International Journal of Applied Research 2016; 2(8): 725-730

ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2016; 2(8): 725-730
www.allresearchjournal.com
Received: 16-06-2016
Accepted: 17-07-2016

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Training for employee's productivity in automobile industry

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Abstract
Training is one of the most important human resource development activities in Indian Automobile Industry. Different styles and methods of training are adapted for the skill and knowledge development of human resource. All these activities focus on improvement of employee's productivity. Extensive studies have taken place on Employee training and productivity, but very few studies have taken place to analyze the impact of training on employee's productivity. This study has evaluated the impact of training on employee's productivity. SPSS 19 was used as statistical package for data analysis. ANOVA, Correlation, regression, and percentage analysis were done to reach to the conclusion. A model for estimation of impact of training on employee's productivity in Automobile Industry was developed. It was found that training has positive and significant impact on employee's productivity in Indian Automobile industry.

Keywords: Training, employee productivity, automobile industry, impact of training

Introduction
Human resource is the life blood of every organization. Only through excellently trained personnel, an organization can achieve its goals. Employees are the most valuable asset of every company as they can make or break a company's reputation and can affect the profitability. Employees are responsible for the activities of the organization, customer satisfaction as well as the quality of products and events. Without proper training, employees both new and existing do not receive the information and develop the skill sets necessary for accomplishing their tasks at their maximum potential.

Training
Training changes uninformed employees to informed employee; unskilled or semiskilled workers into skilled employees who can do their assigned tasks in the best way the organization wants them to do. Therefore, Training and Development can be seen as a mixture of activities aimed at improving the performance of personnel in organizations for the attainment of continuous improved productivity.
The Training and Development of employee is an issue faced by every organization. Enormous variation is visible in the amount, quality and quantity of training provided in different organizations. According to Cole (2002) [5] factors influencing the quantity and quality of training and development activities include; the degree of change in the external environment, the degree of internal change, the availability of suitable skills within the existing work-force and the extent to which management see training as a motivating factor in work.
The innovative technologies and advancement, competition from other firms, and the demand for ultra-modern products by customers force the Automobile industry to keep their employees up-to-date for facing the challenges. As the speed of the technological advancement increased and the information network got strong base, the globe is becoming a small village were all are inter connected and inter related.

As far as employee training is concerned in the automobile industry there can see a tremendous diversification due to the vast technological usage. The face of Automobile industry has changed from the mechanical oriented industry to a multi-disciplinary industry which is leading to a diversified training platform.

Productivity

A very early appearance of the term productivity was as used by Quesnay (1766) in the Journal del' Agriculture over two centuries ago. Since then it has been applied in many different circumstances at various levels of aggregation, particularly in relation to economic systems (Tangen, 2002a) [31]. It has been argued that productivity represents one of the most important basic variables governing economic production activities (Singh *et al.*, 2000) [27, 28]. Grossman (1993) [11] discusses productivity improvement as one of the key competitive advantages of an enterprise in the following way: Companies need to realize that gains in productivity are one of their major weapons to achieve cost and quality advantages over their competition.

Basic definition of productivity

Depending upon who is defining it - whether it is an economist, accountant, manager, politician, union leader, or industrial engineer - you will get a slightly different definition of the term productivity. However, if we closely examine the various definitions and interpretations of this term, three basic types of productivity appear to be emerging. For the purpose of this text, we shall refer to these basic forms as follows.

Partial Productivity: It is the ratio of output to one class of input. For example, labour productivity (the ratio of output to labour input) is a partial productivity measure. Similarly, capital productivity (the ratio of output to capital input) and material productivity (the ratio of output to materials input) are examples of partial productivity.

Total-factor productivity: It is the ratio of net output to the sum of associated labour and capital (factor) inputs. By net output, we mean total output minus intermediate goods and services purchased. Notice that the denominator of this ration is made up of only the labour and capital input factors.

Total productivity: It is the ratio of total output to the sum of all input factors. Thus, a total productivity measure reflects the joint impact of all the inputs in producing the output.

