

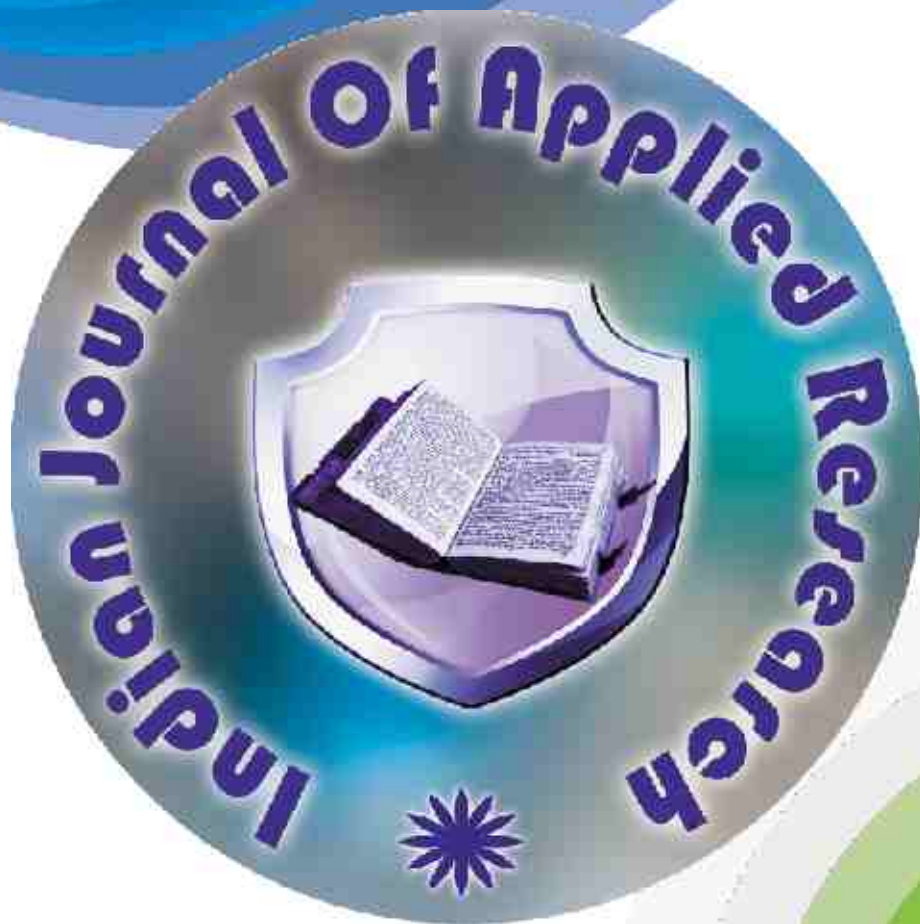
₹ 200

ISSN - 2249-555X

Volume : 1

Issue : 5

February 2012



Journal for All Subjects

www.ijar.in

Listed in International ISSN Directory, Paris.



ISSN - 2249-555X

Indian Journal of Applied Research

Journal for All Subjects

Editor-In-Chief

Dr A Kumar

Director, College Development Council (CDC)
Director, Internal Quality Assurance Cell (IQAC)
Professor in Management,
Department of Business Administration, Faculty of Management,
Bhavnagar University,

Editorial Advisory Board

Dr. S. N. Pathan
Maharashtra

Dr. SM. Ramasamy
Gandhigram

Dr. M. M. Goel
Kurukshetra

Dr. S. Ramesh
Tamil Nadu

Dr Ramesh Kumar Miryala
Nalgonda.

Dr. B. Rajasekaran
Tirunelveli

Dr. A. R. Saravankumar
Tamilnadu

Dr. Roy M. Thomas
Cochin

Dr. G. Selvakumar
Salem

Dr. Apurba Ratan Ghosh
Burdwan

Dr. Shrawan K Sharma
Uttarakhand

Dr. Sudhanshu Joshi
Uttarakhand

Prof. (Dr.) B Anandampilai
Pudhukottai

Advertisement Details

Position	B/W (Single Color)	Fore Color
Full Inside Cover	₹ 6000	₹ 12500
Full Page (Inside)	₹ 5000	-

Subscription Details

Period	Rate	Discount	Amount Payable
One Year (12 Issues)	₹ 2400	Nil	₹ 2400
Two Year (24 issues)	₹ 4800	₹ 200	₹ 4600
Three Year (36 issues)	₹ 7200	₹ 300	₹ 6900
Five Year (60 issues)	₹ 12000	₹ 600	₹ 11400

You can download the Advertisement / Subscription Form from website www.ijar.in. You will require to print the form. Please fill the form completely and send it to the **Editor, INDIAN JOURNAL OF APPLIED RESEARCH** along with the payment in the form of Demand Draft/Cheque at Par drawn in favour of **INDIAN JOURNAL OF APPLIED RESEARCH** payable at Ahmedabad.

