED & DR. G. MALYADRI</i>	110
19.	ORGANISATIONAL AND ENVIRONMENTAL DETERMINANTS OF PERFORMANCE APPRAISAL SYSTEM: A REVIEW AND FRAMEWORK FROM CONTEXTUAL PERSPECTIVE <i>SAPNA TANEJA, DR. RAVIKESH SRIVASTAVA & DR. N. RAVICHANDRAN</i>	117
20.	E-LEARNING INITIATIVES TO AUGMENT BUSINESS PERFORMANCE: AN EMPIRICAL STUDY OF SELECT AUTO COMPONENT FIRMS <i>DR. AISHA M. SHERIFF & GEETHA R</i>	127
21.	INTERPRETIVE STRUCTURAL MODELING BASED APPROACH FOR ADOPTING CPFR IN INDIAN INDUSTRIES <i>RAJESH A. KUBDE & DR. SATISH V. BANSOD</i>	136
22.	TECHNOLOGY TRENDS AND IMPACT OF ROBOTICS IN THE CORPORATE WORLD AT DIFFERENT LEVELS OF MANAGEMENT <i>P. POONGUZHALI & DR. A. CHANDRA MOHAN</i>	141
23.	PERFORMANCE APPRAISAL ACT AS A MAJOR MOTIVATIONAL SOURCE <i>NAILA IQBAL</i>	147
24.	FOREIGN DIRECT INVESTMENT FLOWS INTO INDIA AND THEIR CAUSAL RELATIONSHIP WITH ECONOMIC GROWTH SINCE LIBERALISATION <i>S. GRAHALSKSHMI & DR. M. JAYALAKSHMI</i>	150
25.	INCLUSIVE GROWTH AND REGIONAL DISPARITIES IN ANDHRA PRADESH <i>V. VANEENDRA NATHA SASTRY</i>	159
26.	STRATEGIES TO COPE UP WORK - PLACE STRESSORS: AN EMPIRICAL STUDY IN EDUCATIONAL INSTITUTIONS <i>B. LAVANYA</i>	162
27.	DETERMINANTS OF JOB SATISFACTION AMONG EMPLOYEES IN INFORMATION TECHNOLOGY INDUSTRY IN DELHI <i>BRAJESH KUMAR & DR. AWADHESH KUMAR</i>	166
28.	MODERN CHALLENGES TO WOMEN ENTREPRENEURSHIP DEVELOPMENT: A STUDY OF DISTRICT RAJOURI IN JAMMU AND KASHMIR STATE <i>AASIM MIR</i>	169
29.	INTERNATIONAL HRM CHALLENGES FOR MNC'S <i>B. G. VENKATESH PRASAD & N. CHETAN KUMAR</i>	173
30.	INSIDER TRADING: GOVERNANCE, ETHICAL AND REGULATORY PERSPECTIVE <i>NIDHI SAHORE</i>	177
	REQUEST FOR FEEDBACK	182

CHIEF PATRON

PROF. K. K. AGGARWAL

Chancellor, Lingaya's University, Delhi
Founder Vice-Chancellor, Guru Gobind Singh Indraprastha University, Delhi
Ex. Pro Vice-Chancellor, Guru Jambheshwar University, Hisar

FOUNDER PATRON

LATE SH. RAM BHAJAN AGGARWAL

Former State Minister for Home & Tourism, Government of Haryana
Former Vice-President, Dadri Education Society, Charkhi Dadri
Former President, Chinar Syntex Ltd. (Textile Mills), Bhiwani

CO-ORDINATOR

AMITA

Faculty, Government M. S., Mohali

ADVISORS

DR. PRIYA RANJAN TRIVEDI

Chancellor, The Global Open University, Nagaland

PROF. M. S. SENAM RAJU

Director A. C. D., School of Management Studies, I.G.N.O.U., New Delhi

PROF. M. N. SHARMA

Chairman, M.B.A., Haryana College of Technology & Management, Kaithal

PROF. S. L. MAHANDRU

Principal (Retd.), Maharaja Agrasen College, Jagadhri

EDITOR

PROF. R. K. SHARMA

Professor, Bharti Vidyapeeth University Institute of Management & Research, New Delhi

CO-EDITOR

DR. BHAVET

Faculty, M. M. Institute of Management, Maharishi Markandeshwar University, Mullana, Ambala, Haryana

EDITORIAL ADVISORY BOARD

DR. RAJESH MODI

Faculty, Yanbu Industrial College, Kingdom of Saudi Arabia

PROF. SANJIV MITTAL

University School of Management Studies, Guru Gobind Singh I. P. University, Delhi

PROF. ANIL K. SAINI

Chairperson (CRC), Guru Gobind Singh I. P. University, Delhi

DR. SAMBHAVNA

Faculty, I.I.T.M., Delhi

DR. MOHENDER KUMAR GUPTA

Associate Professor, P. J. L. N. Government College, Faridabad

DR. SHIVAKUMAR DEENE

Asst. Professor, Dept. of Commerce, School of Business Studies, Central University of Karnataka, Gulbarga

ASSOCIATE EDITORS

PROF. NAWAB ALI KHAN

Department of Commerce, Aligarh Muslim University, Aligarh, U.P.

PROF. ABHAY BANSAL

Head, Department of Information Technology, Amity School of Engineering & Technology, Amity University, Noida

PROF. A. SURYANARAYANA

Department of Business Management, Osmania University, Hyderabad

DR. SAMBHAV GARG

Faculty, M. M. Institute of Management, Maharshi Markandeshwar University, Mullana, Ambala, Haryana

PROF. V. SELVAM

SSL, VIT University, Vellore

DR. PARDEEP AHLAWAT

Associate Professor, Institute of Management Studies & Research, Maharshi Dayanand University, Rohtak

DR. S. TABASSUM SULTANA

Associate Professor, Department of Business Management, Matrusri Institute of P.G. Studies, Hyderabad

SURJEET SINGH

Asst. Professor, Department of Computer Science, G. M. N. (P.G.) College, Ambala Cantt.

TECHNICAL ADVISOR

AMITA

Faculty, Government M. S., Mohali

FINANCIAL ADVISORS

DICKIN GOYAL

Advocate & Tax Adviser, Panchkula

NEENA

Investment Consultant, Chambaghat, Solan, Himachal Pradesh

LEGAL ADVISORS

JITENDER S. CHAHAL

Advocate, Punjab & Haryana High Court, Chandigarh U.T.

CHANDER BHUSHAN SHARMA

Advocate & Consultant, District Courts, Yamunanagar at Jagadhri

SUPERINTENDENT

SURENDER KUMAR POONIA

CALL FOR MANUSCRIPTS

We invite unpublished novel, original, empirical and high quality research work pertaining to recent developments & practices in the area of Computer, Business, Finance, Marketing, Human Resource Management, General Management, Banking, Insurance, Corporate Governance and emerging paradigms in allied subjects like Accounting Education; Accounting Information Systems; Accounting Theory & Practice; Auditing; Behavioral Accounting; Behavioral Economics; Corporate Finance; Cost Accounting; Econometrics; Economic Development; Economic History; Financial Institutions & Markets; Financial Services; Fiscal Policy; Government & Non Profit Accounting; Industrial Organization; International Economics & Trade; International Finance; Macro Economics; Micro Economics; Monetary Policy; Portfolio & Security Analysis; Public Policy Economics; Real Estate; Regional Economics; Tax Accounting; Advertising & Promotion Management; Business Education; Management Information Systems (MIS); Business Law, Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labor Relations & Human Resource Management; Marketing Research; Marketing Theory & Applications; Non-Profit Organizations; Office Administration/Management; Operations Research/Statistics; Organizational Behavior & Theory; Organizational Development; Production/Operations; Public Administration; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism, Hospitality & Leisure; Transportation/Physical Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Digital Logic; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Multimedia; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic and Web Design. The above mentioned tracks are only indicative, and not exhaustive.