Productivity concept in manufacturing is analysed in the scope of organization, but in the service sector this scope is larger and involves an external element from the organizational position customer. Some of the service organizations reduce an input element by including customer to their activity and thus boosting service productivity.

In spite of the fact that productivity is seen as one of the most vital factors affecting a manufacturing company's competitiveness, many researchers argue that productivity is often relegated to second rank, and neglected or ignored by those who influence production processes (Singh *et al.*, 2000; Sink and Tuttle, 1989; Broman, 2004) [27, 28, 29, 4]. One possible reason for this is the lack of common agreement on what the term actually represents. Though the term is widely used, it is often misunderstood, leading to productivity being disregarded or even to contra productive decision making (Tangen, 2002b; Forrester, 1993) [32, 8]. Chew (1988) suggests that even though the concept of productivity has existed for a long time, remarkably many people who make decisions every day about improving plant efficiency do not know how to answer the simple question of what productivity is. Bjorkman (1991) suggests that decisions on productivity improvement are often based on individual opinions instead of on a shared and commonly held view. A relatively simple review of the literature suggests that:

- Those who use the term productivity rarely define it.
- There is a lack of awareness of the multiple interpretations of the term, as well as the consequences, to which such discrepancy leads.
- There are both verbal and mathematical definitions and approaches.

Productivity is a multidimensional term, the meaning of which can vary, depending on the context within which it is used. However, there are common characteristics that tend to be embraced by the term. In industrial engineering, productivity is generally defined as the relation of output (i.e. produced goods) to input (i.e. consumed resources) in the manufacturing transformation process (Sumanth, 1994) [30].

Mathematical definitions, on the other hand, can be used as the basis of performance measures, where the major aim is to improve (not to explain) productivity. Since it can be difficult to translate a verbal definition to a mathematical one, mathematical definitions do not always reflect all the characteristics that represent the concept of productivity.

Compromises are often made when mathematical definitions are formulated, which in turn means that they usually only show a part of the "true" meaning of productivity. Broman (2004) [4] suggests that it is necessary to have a clear distinction between a concept and a particular mathematical definition attached to the concept, in order to effectively evaluate the characteristics of the mathematical definition.

Background of the Study

Indian Automobile Industry is one of the leading Global Automobile Industry and is trying to reach to the top position. For achieving this goal, it is doing their level best to train their employees so that the productivity will be enhanced and optimised. So many studies have been taken place on the training process in Automobile Industry and is a major concern for the management. But not much study is carried out to analyse the impact of these training practice on employees. It is at this juncture this study gain significance.

Objective of the study

To study and evaluate the impact of training on Employee's productivity in Indian Automobile Industry.

Hypothesis

H01: There is no significant impact of training on employee's productivity in Automobile Industry.

Literature Review

According Cole (2002) [5] in his book Personnel and Human Resource Management, training is a learning activity directed towards the acquisition of specific knowledge and skills for the purpose of an occupation or task. The focus of training is the job or task for example, the need to have efficiency and safety in the operation of particular machines

or equipment, or the need for an effective sales force to mention but a few.

Linda Maund (2001) [19] in his book An Introduction to Human Resource Management, theory and practice, stated that "one of a manager's most important jobs is to manage the employee development of an employee which includes his/her personal growth and career development."

Human resource development is the integration of individual, career and organization development roles in order to achieve maximum productivity, quality, opportunity and fulfilment of organizations members as they work to accomplish the goals of the organization (Pace, Smith & Mills 1991) [22].

Training is a type of activity which is planned, systematic and it results in enhanced level of skill, knowledge and competency that are necessary to perform work effectively (Gordon 1992) [10].

Firms can develop and enhance the quality of the current employees by providing comprehensive training and development. Research indicates that investments in training employees in problem-solving, decision-making, teamwork, and interpersonal relations result in beneficial firm level outcomes (Russell, Terberg, and Powers, 1985; Bartel, 1994) [25, 2].