1. Thoughts, language vision and example in published research paper are entirely of author of research paper. It is not necessary that both editor and editorial board are satisfied by the research paper. The responsibility of the matter of research paper/article is entirely of author.
2. Editing of the Indian Journal of Applied Research is processed without any remittance. The selection and publication is done after recommendations of atleast two subject expert referees.
3. In any condition if any National/International University denies accepting the research paper published in IJAR, then it is not the responsibility of Editor, Publisher and Management.
4. Only the first author is entitle to receive the copies of all co-authors
5. Before re-use of published research paper in any manner, it is compulsory to take written permission from the Editor-IJAR, unless it will be assumed as disobedience of copyright rules.
5. All the legal undertaking related to Indian Journal of Applied Research is subject to Ahmedabad Jurisdiction.
7. The research journal will be send by normal post. If the journal is not received by the author of research papers then it will not be the responsibility of the Editor and publisher. The amount for registered post should be borne by author of the research paper in case of second copy of the journal.

Editor,

Indian Journal Of Applied Research

8-A, Banans, Opp. SLU Girls College, New Congres Bhavan, Paldi,
Ahmedabad-380006, Gujarat, INDIA

Contact.: +91-9824097643 E-mail : editor@ijar.in

Index

Sr. No	Title	Author	Subject	Page. No.
1.	Assay Of Triphenylmethane Reductase Enzyme And PCR-Based Identification Of TMR Gene In Enterobacter Asbriae Strain XJUHX-4TM	Tina Mukherjee, Moumita Bhandari, Manas Das	Biotechnology	1-2
2.	An Analysis Of Growth Of Credit Card Industry	Dr. A. Vinayagamoorthy, K. Senthikumar	Commerce	3-5
3.	Impact Of Pre-Merger And Post Merger On Financial Performance (With Reference To Private Sector Banks)	Dr. Shital Vekariya	Commerce	6-8
4.	Relativity On Climate And Competencies In Human Resource Development With Reference To Neyveli Lignite Corporation Ltd,	S. Jayakumar. Dr. R. Ramachandran	Commerce	9-11
5.	Human Resource Outsourcing: A Strategy For Gaining Competitive Advantage	Dr. Santosh M. Singh	Commerce	12-13
6.	Relationship Between EVA And ROI And MVA (A Case Study Of Ten Manufacturing Industries In India)	Dr. Shivani Gupta	Commerce	14-15
7.	Modeling The Traits Of An Effective Teacher At Higher Education	Dr. Haridayal Sharma	Commerce	16-17
8.	Mahatma Gandhi National Rural Employment Guarantee Act (Mgnrega): Issues And Challenges	Dr. Mohd. Ashraf Ali, Mushtaq Ahmad	Commerce	18-20
9.	Standardisation And Grading	Viram. J. Vala, Dr. Vijay Kumar Soni	Commerce	21-22
10.	Profitability Of Selected Information Technology Companies In India	Dr. M. Jegadeeshwaran, C. Udaya	Commerce	23-25
11.	Emerging Trends In The Indian Media And Entertainment Industry	Dr Mahalaxmi Krishnan	Commerce	26-27
12.	Inventory Management Strategies And Control Techniques: An Empirical Investigation Of Small Scale Industries	Vipul Chalotra, Neetu Andotra	Commerce	28-30
13.	A Study On Performance Indicators Of Commercial Banks	Dr. G. Ganesan, P. Parthasarathy	Commerce	31-33
14.	Improved Approaches To Coreference Resolution In Machine Learning	Kuldeep Singh Raghuwanshi, Ashwini Kumar Verma	Computer Science	34-37
15.	Security Issues & Controls In Cloud Computing	V. Naga Lakshmi	Computer Science	38-40
16.	Human Development Index Of De-Notified Nomadic Castes In Maharashtra Division: A Study Of Jalna And Aurangabad Districts	Dr. Ashok Pawar	Economics	41-43
17.	Public Private Partnership In Rural & Urban Projects In India	Dr. Ashok S. Pawar, Dr. Shankar B. Ambhore	Economics	44-45
18.	Populace Insight On Development In Public Health Sector Of India Subsequent To Functioning Of National Rural Health Mission	Krishnakant Sharma	Economics	46-49
19.	Problems Of Rural Women Entrepreneurs In India: A Conceptual Overview	C. Jeyasri Usha N Devi, Dr. A. Sankaran	Economics	50-52
20.	Poverty Of Banjara And Vanjari Communities In India	Tidke Atish S., Dr. Pawar Ashok S.	Economics	53-54
21.	India And China: Economic Reforms And WTO	Dr. Surinder Kumar Singla, Dr. Kulwinder Singh	Economics	55- 56
22.	Implementing Life Skill Education Strategies In Teaching – Learning Process	R. Kalaiselvi, Dr. A. Palanisamy, Dr. A R. Saravanakumar	Education	57-59