Anybody can submit the soft copy of his/her manuscript **anytime** in M.S. Word format after preparing the same as per our submission guidelines duly available on our website under the heading guidelines for submission, at the email address: infoijrcm@gmail.com.

GUIDELINES FOR SUBMISSION OF MANUSCRIPT

1. COVERING LETTER FOR SUBMISSION:

DATED: _____

THE EDITOR
IJRCM

Subject: SUBMISSION OF MANUSCRIPT IN THE AREA OF _____.

(e.g. Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)

DEAR SIR/MADAM

Please find my submission of manuscript entitled ' _____ ' for possible publication in your journals.

I hereby affirm that the contents of this manuscript are original. Furthermore, it has neither been published elsewhere in any language fully or partly, nor is it under review for publication elsewhere.

I affirm that all the author (s) have seen and agreed to the submitted version of the manuscript and their inclusion of name (s) as co-author (s).

Also, if my/our manuscript is accepted, I/We agree to comply with the formalities as given on the website of the journal & you are free to publish our contribution in any of your journals.

NAME OF CORRESPONDING AUTHOR:

Designation:

Affiliation with full address, contact numbers & Pin Code:

Residential address with Pin Code:

Mobile Number (s):

Landline Number (s):

E-mail Address:

Alternate E-mail Address:

NOTES:

- a) The whole manuscript is required to be in **ONE MS WORD FILE** only (pdf. version is liable to be rejected without any consideration), which will start from the covering letter, inside the manuscript.
- b) The sender is required to mention the following in the **SUBJECT COLUMN** of the mail:
New Manuscript for Review in the area of (Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)
- c) There is no need to give any text in the body of mail, except the cases where the author wishes to give any specific message w.r.t. to the manuscript.
- d) The total size of the file containing the manuscript is required to be below **500 KB**.
- e) Abstract alone will not be considered for review, and the author is required to submit the complete manuscript in the first instance.
- f) The journal gives acknowledgement w.r.t. the receipt of every email and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of manuscript, within two days of submission, the corresponding author is required to demand for the same by sending separate mail to the journal.

2. **MANUSCRIPT TITLE:** The title of the paper should be in a 12 point Calibri Font. It should be bold typed, centered and fully capitalised.

3. **AUTHOR NAME (S) & AFFILIATIONS:** The author (s) **full name, designation, affiliation (s), address, mobile/landline numbers**, and **email/alternate email address** should be in italic & 11-point Calibri Font. It must be centered underneath the title.

4. **ABSTRACT:** Abstract should be in fully italicized text, not exceeding 250 words. The abstract must be informative and explain the background, aims, methods, results & conclusion in a single para. Abbreviations must be mentioned in full.

5. **KEYWORDS:** Abstract must be followed by a list of keywords, subject to the maximum of five. These should be arranged in alphabetic order separated by commas and full stops at the end.
6. **MANUSCRIPT:** Manuscript must be in **BRITISH ENGLISH** prepared on a standard A4 size **PORTRAIT SETTING PAPER**. It must be prepared on a single space and single column with 1" margin set for top, bottom, left and right. It should be typed in 8 point Calibri Font with page numbers at the bottom and centre of every page. It should be free from grammatical, spelling and punctuation errors and must be thoroughly edited.
7. **HEADINGS:** All the headings should be in a 10 point Calibri Font. These must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
8. **SUB-HEADINGS:** All the sub-headings should be in a 8 point Calibri Font. These must be bold-faced, aligned left and fully capitalised.
9. **MAIN TEXT:** The main text should follow the following sequence:

INTRODUCTION**REVIEW OF LITERATURE****NEED/IMPORTANCE OF THE STUDY****STATEMENT OF THE PROBLEM****OBJECTIVES****HYPOTHESES****RESEARCH METHODOLOGY****RESULTS & DISCUSSION****FINDINGS****RECOMMENDATIONS/SUGGESTIONS****CONCLUSIONS****SCOPE FOR FURTHER RESEARCH****ACKNOWLEDGMENTS****REFERENCES****APPENDIX/ANNEXURE**

It should be in a 8 point Calibri Font, single spaced and justified. The manuscript should preferably not exceed **5000 WORDS**.

10. **FIGURES & TABLES:** These should be simple, crystal clear, centered, separately numbered & self explained, and **titles must be above the table/figure**. **Sources of data should be mentioned below the table/figure**. It should be ensured that the tables/figures are referred to from the main text.
11. **EQUATIONS:** These should be consecutively numbered in parentheses, horizontally centered with equation number placed at the right.
12. **REFERENCES:** The list of all references should be alphabetically arranged. The author (s) should mention only the actually utilised references in the preparation of manuscript and they are supposed to follow **Harvard Style of Referencing**. The author (s) are supposed to follow the references as per the following:
 - All works cited in the text (including sources for tables and figures) should be listed alphabetically.
 - Use (ed.) for one editor, and (ed.s) for multiple editors.
 - When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc, in chronologically ascending order.
 - Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
 - The title of books and journals should be in italics. Double quotation marks are used for titles of journal articles, book chapters, dissertations, reports, working papers, unpublished material, etc.
 - For titles in a language other than English, provide an English translation in parentheses.
 - The location of endnotes within the text should be indicated by superscript numbers.

PLEASE USE THE FOLLOWING FOR STYLE AND PUNCTUATION IN REFERENCES:**BOOKS**

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

UNPUBLISHED DISSERTATIONS AND THESES

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

ONLINE RESOURCES

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

WEBSITES

- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 <http://epw.in/user/viewabstract.jsp>

E-LEARNING INITIATIVES TO AUGMENT BUSINESS PERFORMANCE: AN EMPIRICAL STUDY OF SELECT AUTO COMPONENT FIRMS

DR. AISHA M. SHERIFF
PROFESSOR

DEPARTMENT OF STUDIES IN BUSINESS ADMINISTRATION
UNIVERSITY OF MYSORE
MYSORE

GEETHA R

ASST. PROFESSOR

MBA DEPARTMENT

RJS INSTITUTE OF MANAGEMENT STUDIES
BANGALORE

ABSTRACT

E-learning is a most widely acknowledged concept that has evolved as an outcome of the Integration of Information and Communication Technology (ICT) with the training and developmental practices of business organizations. E-learning fosters computer aided and network enabled transfer of knowledge and skills to the workforce so as to cater to their diverse needs in alignment with the fulfillment of organizational goals. There are thousands of Computer Based Learning (CBL) and Web Based Learning (WBL) techniques and software applications available online as well as off-line. The most extensively used of them are Learning Management System(LMS), Authoring tools, Interactive Communication Tools, Content Management systems(CMS), groupware, office suite, mind-mapping tools, project scheduling tools, slide shows, webinars, web-conferences, multimedia elements and simulations. This empirical paper examines the effectiveness of various E-learning tools and techniques used in auto-component industry in order to enhance the job related skills and competencies of their workforce. An attempt was also made to investigate and find out whether the massive investments made on e-learning applications in auto-component firms facilitate in augmenting their business performance by reducing the cost of training and the task-time.

KEYWORDS

e-learning initiatives, Technology Driven Learning(TDL), Computer Based Learning(CBL), Web Based Learning(WBL).

I. INTRODUCTION

Hafele and Maier-Hafele (2001) have defined e-Learning as a term used for different kinds of software supported learning; and Median (2003) perceives e-learning as all forms of computer aided learning. These perceptions about e-learning are narrow in approach since they are only highlighting Computer-Based Learning (CBL) and do not describe Web Based Learning (WBL) techniques. However Rosenberg (2001) mentions that e-learning is internet technology based and networked form of learning which transcends the general concepts and traditional paradigms of learning.

Susan Codone, et al (2001) define e-learning as any type of learning delivered electronically. They mention that it can encompass learning products delivered by computer, intranet, internet, Satellite, or other remote technologies. Brandon Hall, a noted e-learning researcher, defines e-learning as "instruction delivered electronically wholly by a web browser, through the Internet or an intranet, or through CD-ROM or DVD multimedia platforms."