Previous studies show that the survival of any organization in the competitive society lies in its ability to train its human resource to be creative, innovative, inventive who will invariably enhance performance and increase competitive advantage. Edralin, D.M (2004), Lynton, R.P., Pareek, U (2000) [7, 20], Vemic, J (2007) [7, 3].

Training programs that are consistent with employee and organizational goals and needs and fit with the business strategy will meet with greater success than those that are not (Wexley & Latham, 1991) [34].

Palo, S., Padhi, N (2003) [23] stated in their study titled Measuring Effectiveness of Total Quality Management Training': An Indian Study that training and development is an aspect of human resource practices that help in enhancing employees' skills, knowledge, and competence capable of improving employees' ability to perform more efficiently.

Goldstein, I. L. and Ford, K. (2001) in their book Training in Organizations: Needs assessment, Development and Evaluation said that training and development play a vital role in the effectiveness of an organisation.

Gupta, S., Bostrom, R.P (2006) [12] in their report titled End-User Training Methods: What We Know, Need to Know, found that it is one of the most pervasive techniques for improving employees' performance enhancing organisation productivity in the work place.

Houger V. P (2006) [14] in his research work titled 'Trends of employee performance, Collaborative effort between managers and employees' stated that employees are the indispensable asset and key element of gaining competitive advantage of any organization and training is essential tool for its actualization.

Training has been an important variable in increasing organizational productivity. Most of researches including Colombo and Stanca (2008) [6], Sepulveda (2005) [26] and Konings & Vanormelingen, (2009) [17], showed that training is a fundamental and effectual instrument in successful accomplishment of the firm's goals and objectives, resulting in higher productivity.

Training, together with other activities positively affects results and is associated with a productivity increase and a staff turnover decrease (Arthur, 1994; Huselid, 1995; Ichniowski *et al*., 1997) [1, 15, 16].

(Bernolak (1996) [3] provides a useful verbal explanation of productivity which is related to manufacturing: Productivity means how much and how well we produce from the resources used. If we produce more or better goods from the same resources, we increase productivity. Or if we produce the same goods from lesser resources, we also increase productivity. By "resources", we mean all human and physical resources, i.e. the people who produce the goods or provide the services, and the assets with which the people can produce the goods or provide the services. The resources that people use include the land and buildings, fixed and moving machines and equipment, tools, raw materials, inventories and other current asset.

Research Methodology

Research methodology encompasses the procedures followed to analyse and interpret the data accumulated. These often utilize a range of sophisticated statistical analyses of the data to identify correlations or statistical supremacy in the results. A great deal of research study is involved to develop an efficacious research methodology.

Tools for data collection

To gather the required information for this study, both secondary and primary source of data was used. To collect primary data, close ended structured questionnaires were prepared. These questionnaires were then administered to the employees of automobile industry to collect data. Secondary data had been collected from journals, magazines, news articles, books, internet and other documented material. Primary Data was collected through questionnaire.

Questionnaire design

Questionnaire is divided into 4 sections. First section includes demographic profile of respondents. In second section training was studied with the help of 14 questions. In third section, questions on productivity were included which also had 14 questions. The statements in second and third sections were of 5 point Likert scale to get the response of the respondents. Likert (1932) developed the principle of measuring attitudes by asking people to respond to a series of statements about a topic, in terms of the extent to which they agree with them, and so tapping into the cognitive and affective components of attitudes. According to McLeod, S. A. (2008) [21] Likert Scales have the advantage that they do not expect a simple yes / no answer from the respondent, but rather allow for degrees of opinion, and even no opinion at all. Therefore, quantitative data is obtained, which means that the data can be analyzed with relative ease. The fourth section was open ended for expressing the respondents view.

Demographic data

To study the impact of training on employee's productivity the demographic details were collected. In the first section gender, age, marital status, qualification, experience was included. In the second section data on training need identification, training methods, training evaluation and number of training days were collected. All these data were collected through close ended questions.