23.	Utilisation Of Modern Technology By The Teachers In Pupil Processing Organisation	Dr. P.Paul Devanesan, Dr A. Selvan	Education	60-61
24.	Impact Of Vocational Training On Students	K.Sudha Rani, G.Umapathi, Dr. T. Ananda,	Education	62-63
25.	A Study On Emotional Intelligence Of Secondary School Teachers	Dr. Umme Kulsum, Prathima H.P.	Education	64-66
26.	The Efficiency Of Feedback Strategy Of Homework On The Development Of 10th Grade EFL Writing Skill In Al-Karak Educational Directorate	Majid Al- Khataybeh, Areej Al-Shourafa`	noitacudE	67-74
27.	Perspectives Of Stress Management In Education System	M. Meenakshisundaram, G. P. Raja, Dr. A R. Saravanakumar	Education	75-76
28.	Attention Regulation Of Meditators And Non-Meditators Of Class IX	G. Madhavi Kanakadurga, Dr. D. Vasanta Kumari,	Education	77-78
29.	Role Of Psychoeducation In Teaching – Learning Process	Dr. A R. Saravanakumar, Dr. A. Balu, Dr. S. Subbiah	Education	79-80
30.	Microcontroller Driven RGB Led System For Tristimulus Surface Colorimetry	T. N. Ghorude, A. D. Shaligram	Electronics	81-83
31.	Pmgsy And Rural Roads Development In India: Economic, Financial And Maintenance Issues	K.C. Manjunath	Engineering	84-86
32.	Routing Packets On A Chip.	Naren V Tikare	Engineering	87-89
33.	Finding The Nearest Neighbors In Biological Databases	Er. Pankaj Bhambri, Dr. O.P. Gupta, Er. Franky Goyal	Engineering	90-92
34.	Factors Affecting The Sustainability Of The Asphalt Roads: A Case Study Of Irbid Inner Ring Road, Jordan	Eng. Nasr Ahmad Dr. Mihai Iliescu	Engineering	93-94
35.	Physical And Chemical Testing Of Compounded PVC	Sapna Dabade, Dr. Dheeraj Mandloi, Deepak Khare	Engineering	95-96
36.	Impact Of Organic Farming On Yield Of Some Common Crops- A Case Study.	Namrata D. Awandekar	Environmental Science	97
37.	Hydrogeologic Settings Of The North And South Brahmaputra Plains In Upper Assam: A Comparative Study	Dr. Uttam Goswami	Geology	98-100
38.	To Study Staffing Pattern In Rajasthan Public Healthcare Delivery System.	Dr. Ashwin G. Modi, Sushman Sharma	Healthcare	101-105
39.	Work And Health: A Situational Analysis Of Factory Workers	Dr. S. S. Vijayanchali, Dr. E. Arumuga Gandhi	Home Science	106-108
40.	Performance Of Camel Kid Hair: Acrylic Blended Yarn And Knitted Fabric	Suman Pant, Anjali Sharma	Home Science	109-110
41.	Impact Of Holistic Nutrition Education Package On Diabetes Mellitus Control In Middle Aged Women	Dr. Anjali Rajwade	Home Science	111-112
42.	Assessment Of Relationship Between Ida And Personal Hygiene, Nutritional Knowledge And Dietary Practices In Adolescent Girls	Dr. Anjali Rajwade	Home Science	113-114
43.	Employee Attrition And Retention In Private Insurance Sector– A HRM Challenge	Dr. J. Senthil Vel Murugan, S.Bala Murugan	Human Resource Management	115-117
44.	A Study On Impact Of Unionism On Industrial Relations In Manufacturing Sector	Jaya Ahuja	Industrial Relations	118-120