By summarizing the above concepts, e-learning in organizations can be comprehensively defined as –"the acquisition (by the workforce) of task-oriented knowledge, skills, abilities and behavioral guidance, provided by the organizations with the aid of electronic and web technology driven tools and techniques for effective accomplishment of the predetermined goals of business organizations."

Technology has permeated in all spheres of human activities. Likewise it has made a remarkable breakthrough in the sphere of Training and learning as well. Realizing the significance and potential of e-learning tools and applications, business organizations of late are investing massively on Technology Driven Learning (TDL).

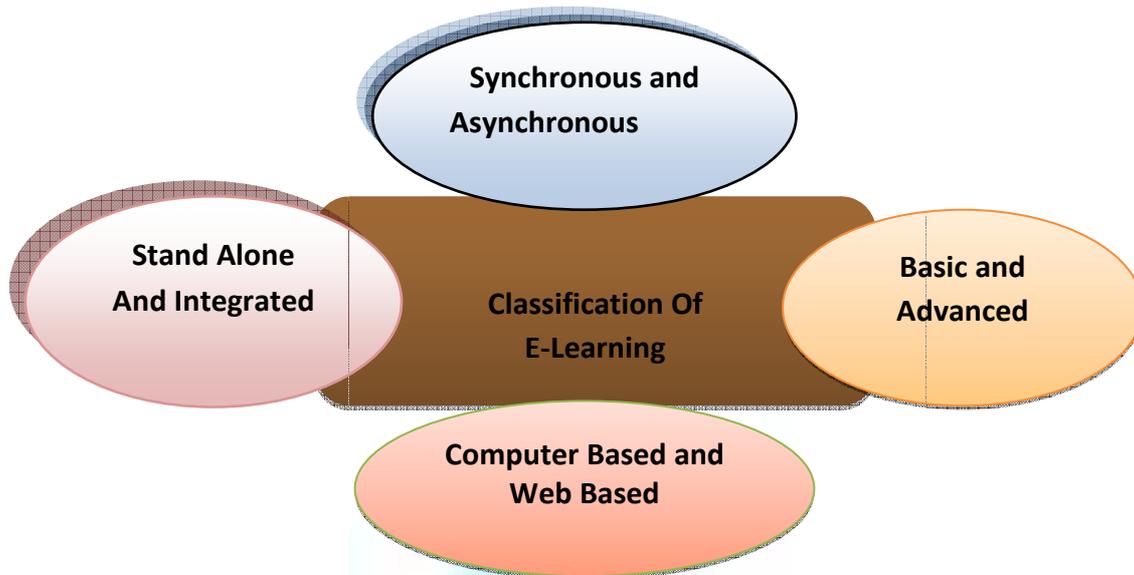
There are thousands of Technology Driven Learning tools. They may be either Computer Based Learning (CBL) or Web Based Learning (WBL) techniques or software applications which are available online as well as off-line. The most extensively used of them are Learning Management System (LMS), Authoring tools, interactive communication tools, Content Management systems(CMS), groupware, office suite, mind-mapping tools, project scheduling tools, slide shows, webinars, web-conferences, multimedia elements and simulations.

Some of the smaller organizations use TDL tools as standalone applications for facilitating quick and cost-effective learning for their workforce while the larger organizations have integrated their learning programmes with other HR activities by incorporating them with integrated software packages like SAP, People Soft and other similar ones.

CLASSIFICATION OF E-LEARNING TOOLS

Based on the complexity and methodology of knowledge acquisition e-learning can be broadly classified into four categories namely:

FIGURE 1: CLASSIFICATION OF E-LEARNING TOOLS



1. Synchronous and Asynchronous e-Learning

Synchronous learning tools include all those tools which require the presence of learners at the time when instructions are delivered or at the time when training is imparted.

Asynchronous learning on the other hand occurs when a learner takes an online course in which he/she completes events at different times, and when communication occurs via time-delayed medium like email or in discussion list postings.

2. Basic and Advanced E-learning

The e-learning tools may be simple and basic tools like MS office tools or they may be highly advanced tools like Learning Management System, Authoring tools, Content Management System, groupware, Mind mapping suites and others.

3. Computer Based and Web Based E-Learning

Computer Based Learning abbreviated as CBL refers to Learning facilitated by the use of computers in a more structured environment. CBL encourages collaborative learning. It includes DVDs, CD-ROM, Learning Management System, Authoring Tools and other software applications

Web Based Learning (WBL) on the other hand includes all types of learning that takes place with the aid of World Wide Web and intranet facilities. It includes web 2.0 applications like blogs, podcasts, wikis, Social Networking Sites (SSNs), webinars, online audio and video conferences, emails, groupware and the like.

4. Standalone and Integrated/Blended e-learning

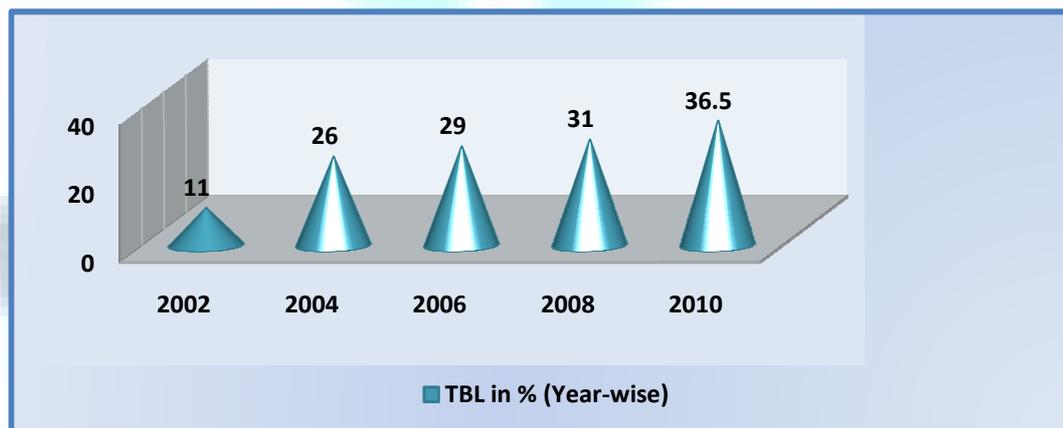
When synchronous, asynchronous, CBL or WBL learning tools are used in isolation then such form of learning is known as standalone e-learning.

On the other hand when two or more of the above learning techniques are blended in conjunction with each other to make learning a more fascinating and interesting experience then it is known as integrated or blended e-Learning. Some of the integrated e-learning tools are developed by People Soft, SAP, etc.

STATISTICAL DATA PERTAINING TO E-LEARNING

According to the reports of American Society for Training and Development (ASTD) published in the year 2011, Technology Based Learning (TBL) has augmented from a mere 11 % in the year 2002 to 36.5 % in 2010 in all the major industries across the globe. Figure (2) indicates the year wise increase in the use of e-learning techniques in major sectors across the world. In 2004, TBL increased from 11 to 26 percent. Subsequently in 2006 and 2008 it increased to 29% and 31% respectively.

FIGURE 2: LONGITUDINAL TRENDS IN TECHNOLOGY BASED LEARNING



Source: ASTD Report on the State of Major Industries for 2011 (EBSCO)

The above statistical data indicates the growing significance of e-Learning in business organizations. The TDL tools are used at all levels of employment right from the executive to the shop floor level in order to augment the business performance. The complexity of courseware will invariably differ across the levels. For managerial and executive level, advanced learning tools like - LMS and authoring tools will be incorporated while for shop floor level basic tools like power point, excel spread sheets, videos and graphical depictions will be used. Most of the organizations use both instructional techniques in addition to e-learning applications for achieving effective outcomes.