Feedback on Training and Productivity

Questionnaire included various aspects of training and employee productivity. A five-point scale where 5 is for

Strongly Agree, 4 is for Agree, 3 is for Un Decided/Neutral, 2 is for Dis Agree and 1 is for Strongly Dis Agree, was used in the questionnaire to find how much a training strategy influence employee and impact on employee productivity.

Open ended question for expressing additional personal views

In this section facility was given for expressing additional views which was optional.

Tools for data analysis/ criteria for data analysis

The results of the survey are coded in the excel sheet. After collecting and coding, data was ready for statistical analysis. For analysis SPSS 19 statistical package was used. Initially all data was imported into SPSS from excel sheet and then series of analysis are applied. ANOVA, Correlation, regression, and percentage analysis were used to test the Hypothesis. Respective test was applied on individual questions to test various hypotheses separately.

Sample design

The geographical region selected for research is the major automobile units located in Pithampur industrial area. Targeted sample was 400 respondents; out of which362 respondent sheets were received from which 290 responses were complete in all aspects and the actual analysis was done on it

Regression Analysis

Regression analysis is a procedure of functional relationship used for prediction. A simple regression analysis was carried out. In simple regression analysis the value of dependent variable depends upon the value of independent variable. It is useful in analysing the relationship between a single dependent variable and independent variable (Hair, Anderson, Tatham, & Black, 1995).

The assumption of the simple regression technique is that the variable is distributed reasonably normally and the relationship between independent and dependent variable is linear. This assumption was checked by reference to all partial plots graphs. It was expected that any relationship identified between independent variables and the dependent variable would be linear. A visual scan was conducted of the partial plots of the variables in the regression analyses, where no evidence of a curvilinear relationship was found. The following section attempted to check how an independent variable is contributing towards dependent variable. Both the variables were standardised and 'F' ratio for analysis of variance (ANOVA) was also estimated. The student t' test was used to test the hypothesis of impact of independent variable on dependent variable.

Impact of Training on Employee's Productivity in Automobile Industry

The resulted regression model is the estimation of impact of training on employee's productivity in Automobile Industry. The results are given in the Table No-1. Employee's Productivity = 2.889E-15+ (0.739 X Training).

It is found that the R square is 0.544. This indicates that the determination power of the regression equation is about 54.4 per cent. This shows that training explain 54.4 per cent variation in employee's productivity in Automobile Industry. The rest of 45.6 per cent of employee's productivity is unexplained in the model. The standard error of the estimates is 0.67495450, which is less than one. The F-ratio (ANOVA) is 346.379 is statistically significant at 1percent level of significance. Therefore, the model is acceptable. The regression model is estimated by enter method.

From the Table No-1, it is found that the intercept is small and statistically insignificant. This implies that there is no scope of autonomous employee's productivity. This may support the value of R square in the model. The coefficient of Training is positive and statistically significant. It may be interpreted that Training showing positive impact on employee's productivity.

Therefore, it may be concluded that the training has positive and significant impact on employee's productivity of selected Indian Automobile industry understudy. As far as the impact of training on employee productivity is concerned, the study shows a clear relation between training and productivity. Though there is gender wise, age wise, status wise, experience wise, qualification wise and designation wise difference in employees training commitment the overall commitment of employees towards training is significantly high. The analysis shows that there is a very strong impact of training on employee's productivity in Automobile Industry.

Table 1: Showing impact of training on employee's productivity

R^2	0.546				
Adjusted R^2	0.544				
Std. Error of the Estimate	0.67495450				
ANOVA (F)	346.379		Significance=0.000		
Dependent Variable: Employee's Productivity (Prd)	Un-standardized Coefficients		Standardized Coefficients	't' stat	Sig
Independent Variables	B	Std. Error	β		
Constant- Intercept	2.889E-15	0.040		0.000	1.000
Training (Trg)	0.739	0.040	0.739	18.611	0.000
Excluded Variables					

Suggestions

1. Training content and delivery approaches should be relevant to the job functions of employees.
2. Determining the current state of the knowledge of the employee before embarking on training and development.
3. The employer should have compulsory training programs for all employees in order to improve the knowledge and understanding of annual business strategy and objectives
4. The provision of feedback to employees after training is recommended in order for employees to become aware of areas where they can improve their performance.
5. The employer should provide sufficient resources for training so as to improve the training programs provided.