45.	Augmentation Of India's Foreign Exchange Reserve: An Analysis	Dr.S P.Mathiraj, Ar.Annadurai	International Business	121-123
46.	Films – A Techno Literary Art Form	Dr. Dipti Mehta	Literature	124-125
47.	Indirect Models Of Reading To Develop Descriptive Writing	Dr. K. Madhavi	Literature	126-128
48.	Ramkrishna Mishra Ke Upanaso Me Rajnetaik Chetavni	Dr. Sanjay Rathod, Dilip Jhadav	Literature	129
49.	Hindi Kavita Me Nari Jivan Ka Badla Swarup	Dr. Sanjay Rathod	Literature	130
50.	Impact Of IPL Sponsorship On Consumer Buying Behavior With Reference To Nagpur City	Chandrima Das	Management	131-135
51.	Crowd Sourcing –A New Management Mantra	Devi Premnath, Dr. C. Nateson	Management	136-137
52.	Small Scale Industries In India: An Evaluation Of Productivity In The Post-Liberalized Scenario	Dr. Gaurav Lodha,	Management	138-139
53.	Comparative Analysis Of Milk Products With Respect To Its Competitors With Special Reference To Karnataka Milk Federation (KMF) – At Dharwada City, Karnataka, India	Dr. N. Ramanjaneyalu	Management	140-143
54.	A Study On Work Stress In Women Employees In Coimbatore District	R. Maheswari, N. Brindha	Management	144-145
55.	Accounting For Carbon Credits	Dr. Gaurav Lodha	Management	146-148
56.	A Literature Review On The Relationship Between Training (As A Core Responsibility Of HRM) And Firm Performance.	Priya Sharma, Dr. S. L. Gupta	Management	149-152
57.	A Study On Agricultural Marketing Practices And Constraints With Special Reference To Paddy / Rice.	CM Maran, Dr Raja Pranmalai	Management	153-156
58.	Performance Of Share Price Of Indian Public Sector Banks And Private Sector Banks - Comparative Study	V. Prabakaran, D. Lakshmi Prabha	Management	157-158
59.	Intuitionistic Fuzzy Primary And Semiprimary Ideal	Dr. M.Palanivelrajan, S.Nandakumar	Mathematics	159-160
60.	Significance Of Umbilical Artery Velocimetry In Perinatal Outcome Of Fetuses With Intrauterine Growth Retardation.	Dr G S Shekhawat	Medical Science	161-163
61.	Large Adult Sacrococcygeal Teratoma: A Case Report And Review Of Literature.	Dr.Yavalkar Pa, Dr. Naik Am.	Medical Science	164-165
62.	Epidural Steroid In Low Back Ache	Dr. B. L. Khajotia, Dr. Neelam Meena	Medical Science	166-167
63.	A Comparative Study Of Second Trimester MTP With Use Of Vaginal Misoprostol And Extra Amniotic Instillation Of Ethacridine Lactate.	Dr. Ketaki Junnare, Dr. Sameer Darawade, Dr. Priyamvada Shah, Dr. Swati Mali.	Medical Science	168-169
64.	A Novel Surgical Approach For Treatment Of Sui –TVT Obturator Tape	Dr. Ketaki Junnare, Dr. Durga Karne, Dr Neelesh Risbud.	Medical Science	170-171
65.	Advantage Of Fallopian Tube Sperm Perfusion Over Intra-Uterine Insemination When Used In Combination With Ovarian Stimulation For The Treatment Of Unexplained Infertility.	Dr G S Shekhawat, Dr Pushpalata Naphade	Medical Science	172-175

66.	"Bilateral Sertoli-Leydig Cell Tumor In Postmenopausal Female" A Case Report	Dr. Priyamvada Shah, Dr. Ketakijunnare, Dr. DurgaKarne	Medical Science	176-178
67.	Pretreatment With Ephedrine For Prevention Of Pain Associated With Propofol Injection.	Dr. Kavita U Adate, Dr. Jyoti A. Solanki	Medical Science	179-181
68.	Does The Structured Teaching Programme Influence The Knowledge About Physical Wellbeing Of School Children? A Quasi Experimental Study.	Dr. S. Valliammal, Dr. Ramachandra, Raja Sudhakar	Nursing	182-184
69.	An Approach For Information Retrieval For Bookstores Using Formal Ontology	Sumit Jain, C.S.Bhatia	Ontology	185-187
70.	Analgesic Activity Of Anacardium Occidentale	A. Devadoss, C. Aparna, K. Parimala, D. Sukumar	Organic Chemistry	188-190
71.	Behaviourism : Science Or Metaphysics	Dr. Jatinder Kumar Sharma	Philosophy	191-193
72.	Multi-Dimensional Perspectives Of Obesity And Its Management	S. Dhanaraj, Dr. A. Palanisamy	Physical Education	194-196
73.	Refractive Index, Density, Excess Molar Volume, Excess Molar Refraction For Liquid Mixtures (Ethyl Ethanoate + Benzene Derivatives) At Different Temperatures	Sheeraz Akbar, Mahendra Kumar	Physics	197-199
74.	Refractive Indices, Densities And Excess Properties For Liquid Mixtures (Cetane + Alkanols) At Different Temperatures	Sheeraz Akbar, Mahendra Kumar	Physics	200-202
75.	Capacity Building For Effective Local Governance: Indian Perspectives	Dr. Pralhad Chengte	Political Science	203-205
76.	Psychological Well-Being: A Study Of Non-Institutionalized Aged	Dr. Pankaj S. Suvera	Psychology	206-208
77.	Women Empowerment Through N R E G S (With Reference To State Of West Bengal)	Dilip Kumar Karak	Social Sciences	209-211
78.	Effect Of Selected Yogic, Aerobic And Laughter Exercises On Blood Pressure Of High School Boys	Dr.Manjappa.P, Dr.Shivarama Reddy. M	Sports	212-216
79.	Association Study Between Lead And Copper Accumulation At Different Physiological Systems Of Goat By Application Of Canonical Correlation And Canonical Correspondence Analyses	Partha Karmakar, Debasis Mazumdar, Seema Sarkar (Mondal), Sougata Karmakar	Statistics	217-219
80.	Development Of Silver -Silica Nanocomposite For Novel Humidity Sensing Application	Surender Duhan	Technology	220-221



A Literature Review On The Relationship Between Training (as A Core Responsibility Of HRM) And Firm Performance.