II. REVIEW OF LITERATURE

Meta analytical literature survey technique was adopted in order to form a basis for the justification of the present study. The research premise was developed after scouting through various research papers and analyzing the earlier reports and articles relevant to the e-learning practices in organizations. Literature survey helped in identifying the research gap and variables for the present study. Some of the reviews are presented below:

D. R Garrison & T. Anderson (2003) – in their book on “e-Learning in 21st Century a Framework for Research and Practice” published for Open University it Nederland provide the foundational understanding of e-learning by investigating into its unique potential to support constructive communities of inquiry consistent with the long-held ideals of higher education. They provide a coherent perspective by demonstrating e-learning in an inclusive manner. They define e-learning as networked on-line learning that takes place in a formal context and incorporating a range of multimedia technologies to support asynchronous learning in a collaborative manner. The scope of their study confines e-learning to higher education and it does not include the role of e-learning in manufacturing industry.

Jorge G. Ruiz, MD, Michael J. Mintzer, MD, et al (2006) in their empirical paper on the –“The impact of e-Learning in Medical Education”, the authors provide an introduction to e-learning and its impact on medical education. They say that e-learning components play a vital role in enhancing the faculty competencies and performance. They indicate that e-learning is a complement to the instructional learning and it enables learners to control content, sequence, pace of learning, time and the media used for learning. E-learning repositories or digital libraries constitute the major part of e-learning resources in medical education. E-learning is providing greater research opportunities to medical faculty and it is also transforming their role from instructors to facilitators and assessors or evaluators. They also feel that e-learning can lead to the standardization of learning content.

Margaret Discol (2001) – in her article on “Blended learning: Let’s get beyond the Hype” says that blended learning includes a combination of four concepts of learning techniques namely-web-based technology (e.g., live virtual classroom, self-paced instruction, learning, streaming video, audio, and text), pedagogical approaches (e.g., constructivism, behaviourism, cognitive, instructional technology (e.g., videotape, CD-ROM, web-based training, film) with face-to-face instructor-led training and instructional technology with actual job tasks in order to create a harmonious effect of learning and working. She quotes online assessments, online information references, posting of online threads and discussions after training session to keep trainees connected, pre-work and office hours online, e-mailing and messaging, seeking expert help online, online counselling and mentoring, electronic job aids, etc. as examples of blended learning techniques. This article discusses on various forms of blended learning practices which can be classified as e-learning.

Natalie T. Wood, Michael R. Solomon, and David Allan (2008): These authors in their article on -“Welcome to the Matrix: E-Learning Gets a Second Life” conceptually explore the use of virtual worlds as a pedagogical tool for marketing educators. They opine that the advantages and disadvantages of teaching through e-tools can enrich the marketing curriculum for students.

Razak Raj (2010) in his conceptual paper on -“Evaluation of Online Learning Systems in Higher Education” discusses about the challenges involved in developing e-learning in higher educational institutions. According to him technology will essentially bring about a great need for fully automated learning environments whereby management planning and everyday administration will be the domain of the technicians and universities should equip to build the infrastructure required to implement e-learning.

Rosenberg, Marc Jeffrey (2001) in his book on- “E-Learning: Strategies for delivering knowledge in the Digital Age” points out that training is a default approach used for facilitating employee learning and for improving their performance by supporting learners’ to acquire new skills or utilize new knowledge in a specific level of proficiency, within a specific time frame for a specific purpose.

He further mentions that organizations no longer look for volume of learning but what they actually look for is the Auditability of learning outcomes in the form of saved downtime, quickened pace of learning, freshness and relevance of the learning content, reduced costs and so on. According to him organizations basically integrate e-learning tools and techniques for three main purposes and they are- instruction delivery, information/knowledge delivery and for employee performance support. The focus and scope of this book is centered on the application of E-tools for the three purposes mentioned above. It also discusses about both intrinsic and extrinsic support offered by e-tools.

Ruth C. Clark & Richard E. Mayer (2011) in their book on-“e-Learning and the Science of Instruction: Proven Guidelines for Consumers” have made an attempt to identify both the potential and pitfalls of digital learning. They have explored and identified the standards for e-learning design by examining and applying research on how people learn using psychology as a basis. The authors address the best ways to use text, graphics and audio to maximize learning experience. They also point out how an interesting story hurts learning and how collaborative internet tools can be used for maximizing learning benefits. They have focused the attention on learner and highlight techniques that can help them to succeed.

Tsvetozar Georgiev, Evgenia Georgieva & Angel Smrikarov (2004) – in their paper on “M-Learning - a New Stage of E-Learning”, presented in International Conference on Computer Systems and Technologies - CompSysTech’2004 indicate that, Distance learning, electronic learning and mobile learning offer methods, which decrease the limitations of traditional education. This paper discusses the existing devices and technologies appropriate to realise mobile learning. Mobile learning as new stage of distance and e-learning is also examined by the authors. They have incorporated different dimensions of e-learning like- the distance learning, electronic learning and mobile learning with special focus and emphasis on mobile learning. However, the outcomes of e-learning and the metrics used to assess their effectiveness have not been dealt within their work.

Zeying Wan, Deborah Campeau, and Nicole Haggerty (2012) in their research paper on “The Effects of Self-Regulated Learning Processes on E-Learning Outcomes in Organizational Settings” focus on employees’ e-learning processes during online job training. They have proposed personal versus social learning strategies and have developed measurement scales. Their findings reveal that the learners adopt different self-regulated learning strategies which yield different e-learning outcomes. They further indicate that learning strategies employed by learners would be influenced by factors such as the virtual learning competence, goal orientation, intellectual demand and cooperative norms. Their study facilitates e-learners to obtain deeper insights on learning outcomes and provides valid information to organizations on the effectiveness of e-learning.

Meta-analysis of several secondary sources of literature in addition to the above reviews clearly indicates that there is no adequate literature to substantiate the need for huge investments on e-learning technology in auto-component industry. Though, there are innumerable articles and research papers justifying the need for e-learning practices in education sector they too have failed to quantify the outcomes of e-Learning. Considering the gaps in the literature reviewed the following objectives have been identified for the contemporary research

III. THE RATIONALE AND NEED FOR THE STUDY

There is a need to justify the rationale behind massive investments on e-learning tools and techniques in organizations. When it comes to e-learning, auto-component industry can be said to be in the nascent phase since it is slowly transcending beyond traditional instructional techniques to e-training and e-learning techniques. However some of the tier-1 firms which are large in size with more than 2000 employees like- Sundarm Motors, Bosch, Ingersoll Rand, 3 M technologies, Automotive Axles, etc. have been using it for quite a few years now and they perceive E-learning techniques to be highly beneficial to business organizations. Hence the present study was undertaken to justify whether the investments on e-technology by auto-component firms enhance the skills and competencies of workforce which in turn will facilitate in the augmentation of business productivity and performance.