* Priya Sharma ** Dr. S. L. Gupta

* Research Scholar, Singhania University, Rajasthan

** Professor and Doctoral Research Coordinator, BIT Mesra, Noida Campus, Noida, U.P.

ABSTRACT

Large and small companies need training if they are to thrive. A simple approach to training can be the best way to achieve excellence. There are many researchers who explored the training and its important role in improving firm performance as well as some has been criticized it as too expensive and non transferring to the job. Some studies have find the impacts of training on firm performance while some have got failed on that. This article aims to understand the effects of training on firm performance by reviewing theory and previous empirical studies on the relationship between HRM, training and firm performance. The paper aims to describe the importance of HRM and its approaches towards employee training. It also describes the important theoretical approaches and proposes a framework for analyzing training and firm performance issues. Furthermore, HRM strategy does moderate the training performance relationship. Finally, the article discusses and identifies the limitations of previous studies and directions for future research on this topic.

Keywords : Training and Firm performance, HRM and Firm performance, Training

Introduction

Training is the act of increasing the knowledge and skills of an employee for performing a particular job. The major outcome of training is learning. HRM is known as the central business concern, as matters related to policies, practices, and systems that shape employees' behavior, attitudes, and performance (Noe, Hollenbeck, Gerhart & Wright, 2000). One important role that HRM plays is training. Training is a planned and systematic effort to modify and develop knowledge, skill, competency and attitude toward learning experience to achieve effective performance through work productivity (Buckley & Caple, 2004).

HRM and firm performance have become the foundation of a new era of managing a diversified workforce in the advent of globalised world. Thus, understanding the relationship between HRM and firm performance would serve as a platform for companies' managers, to assist them in achieving better performance. Hence the main purpose of this study is to investigate whether certain components of HRM such as training, influence firms' performance. This study assumes that answers to such questions would have relevant implications for the business growth and further enhance a firms' market value.

This review is organized as follows. First, the paper reviews the studies that have estimated the effect of training on firm performance and the relationship between HRM and firm performance by using firm level data of a large sample of firms or detailed data from one specific company. Second, in explanation of the review results the article briefly summarizes advantages and disadvantages of both the approaches using data from a large sample of firms and of one specific company, as well as measuring the effect on firm performance. Third, the paper also summarizes how previous studies have measured and estimated the impact of training on firm performance. Finally, the article discusses theoretical and

methodological issues, limitations of prior studies, as well as providing suggestions and directions for future research on this topic.

Literature Review

The knowledge and skills of workers acquired through training have become important in the face of the increasingly rapid changes in technology, products, and systems. Most organizations invest in training because they believe that higher performance will result (Alliger, et al. 1997, Kozlowski, et al. 2000). However, the theoretical framework for the relationship between training and firm performance has been subject to considerable debate. Devanna, Formbrun and Tichy (1984) proposed a model which emphasizes the interrelatedness and coherence of human resource management (HRM) policies and performance. According to their model, training and other HRM activities aim to increase individual performance, which is believed to lead to higher firm performance.

Guest (1987) developed a theoretical framework to show how HRM policies can affect human resources and organizational outcomes. The strength of Guest's model is it is a valuable analytical framework for studying the relationship between HRM policies and organizational performance, because it expresses pathways for more careful, clear and ease of empirical testing. He saw commitment as a vital outcome, concerned with the goals linking employees with firm performance as the goal of quality is important to ensure the high quality of products and services. Therefore, training and development policy play an importance role in HRM and contribute to improved strategic integration, employee commitment, flexibility and quality. HRM outcomes can then lead to high job performance, high problem solving activity, high cost effectiveness, and low turnover, reduced absences and fewer grievances.

Another theoretical framework which emphasizes the interrelatedness and the coherence of HR practices, firm strategy and firm level outcomes is presented by Wright and McMahan (1992). They present six theoretical models from the fields of organizational theory, finance and economics. Three of them (resource based view of the firm, cybernetic systems, and behavioral perspective) consider the relationship between HRM, training and firm performance.

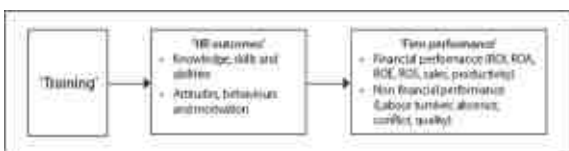
HRM faces challenges of bringing better fitted workers into the organizations and meeting the workers' needs and expectations. Thus, there is a compelling demand to develop better ideas, strategies to improve the interface between employees and employers, and to elaborate comprehensive insight that can help human resource managers get better results and improved performance (Vigoda & Cohen, 2003). The relationship between human resource management (HRM) and firm performance has received extensive considerable attention from researchers in recent years (e.g., Li, Zhao, & Liu, 2006; Sanchez, Jimenez, Carnicer, & Perez, 2007; Lin & Chen, 2007). A vast amount of research has proved the positive relationship between HRM and firms' performances in terms of sales revenue, profitability, net asset ROI, and market share (Huselid, 1995; Schuler & Jackson, 1987; Hill & Rothaermel, 2003).

To summarize, These authors have put training on a set of HRM policies and consider training as an important and vital policy for improving knowledge, skills, attitude and motivation of employees. Second, the HR system is a complex set of policies designed to manage labor in the organization and integrate into organizational strategy in order to create high performance for an organization. Third, this review of theoretical models linking training to firm performance also suggests that it is explicitly recognized that no organization can attain its goals or organizational strategy without labor that has the right knowledge, skills, abilities, behavior, and attitudes. Therefore, training plays an important role in improving the quality of employees directly and effecting on firm performance through HR outcomes.

A Framework for Analyzing Training and Firm Performance Issues

To contribute to the theoretical literature, a theoretical framework was developed and proposed to fulfill the requirement for analyzing HRM, training and firm performance issues. This framework is shown in Figure 1 and Figure 2. Figure 1 is based on the fundamental premises of training processes, HR outcomes and firm performance. Training is predicated on contributing to higher level group and organizational objectives, results and performance. A number of HR outcomes and firm performance, which are important in analyzing the relationship, are enumerated in the second and third box. Attention is drawn to some of the critical variables. Figure 1 shows that training affects the overall knowledge, skills, abilities, attitudes, behaviors, and motivation of employees. HR outcomes have a direct impact on firm performance. In Figure 2 this framework is more complex than that in Figure 1 because it implies interactions between training and organizational strategies, and how these strategies relate to training and firm performance relationships.

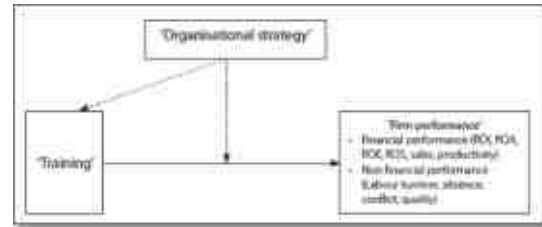
Figure 1 : A framework for analyzing training and firm performance issues



In the long run, striving to enhance HR outcomes will lead to favorable consequences for firm performance (i.e., financial and non financial performance). Therefore, to determine whether training enhances the performance of the organization, financial performance, or non financial performance, a process of HR outcomes and firm

performance assessment must be considered together in real situations in order to reach a consensus on its meaning. With respect to the performance being used in this model a distinction can be made between financial and non financial performance. Financial performance in this context is linked to indicators like return on investment (ROI), return on assets (ROA), return on equity (ROE), return on sales (ROS), sales, market share and productivity. Non financial performance includes labor turnover, absence of employees, conflict, quality of product, service and innovation.

Figure 2 : Training, organizational strategy, and firm performance



Research Methodology

Sample

The main focus of the review presented in this paper is on research published in many different journals across a number of disciplines from 1991 to 2011, that have assessed the relationship between HRM, training and firm performance. Major psychological, managerial, or business journals (like., International Journal of Economics and Finance, Personnel Psychology, Research and Practice in HRM, International Journal of Human Resource Management and Journal of Operational Management) and working papers (Faculty of Economics, Portugal University, Stockholm School of Economics in Russia), books (American Society for Training and Development) were scanned for articles containing related information and data. In total, 70 studies were found that could be used for this purpose.

The measurement of training and firm performance or HRM and firm performance varied across the studies. Some studies use a single item to measure training or performance, whereas others use multiple training and firm performance measures. For example, Zwick (2006) used data on 2079 establishments from the Germany Institute for Employment Research to analyze of the impact of training intensity on establishment productivity, whereas Carl Fey, Sergey, Hyeong and Ingmar (2007) used a unique data set of subsidiaries of 241 companies operating in Russia, USA, and Finland. Dag H. Olsen, Tom R. Eikebrokk (2009) ,examines the 339 small and medium sized enterprises in three European countries to find the relationship between training, competence and performance. Therefore, there are a number of challenges in reviewing the results of these studies because of a lack of consistency in their calculation and measurements.