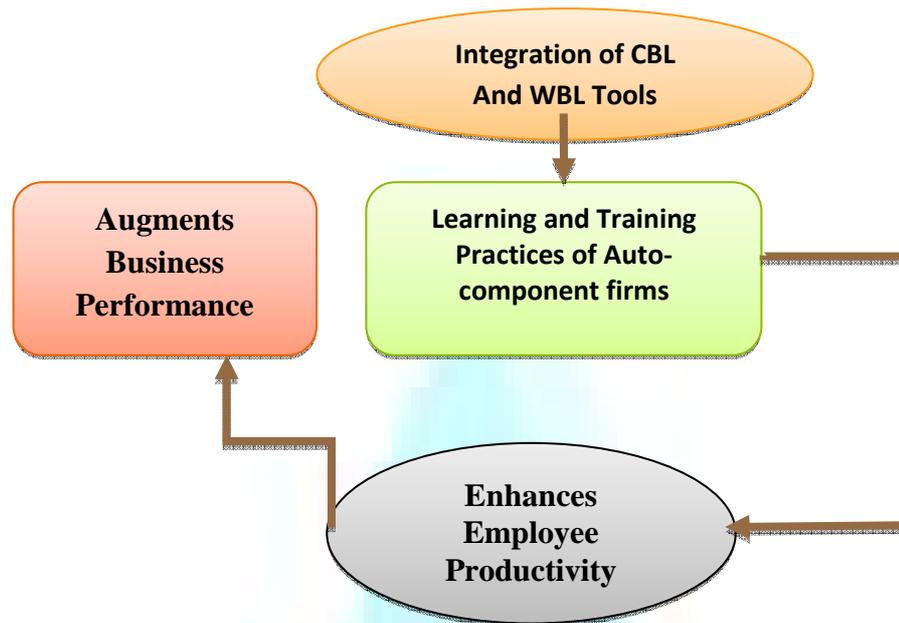
IV. STATEMENT OF THE PROBLEM /RESEARCH PREMISE

Through the present study an effort is made to address the following research questions:

1. What are the beneficial outcomes of e-learning initiatives of auto-component firms?
2. How are e-learning outcomes facilitating the augmentation of their business performance?

The model given below indicates the research framework developed for the current research.

FIGURE 3: RESEARCH FRAMEWORK



The research framework shown in figure (3) indicates that integration of e-Learning tools with the learning practices of auto-component firms enhances the productivity of workforce since they help in improving the job-related skills and competencies of the workforce and also keeps them highly motivated and engaged with their work. This in turn is perceived to enhance the productivity and performance of the firms.

Worldwide, e-learning industry is estimated to be worth over \$48 billion according to conservative estimates. This is obvious since we are witnessing that the business organizations across the globe are investing massively on the purchase of e-learning technology hoping that it would enhance their profits by increasing the job related skills competencies and proficiency of their workforce. They also believe that effective learning can lead to innumerable benefits like-positive change in the attitude and behavior of the workforce, employee motivation, employee engagement, retention, talent management, reduced absenteeism and lower rates of attrition.

V. OBJECTIVES OF THE STUDY

1. To examine the various e-learning initiatives of auto component firms.
2. To assess the effectiveness of e-learning initiatives of auto component firms
3. To analyze the role of various outcomes of e-Learning in augmenting business performance.

VI. HYPOTHESES

It was intended to test the following hypotheses through this research:

Hypothesis1: H_0 : e-Learning practices do not reduce the training expenses

H_a : e-Learning practices reduce the training expenses

Hypothesis2: H_0 : e-Learning practices do not reduce employee task-time

H_a : e-Learning reduces employee task-time

Hypothesis3: H_0 : e-Learning does not augment productivity

H_a : e-Learning augments productivity

VII. RESEARCH METHODOLOGY

RESEARCH DESIGN

The study is an evaluative and diagnostic attempt to discover empirically the nature of relationship between e-learning practices and reduction in cost of training and the task time. In order to gain clear insights into the applications of e-learning tools and techniques in auto component firms and to investigate into their beneficial outcomes both descriptive and exploratory research designs were adopted. Qualitative and quantitative data were collected so as to understand the implications of e-learning on the productivity and performance of auto component firms.

DATA COLLECTION

PRIMARY DATA

Questionnaire and Personal Interview techniques were used as research instruments to gather primary data for the study. A highly structured questionnaire with questions soliciting both qualitative and quantitative data was used for the research purpose.

Mathematical and Statistical Tools Employed: Frequency distribution tables, descriptive statistics, crosstabulation, percentage analysis, standard deviation and Pearson's correlation and hypothesis testing tools were employed to test the hypothesis.

SAMPLING PLAN AND SIZE

Around 110 HR managers were identified and chosen as the respondents from forty four select auto component firms which are mostly suppliers to some of the Leading Original Equipment Makers (OEMs) for the present study. This is indicated in **Table-6.1** below.

TABLE-I: COMPANY-WISE DISTRIBUTION OF THE RESPONDENTS

S No.	List of Select Auto-Component Firms	No of Respondents	Percent	Valid Percent	Cumulative Percent
1	3M India Ltd.	3	2.7	2.7	2.7
2	Aditya Auto Products& Eng.pvt.Ltd.	2	1.8	1.8	4.5
3	Automotive Axles	4	3.6	3.6	8.2
4	BEML Ltd.	4	3.6	3.6	11.8
5	Bill Forge Pvt. Ltd.	3	2.7	2.7	14.5
6	Bosch	5	4.5	4.5	19.1
7	Bright Auto Plast Ltd.	1	.9	.9	20.0
8	CIPSA-Tect Pvt. Ltd.	2	1.8	1.8	21.8
9	DNKI	3	2.7	2.7	24.5
10	Dynamatic Technology Ltd.	2	1.8	1.8	26.4
11	Exide Industries Ltd.	3	2.7	2.7	29.1
12	Federal Mogul India	2	1.8	1.8	30.9
13	Gear Rock Forge Pvt. Ltd.	2	1.8	1.8	32.7
14	GI Auto Pvt. Ltd.	1	.9	.9	33.6
15	Hanil Tube India Pvt. Ltd	1	.9	.9	34.5
16	Harita NTI Ltd.	3	2.7	2.7	37.3
17	Hyundai Mobis India Ltd	2	1.8	1.8	39.1
18	IFB Indian Fine Banks	3	2.7	2.7	41.8
19	Ingersoll Rand	3	2.7	2.7	44.5
20	Kailash Vahan Udyog Ltd.	2	1.8	1.8	46.4
21	Kar Mobiles Ltd.	2	1.8	1.8	48.2
22	Kirloskar Electric Co .Ltd.	3	2.7	2.7	50.9
23	KTTMPL	4	3.6	3.6	54.5
24	Max Preci Pvt. Ltd.	1	.9	.9	55.5
25	Rane Madras Ltd.	3	2.7	2.7	58.2
26	Sandhar Components -Unit1 Attibele	3	2.7	2.7	60.9
27	Sansera Engg. Pvt. Ltd.	3	2.7	2.7	63.6
28	SKF	2	1.8	1.8	65.5
29	Stumpp Schuele & Somappa Springs Pvt.Ltd.	1	.9	.9	66.4
30	Sundaram Motors Pvt. Ltd.	3	2.7	2.7	69.1
31	Suprajit Engineering Ltd.	2	1.8	1.8	70.9
32	Synthesis Winding TPL	2	1.8	1.8	72.7
33	TAFE	2	1.8	1.8	74.5
34	Tagutec Ind. Pvt. Ltd.	2	1.8	1.8	76.4
35	Tata Yazaki Auto Comp Ltd.	2	1.8	1.8	78.2
36	Tenneco Automotive	3	2.7	2.7	80.9
37	TKAP	3	2.7	2.7	83.6
38	Toyota Boshoko Automotive India PLt	3	2.7	2.7	86.4
39	Triton Valves Ltd.	4	3.6	3.6	90.0
40	Triveni Turbine Ltd.	3	2.7	2.7	92.7
41	TTP Technologies Pvt. Ltd.	2	1.8	1.8	94.5
42	TVS Motor Co Ltd	3	2.7	2.7	97.3
43	VMPL,Vijaydwada	1	.9	.9	98.2
44	Volvo CE	2	1.8	1.8	100.0
	Total	110	100.0	100.0	

Table-I shows the classification of the respondents based on the size of the auto-component firms; Firms employing less than 300 employees were classified as small firms, those employing more than 300 and less than 2000 were grouped as medium firms' and companies employing more than 2000 workforce were considered as large firms. Out of 110 respondents identified for the study 53.6 percent belonged to the medium sized firms employing more than 300 but less than 2000 employees. Another 24.5 percent of them belonged to the small firms with less than 300 employees and remaining 21.8 percent of them were from large firms with a workforce of more than 2000.

TABLE-II: DISTRIBUTION OF RESPONDENTS BY THE SIZE OF THE FIRMS

Size of the Company		No. of Respondents	Percent	Valid Percent	Cumulative Percent
Valid	Small	27	24.5	24.5	24.5
	Medium	59	53.6	53.6	78.2
	Large	24	21.8	21.8	100.0
	Total	110	100.0	100.0	

TABLE-III: DISTRIBUTION OF RESPONDENTS BASED ON FIRM-LEVEL

Level of the Firm		No. of Respondents	Percent	Valid Percent	Cumulative Percent
Valid	Tier-1	68	61.8	61.8	61.8
	Tier-2	20	18.2	18.2	80.0
	Tier-3 and Ancillaries	22	20.0	20.0	100.0
	Total	110	100.0	100.0	

Table-III indicates the distribution of respondents by the level of firms. Majority of the respondents that is about 61.8 percent were from Tier-1 firms which supply components to Original Equipment Makers. Around 18.2 percent of them were from Tier-2 firms, which supply components/accessories to Tier-1 firms and remaining 20 percent of them belonged to tier-3 firms and ancillary units. Tier-3 firms include all those firms which supply components or accessories to tier-2 firms and ancillary units are the sister concerns of Original Equipment Makers (OEMs). If Tier-3 firms are supplying to both Tier-1 and Tier-2 firms then they are

classified as Tier-2 or Tier-3 based on their volume of transaction. If the volume of transactions is more with Tier-1 than with Tier-2, then they are classified as Tier-2 otherwise they will be included under Tier-3 level.

VIII. RESULTS AND DISCUSSION ON E-LEARNING TRENDS AND INITIATIVES OF AUTO-COMPONENTS INDUSTRY

The global auto components industry is estimated at US\$1.2 trillion. The Indian auto component sector has been growing at 20% per annum since 2000 and is projected to maintain the high-growth phase of 15-20% till 2015(Dun & Bradstreet India report).Auto component industry is growing in size and magnitude at such a faster pace in India .It has become imperative for HR practitioners of this industry to embrace advanced technological tools to build the skills and competencies of their workforce so as to meet the global standards and requirements. This can be achieved by incorporating e-learning techniques in their regular training sessions.Most of the auto component firms in India have purchased integrated e-learning modules through SAP or People Soft .Some of them are still reclining to either the traditional instructional teaching techniques or using some standalone software applications for training their employees. Some of the e-learning initiatives of Auto-Component Firms are discussed below.

TABLE-IV: FREQUENCIES OF FIRMS EMPLOYING E-LEARNING PRACTICES

Level of Firm * E-Learning Practices Crosstabulation	E-Learning Practices		Total
	Not Employed	Employed	
Tier-1	3	65	68
Tier-2	0	20	20
Tier-3 and Ancillaries	6	16	22
Total	9	101	110

From Table-IV and Figure(4),it is clearly evident that almost out of 110 respondents 101 of them have expressed that their firms are using one or the other forms of e-learning applications and a mere 9 of them have mentioned that their firms are not employing any form of e-learning and these were mostly Tier-3 or Tier-1 firms. They were found to be using traditional instructional methods in their learning process

FIGURE 4: NUMBER OF FIRMS ADOPTING E-LEARNING

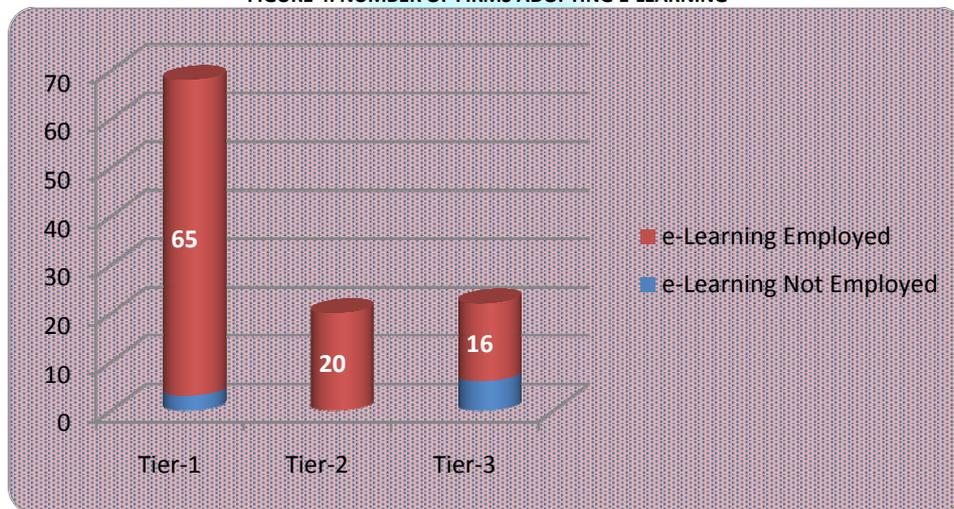


FIGURE 5: E-LEARNING INITIATIVES OF AUTO-COMPONENT FIRMS

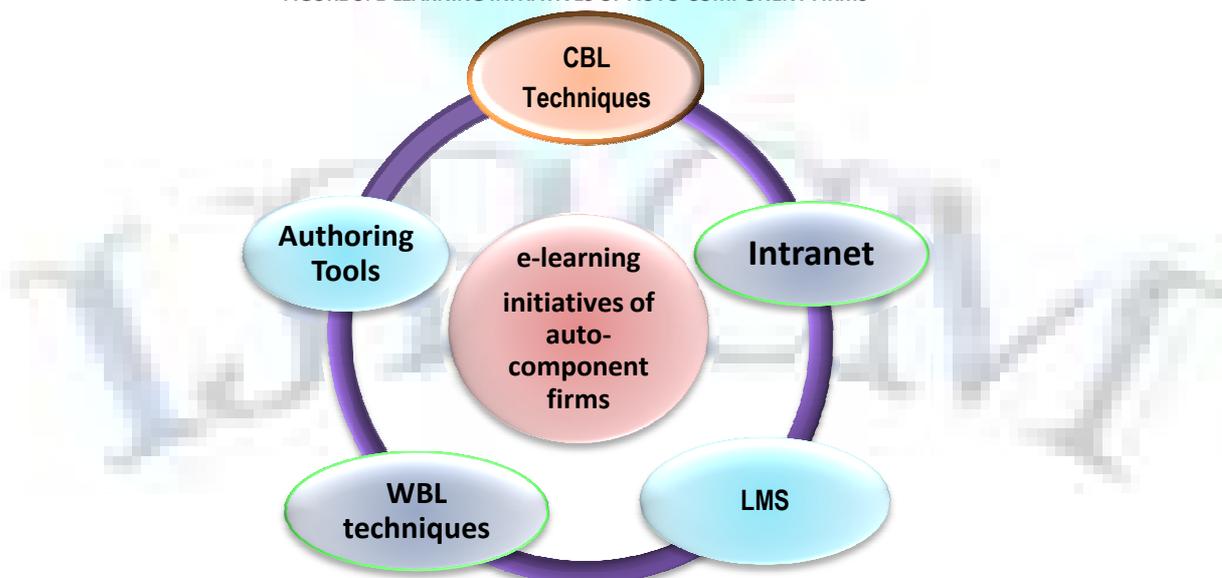


Figure 5 demonstrates the various e-learning initiatives of the select auto-component firms .Most of them are employing basic learning tools like MS office applications such as Power point presentations; excel spread sheets, word documents and others for training their workforce at the bottom line. Extensive use of graphics and videos in the training techniques has enabled knowledge acquisition simpler and faster. It also helps them to re-learn in case if they are unable to understand it first time.