Procedure

To develop an integrated view on empirical evidence for the effects of training on firm performance, this article used selective and descriptive analysis. This action followed opportunity to reanalyze the data from the previous studies. For comparative reasons, the article divided previous studies into two groups: 1) previous studies using data from a large sample of heterogeneous firms, and 2) previous studies using data from a specific company survey. In the first group, there are 52 studies for the study review. The studies of this group have estimated the impact on training on firm performance by using firm level data collected through mail, phone surveys or archival data. In the second group, 14 were found to assess the relationship between HRM, training and firm performance.

With respect to firm performance the article aimed to extract clear empirical evidence and discussions on the unique effects of training on firm performance. Firm performance in the studies was reduced into two categories:

1) financial firm performance (ROI, sales, productivity, profit, market share), and 2) non financial firm performance (turnover, absenteeism, job satisfaction, motivation). However, some studies measured both financial and non financial indicators at the same time. Clarifying the understanding training and financial performance (or non financial performance) from the current literature and proposed directions for future research on this topic was undertaken.

Findings

Results from the Studies of Large Samples of Firms

In this section 56 studies that have estimated the impact of training on firm performance by using firm level data from a large sample of firms are reported. The advantage of the previous studies is that it could be generalized to other companies, whereas a case study could not express the problem in general. The statistics of these companies shows that most studies frequently estimated the effects of training on financial performance (47 studies or 90% of the total studies used a large sample of firms), followed by both financial performance and non financial performance (25 studies or 48% of the total studies used a large sample of firms) and non financial performance (five studies or 10% of the total studies used a large sample of firms).

The kinds of training used for estimation differ throughout the studies. For instance, Barrett and O'Connell (2001) estimated the productivity effects of general training, specific training, and all types of training combined. They found that general training was more related to sales growth when the firms had greater investment in capital than less. Alternatively, Ahmad and Schroeder (2003) estimated the effects of training in job skills and cross training on operational firm performance. Their results showed that training was only related to operational performance through its effect on organizational commitment within the plants, whereas Fey, et al. (2000) concentrated on the influence of technical and non technical training on overall firm performance.

To summarise, the review of previous studies of large samples of firms provides an interesting picture of the relationship between HRM, training and firm performance. They might not, however, accurately control for data, complex production processes, and other factors (e.g., new technology, a change in products, or labour market conditions) besides training.

Results from the Case Studies

A total of 14 case studies, that estimated the influence of training on firm performance, was collected for review purposes. The types of training differ across the studies. For example, Krueger and Rouse (1998) examined the effects of reading, writing and mathematics training on ROI, turnover, absenteeism and job performance, whereas Phillips (1994), in the case of the Coca Cola bottling company of San Antonio, estimated the impact of motivation, performance and appraisal training on ROI, sales, reduced waste and absenteeism. ROI is one of the firm financial indicators and appears in 100 per cent of the case studies in this section. It could also mean that training decisions depend a lot on a return to this form of human capital investment.

In summary, the firm case study approach overcomes the problems of the large sample and a lack of insufficient data for estimation. In addition, the approach considers training and measures firm performance in more detail as well as accurately controlling other factors besides training (e.g., firm characteristics, new technology) that influence firm performance. Another advantage of the case study approach (except the case studies of Bartel 1995, and Krueger and Rouse 1998) is that it tracks the performance measures over a sufficient time period to reach an exact and reliable assessment. However, these case studies could not avoid some problems such as companies not wanting weak results publicised, the use of subjective evaluation of trainees' performance or sample selection of trainees for measurement and estimation and design assumptions.

Effects of Training on Financial Firm Performance

Based on the framework for analyzing training and firm performance issues in Figure 1 and Figure 2, there are 61 previous studies that estimated the effects of training on financial performance (or 94% of the total of 65 studies). To summarise, the review results indicated that there was a significant difference between types of training, types of financial performance indicators and impacts of training on financial performance indicators in these studies. In 61 studies (94% of the total studies) related to financial performance indicators, these authors seem to concentrate on measuring firm performance by financial indicators and most of them demonstrate that training has a positive and significant influence on financial indicators.

Effects of Training on Non Financial Firm Performance

According to the framework in Figure 1, 36 studies examined the impact of training on non financial performance (or 55% of the total of 65 studies) such as turnover, quality, absenteeism and customer satisfaction. With respect to turnover, a majority of other studies also found that training had a positive effect on labor turnover. These results suggest that turnover has a powerful effect on employer decisions to provide training to employees. Other studies have estimated the impact of training on quality, absenteeism, and customer satisfaction. To summarize, it is not surprising that firms invest in training in order to improve non financial performance. It may mean that some non financial performance indicators also play an important role in organizational strategy. Therefore, some studies have estimated and measured the influence of training on non financial performance.