TABLE-V: FREQUENCIES OF FIRMS EMPLOYING THE LISTED E-LEARNING APPLICATIONS

E-Learning Applications	Responses	
	N	Percent
MS office tools(CBL)	110	100.0%
Intranet Based E-Learning	92	83.6%
Web Based Learning tools(WBL)	105	95.5%
Learning Management System(LMS)	24	21.8%
Authoring tools	6	5.5%

Table-V depicts that Computer Based Learning (CBL) Tools in the form of MS office tools and multimedia applications, Web Based Learning (WBL) tools and intranet based learning techniques are widely prevalent in auto-component firms while Learning Management System applications and authoring tools are employed in very few firms. This implies that unlike IT industry, auto-component firms are using only basic learning application.

TABLE -VI: E-LEARNING APPLICATIONS FOR DIFFERENT CATEGORIES OF EMPLOYEES

E-Learning Applications Based on Employee Category	Responses	
	N	Percent
Executives	109	99.1%
Managers	110	100.0%
Supervisors	108	98.2%
Foremen	105	95.5%
Shop floor Workers	105	95.5%
Operative Staff	104	94.5%

From Table-VI, it is evident that e-learning practices are employed among executives, managers, supervisors, foremen, shop floor workers and operative staff in almost all the firms selected for the study.

TABLE -VII: FIRMS SIZE AND THE TYPE OF E-LEARNING ADOPTED BY THEM

Size of the Company * Type of E-Learning Technique Adopted	Type of E-Learning Technique Adopted			Total
	Synchronous	Asynchronous	Both Synchronous and Asynchronous	
	Small	4	1	
Medium	19	1	39	59
Large	0	0	24	24
Total	23	2	85	110

Table VII indicates that majority of the large, medium and small firms are employing both synchronous and asynchronous tools.

TABLE-VIII: AVERAGE TIME SPENT BY AN EMPLOYEE ON E-LEARNING PER ANNUM (IN HOURS)

Size of the Company	Average Time Spent By an Employee on E-Learning Per Annum (in Hours)				Total
	1-20 Hrs.	21-40 Hrs.	41-60 Hrs.	61-80 Hrs.	
Small	1	19	5	2	27
Medium	2	19	34	4	59
Large	0	1	21	2	24
Total	3	39	60	8	110

From Table -VIII it can be inferred that the average time spent on e-learning is encouraging but it will not be sufficient for quick and productive results.

TABLE IX: CLASSIFICATION OF FIRMS BASED ON THE COMPLEXITY OF E-LEARNING TOOLS EMPLOYED

Type of Firm	Classification of Firms Based on the Complexity of E-Learning Tools Employed			Total
	Basic tools	Advanced	Combination of both	
Tier-1	40	2	26	68
Tier-2	13	4	3	20
Tier-3 and Ancillaries	8	0	14	22
Total	61	6	43	110

It can be observed from Table IX that majority of the Tier-1 firms and Tier-2 firms are employing either basic tools or a combination of both basic and advanced tools. Basic tools include Computer Based Learning tools like –MS office tools, projectors, LCDs etc. Advanced Tools include Learning Management System (LMS), Authoring Tools, Multimedia applications and other software applications.

TABLE -X: TYPE OF FIRM * PERCENTAGE EMPLOYEES WITH E-LEARNING INITIATIVES CROSS TABULATION

Type of Firm	Percentage Employees With E-Learning Initiatives				Total
	1-30 percent	31-60 percent	61-90 percent	90-100 percent	
Tier-1	8	27	26	7	68
Tier-2	8	6	4	2	20
Tier-3 and Ancillaries	4	8	7	3	22
Total	20	41	37	12	110

From Table-X, it is evident that in very few firms there are a large number of employees who have e-learning initiatives but in remaining firms it was observed that there is considerable resistance to e-learning due to lack of required technical competence. Probably with additional training, the number of employees with e-learning skills can be increased.

In Table- XI Pearson’s Correlation co-efficient of 0.300 shows that there is a significant positive correlation between e-learning practices and the reduction in cost of learning at 1 percent/0.01 significance level under 1-tailed test. This implies that the investment on e-learning applications helps the organizations to reduce the travelling expenses on employees travelling to distant places for training. Since the correlation is significant at 1 percent confidence level, H₀ is rejected for Hypothesis-1 while H_a which states that e-learning reduces training expenses is accepted.

TABLE -XI: CORRELATION BETWEEN E-LEARNING PRACTICES AND COST AND TIME

Correlations		
		E-Learning Practices
Percentage Reduction in Business Travel Expenses due to E-Learning	Pearson Correlation	.300**
	Sig. (1-tailed)	.001
	N	110
Respondents Opinion on reduction in Task-Time due to E-Learning	Pearson Correlation	-.181*
	Sig. (1-tailed)	.029
	N	110
**. Correlation is significant at the 0.01 level (1-tailed).		
*. Correlation is significant at the 0.05 level (1-tailed).		

Similarly, Pearson’s correlation co-efficient is -0.181 for change in the task time due to e-learning practices and sig value is 0.029 which is less than 0.05 and hence the correlation between task time and e-learning practices is significant at 5 percent confidence level. Hence H_0 is rejected and H_a is accepted for Hypothesis-2.

In Table-XII, the Pearson’s correlation co-efficient of 0.281 at 0.001 significance level under one-tailed test implies that there is a significant positive correlation between the reduction in business travel expenses and increase in business productivity. Since the cost of employee training and the stress involved in travelling to other places can be avoided, business performance will get better through increased productivity of employees, time saved and cost reduction.

TABLE XII: CORRELATION BETWEEN PRODUCTIVITY AUGMENTATION AND COST REDUCED

Correlations			
		Respondents Opinion on Augmentation of Productivity due to E-Learning	Percentage Reduction in Business Travel Expenses due to E-Learning
Respondents Opinion on Augmentation of Productivity due to E-Learning	Pearson Correlation	1	.281**
	Sig. (1-tailed)		.001
	N	110	110
Percentage Reduction in Business Travel Expenses due to E-Learning	Pearson Correlation	.281**	1
	Sig. (1-tailed)	.001	
	N	110	110
**. Correlation is significant at the 0.01 level (1-tailed).			

TABLE XIII: CORRELATION BETWEEN PRODUCTIVITY AUGMENTATION AND TASK TIME REDUCTION

Correlations				
		Respondents Opinion on Augmentation of Productivity due to E-Learning	Respondents Opinion on Reduction in Task-Time due to E-Learning	
Respondents Opinion on Augmentation of Productivity due to E-Learning	Pearson Correlation	1	.407**	
	Sig. (1-tailed)		.000	
	Sum of Squares and Cross-products	46.955	21.409	
	Covariance	.431	.196	
	N	110	110	
Respondents Opinion on Reduction in Task-Time due to E-Learning	Pearson Correlation	.407**	1	
	Sig. (1-tailed)	.000		
	Sum of Squares and Cross-products	21.409	58.918	
	Covariance	.196	.541	
	N	110	110	
**. Correlation is significant at the 0.01 level (1-tailed).				

Similarly Pearson’s correlation co-efficient of 0.407 in table 8.3 implies that there is a significant positive correlation between the reduction in employee task time and productivity augmentation.

Based on the interpretations from Table-XII and Table- XIII, it can be concluded that the correlation between the reduction in travel expenses and e-learning and between the reduction in task time and productivity augmentation is very high and it is significant at 1 percent confidence level under one-tailed test. Hence the auto-component firms’ reduction in training cost and task-time due to e-learning is found to have augmented their productivity. Thus the null hypothesis H_0 is rejected and alternate hypothesis H_a is accepted for Hypothesis-3.

IX. MAJOR FINDINGS AND OBSERVATIONS

- e-learning helps in the reduction of task-time in the auto-component firms
- It has enabled reduction of training expenses by reducing travel expenses incurred on training.
- Investment on e-learning was found to augment productivity by reducing the cost and task-time.
- It reduces complexity of learning content through visual aids and quickens the pace of learning.
- Most of the auto-component firms employed both synchronous and asynchronous learning tools.
- Majority of the firms under auto-component industry were found to be employing either basic e-learning tools or a combination of basic and advanced e-learning tools.
- Employees in most of the organizations under study approximately spent between 41-60 hours per annum on e-learning. However, some of the HR practitioners reported that their workforce spent between 21- 40 hours on the same.
- 31-60 percent of the employees were found to have e-learning initiatives in majority of the firms
- MS office tools, Intranet and Web Based Learning tools were commonly adopted learning tools among the firms considered for study. However advance learning applications like LMS and Authoring tools were employed by very few firms.