Suggestions

As expected, training has a variety of positive effects on the financial and nonfinancial firm performance. These effects might be much broader than the results of many previous studies suggest. It means that these effects are of considerable importance in terms of both theory and managerial implications. Therefore, it is necessary to identify and develop potential ideas for discussion and provide suggestions and directions for future research on this topic.

The reviews see an opportunity for future research in the theoretical explanation of why training might help to increase firm performance. As presented in the theoretical framework for analyzing training and firm performance issues (that are shown in Figure 2), training has directly improved HR outcomes (e.g., knowledge, skills, abilities, attitudes, behaviors' and motivation of employees). Highlighting this feature provides a point of departure for future research, namely, to test the mediating effects of HR outcomes, which could be useful in unraveling the relationship between training and firm performance.

Second, although the presented review shows that training can have positive and significant effects on firm performance in specific sectors (the steel and software industries), corresponding research in other sectors (e.g., food and tobacco, textiles and clothing, chemicals and petroleum, banking and finance) will probably have different effects or views on the relationship between training and firm performance.

Third, the previous studies have estimated the effects of training on firm performance in many specific jobs and countries. However, most of these studies have been implemented in developed countries (e.g., Bishop 1991, Barrett & O'Connell 2001, Aragon-Sanchez, et al. 2003, Faems, et al. 2005), whereas the relationship between training and organizational performance is not adequately addressed and studied in developing countries. Therefore, there is an opportunity for future research to examine the influence of training on firm performance relative to features of job characteristics, as well as a specific country.

Finally, this research may be important for practitioners dealing with training and firm performance in the workplace. Training is a valuable path to follow when an organization would like to improve its performance. For instance, a company could measure types of training for their employees (workers, supervisors, managers) in order to gain a better understanding of how different types of training influence financial and non financial performance indicators. Managers could then decide when and how to provide training programs for their employees in order to obtain their best performance.

Conclusion

This study provided a review of the literature on human resource and training and its effect on firm performance, and it developed and proposed a framework for analyzing training and firm performance issues in order to assess the advantages and disadvantages of many previous studies, to suggest directions for future research, and improve the accuracy of the research results in the future on this topic.

Data from previous studies were used to assess the effects of training on firm performance. There were two approaches to gauge the impact of training on firm performance, namely the studies that use firm level data from a large sample of firms and the case study approach. Based on the firm performance measures used in previous studies firm performance was classified into financial firm performance and non financial firm performance. The review offers new directions for future research that has potential to guide practitioners and managers to decide on their human capital investment plans and provide training for their employees.

REFERENCES

- Aragón-Sánchez, A., Barba-Aragon, I., & Sanz-Valle, R. (2003). Effects of training on business results. *International Journal of Human Resource Management*, 14(6), 956-980. | Bartel, A. P. (2000). Measuring the employer's return on investments in training: Evidence from the literature. *Industrial Relations*, 39(3), 502-524. | Becker, G. S. (1962). Investment in human capital: A theoretical analysis. *Journal of Political Economy*, 70(1), 9-49 | Bernthal, P., & Wellins, R. (2006). Trends in leader development and succession. *Human Resource Planning*, 29(2), 31-40. | Bishop, J. (1991). On the job training of new hires. In D. Stern & J. M. M. Ritzen (Eds.), *Market failure in training?* (61-94). New York: Springer-Verlag. | Delaney, J. T., & Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. *Academy of Management Journal*, 39(4), 949-969. | Fey, C., Björkman, I., & Pavlovskaya, A. (2000). The effect of HRM practices on firm performance in Russia. *International Journal of Human Resource Management*, 11(1), 1-18. | Kalleberg, A. L., & Moody, J. W. (1994). Human resource management and organizational performance. *American Behavioral Scientist*, 37(7), 948-962. | Ngo, H. Y., Turban, D., Lau, C. M., & Lui, S. (1998). Human resource practices of firm performance of multinational corporations: Influences of country of origin. *International Journal of Human Resource Management*, 9(4), 632-652. | Tzafir, S. (2005). The relationship between trust, HRM practices and firm performance. *International Journal of Human Resource Management*, 16(9), 1600-1622. | Wright, P.M., & Snell, S.A. (1991). Toward an integrative view of strategic human resource management. *Human Resource Management Review*, 1(3), 203-225. | Zheng, C., Morrison, M., & O'Neill, G. (2006). An empirical study of high performance HRM practices in Chinese SMEs. *International Journal of Human Resource Management*, 17(10), 1772-1803.



Sara Publishing Academy
Indian Journal Of Applied Research
Journal for All Subjects



Editor,
Indian Journal Of Applied Research
8-A, Banans, Opp. SLU Girls College,
New Congres Bhavan, Paldi, Ahmedabad-380006.
Contact.: +91-9824097643 E-mail : editor@ijar.in

Printed at Unique Offset, Novatsing Rupam Estate, Opp. Abhay Estate, Tavdipura, Shahibaug, Ahmedabad