X. RECOMMENDATIONS

- Since investment on e-learning is found to have innumerable benefits besides augmenting productivity; advanced learning tools may be incorporated by the firms.
- The percentage employees with e-learning initiatives were found to be quite low in auto-component industry, hence a mechanism may be designed to generate and sustain interest of learners.
- The time spent on e-learning may be increased and more multimedia and visual aids should be incorporated for effective delivery of learning content.
- A comprehensive feedback mechanism should be devised to assess and audit e-learning outcomes.

XI. CONCLUSION

E-learning has made remarkable strides in auto-component industry. Though the firms are employing very basic tools of e-learning, they are able to enhance their performance by means of reduced task-time and cost, quickened pace of learning, employee motivation and employee engagement. This empirical study provides ample evidence to justify the rationale behind massive investments on e-learning. If the firms under study have derived noteworthy benefits through simple and basic e-learning applications in addition to their traditional instructional methods, then they'll surely be able to derive mindboggling benefits by investing on advanced learning applications to build the task-oriented skills and competencies of their employees as that would help them in further augmenting their business performance.

XII. SCOPE FOR FURTHER RESEARCH

Changes in post learning - cost, task-time, productivity, learning pace, retention rate and error count can be used as metrics to audit the outcomes of e-learning practices in auto component firms so as to realise the worth of their investments on learning technology. There is immense scope for future researchers to probe into e-learning practices in several other sectors of the economy to gain deeper insights on the effectiveness of e-learning tools.

XIII. REFERENCES

1. Aisha, M. S., & Geetha, R. (2012). Role of electronic technology in HRM. *Asia Pacific Journal for Research in Business and Management*, 2(2), 168-177. ISSN 2229-4104
2. Aisha, M. S., & Geetha, R. (2012). The techniques and rationale of e-surveillance practices in organizations. 2(2), pp. 281-290,. Haryana: Zenith International Journal of Multidisciplinary Research. DOI: www.zenithresearch.org.in
3. Allison Rossett (2002) .The ASTD E-Learning Hand Book: Best Practices, Strategies and Case Studies for an Emerging Field,ISBN:0-07-138796-X , McGraw Hill publications
4. Brusilovsky, P., Eklund, J., & Schwarz, E. (1998) .Web-based Education for all: A tool for developing adaptive courseware. *Computer Networks and ISDN Systems*.30, 1-7 (1998), 291-300.
5. DjamshidTavangarian, Markus E. Leybold et al (2004) .Is e-Learning the Solution for Individual learning? *Electronic Journal of e-Learning (ISSN 1479-4403) Volume 2 Issue 2 2004 (273-280)*
6. Donsong Zhang (2003).Powering E-Learning In The New Millennium: An Overview of E-Learning and Enabling Technology Information Systems *Frontiers*, Kluwer Academic Publishers. 5:2, 201–212, 2003
7. Elizabeth T. Welsh, Connie R. Wanberg et al (2003) .E-Learning: Emerging Uses, Empirical Results and future Directions, *International Journal of Training and Development*, Blackwell Publishing Ltd., USA .7:4ISSN 1360-3736,
8. GunaSekaran .A, Ronald D. Mc Neil et al(2002) .E-LearningResearch and Applications ,Industrial and Commercial Training, Emerald Publications.Vol 34 , No. 2, pp 44-53 ,ISSN 0019-7858 .
9. Jorge G. Ruiz, Michael J. Mintzer ,et al (2006).The Impact of E-Learning in Medical Education *Academic Medicine*, Vol. 81, No. 3 / March 2006
10. Judith B. Strother (2002) .An Assessment of the Effectiveness of e-Learning in Corporate Training Programs” available at - [F www.league.org/publication/whitepapers/0802.html](http://www.league.org/publication/whitepapers/0802.html)
11. Margaret Discoll (2002) .Web Based Training: Creating e-learning Experiences” ISBN 0- 7879-5619-8, John Wiley and Sons Inc. publications.
12. Margaret Driscoll (2001). Blended Learning-Let’s get beyond the Hype” IBM Consultant, http://www-07.ibm.com/services/pdf/blended_learning.pdf
13. Marton, F., Dall’Alba, G. &Beaty, E. (1993).Conceptions of learning , *International Journal of Educational Research*, Vol 19, pp. 277-300.
14. Natalie T. Wood, Michael R. Solomon, and David Allan (2008) ,“Welcome to the Matrix: E-Learning Gets a Second Life”, *Marketing Education Review*, Volume 18, Number 2 (Summer 2008).
15. Pei-chen Sun, Ray J. Tsai et al. (2008) What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction, *Computers & Education* 50 (2008) 1183–1202
16. Peter Brusilovsky ^a (2004), May 17–22, ACM 1-58113-912-8/04/0005. New York, USA
17. Peter Brusilovsky and HemantaNijhavan ^b(2002).A Framework for Adaptive E-Learning Based On Distributed Re-Usable Learning Activities
18. Renée E. Derouin, Barbara A. Fritzsche et al (2005) .E-Learning in Organizations ,*Journal of Management* December 2005 31: 920 DOI: 10.1177/0149206305279815, Sage Publications
19. Roger C.Schank (2002) .Designing World Class e-Learning, ISBN 0-07-137772-7, McGraw-Hill Publications.
20. Rosenberg , Marc Jeffrey (2001).E-Learning: Strategies for delivering knowledge in the Digital Age,ISBN:9780071362689 , McGraw-Hill Professional Publications.
21. Shirley Alexander (2001).E-Learning Developments and Experiences, *Education + Training*, Volume 43 Number 4/5 2001 pp. 240-248
22. Songhao He, Kenji Saito et al (2009) .From Collaborative Learning To Symbiotic e-Learning: Towards Creation Of New E-Learning Environment For The Knowledge Society,Proceedings of the 17th International Conference on Computers inEducation [CDROM]. Hong Kong: Asia-Pacific Society for Computers in Education
23. Susan Codone (2001) .An E-Learning Primer,Raytheon paper November 2001 ,Raytheon Interactive, Pensacola, Florida,
24. Terry Anderson and Faith Elloumi (2004).Theory and Practice of Online Learnin, *Educause Quarterly* No. 3 pp -421 ISBN 0-919737-59-5
25. ThavamalarGovindasamy (2002). Successful Implementation of E-Learning Pedagogical Considerations,*Internet and Higher Education* 4 (2002) 287–299 Published by Elsevier Science Inc.
26. Tsvetozar Georgiev, Evgenia Georgieva et al (2004).M-Learning - a New Stage of E-Learning, *International Conference on Computer Systems and Technologies - CompSysTech’2004*
27. Zeying Wan, Deborah Campeau, and Nicole Haggerty(2012) .The Effects of Self-Regulated Learning Processes on E-Learning Outcomes in Organizational Settings, *Journal of Management Information Systems / Summer 2012*, Vol. 29, No. 1, pp. 307–339. ISSN 0742-1222 (print)/ISSN 1557-928X (online)

REQUEST FOR FEEDBACK

Dear Readers

At the very outset, International Journal of Research in Commerce, IT and Management (IJRCM) acknowledges & appreciates your efforts in showing interest in our present issue under your kind perusal.

I would like to request you to supply your critical comments and suggestions about the material published in this issue as well as on the journal as a whole, on our E-mail i.e. **infoijrcm@gmail.com** for further improvements in the interest of research.

If you have any queries please feel free to contact us on our E-mail infoijrcm@gmail.com.

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-

Co-ordinator

ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

Our Other Journals