6. Holistic Approach to training should be adopted for the overall development of the employee for optimum productivity.
7. Canteen system should be under the supervision of a qualified dilatation to ascertain the standard of food supplied.
8. Employees should be segregated on the basis of physical condition and dietary classification should be implemented.
9. Incentive system should be introduced for those who follow the dietary restrictions and improve their physical conditions.

E-learning should be promoted so that the diversification of knowledge and optimum utilization of resource can be ensured.

Recommendations

In recent times many organizations have realized the importance of the role of training and development programs as it increases the organization's staff efficiency, skills and productivity. In order to achieve the full benefits of a training initiative, Indian Automobile Industry should ensure that the following measures.

i) Systematic Training

Training need identification should be done in more professional way in conjunction with the line manager as well as the individuals involved together with the HR personnel. Everyone involved should agree exactly to what the trainees are lacking, for instance what skill is needed, and what attitudes need to be changed toward work performance.

ii) Objective should be SMART and unambiguous

Objectives should be SMART (Specific, Measurable, Achievable, Realistic and Timely) and unambiguous, and should develop individual as well as meet the needs of the organization. Objectives should also include performance targets, measures standards and should be seen as attainable by individuals.

iii) Provide Specific information to employees

Performance appraisal information which is used by Indian Automobile Industry to assess employees' performance should provide specific information to employees about their performance problems and ways they can improve their performance. This assessment should provide a clear understanding of the differences between current and expected performance, identifying the causes of the performance discrepancies and develop action plans to improve performance of employees through training and development programs.

iv) Create more Opportunities for training

Training needs should be considered on the basis of overall company objectives. The goals of the company should determine what training programs are to be organized for staff. Staff should be motivated to add value to themselves and to their lives.

v) Career Planning and development

Organizational career planning involves matching an individual's career aspirations with the opportunities available in the organization. For career management to be successful in Indian Automobile Industry, both the Authority and employees must assume equal share of the responsibility for it. Development and succession planning will also play a great role. Career progressions projection plans and training and development projections should be made available to each employee.

vi) Enrich job experience

Most employee development occurs through job experiences. Development is most likely to occur when there is a mismatch between the employee's skills and past experiences, and the skills required for the job. To be successful in their job, employees in Indian Automobile Industry must stretch their skills. There are several ways that job experiences can be used for employee development in Indian Automobile Industry and these include the enlargement of current job, job rotation, transfers and promotion to positions with greater challenge.

vii) Improve interpersonal relationships

Interpersonal relationship is another way for employees to develop skills, increase knowledge about the organization and its clients by interacting with a more experienced member. Interpersonal relationships can develop as part of a planned effort to bring together successful senior employees of the Indian Automobile Industry together with less experienced ones.

viii) Evaluate training for effectiveness

Evaluating training to assess its effectiveness in producing the learning outcomes specified when the training intervention is planned, and indicating improvements or changes required to make the training even more effective.

Conclusion

The analysis shows that training has positive and significant impact on employee's productivity in Indian Automobile industry. At present different training methods and techniques are in use in this industry. The stiff competition and the international exposure have compelled this industry to update the skills of their manpower so that they may be competent enough to face the challenges. As far as technical training and skill development are concerned most of the Automobile industries in India are at par and performing their level best. The need of the hour is to establish a system which can act as a catalyst to boost the impact of training. It has found from this study and the related studies that more emphasis is given on technical and intellectual skill development. As the intellectual skills and abilities are implemented through physical activities, there is a need for concentrating on physical fitness as well. This in turn will act as a catalyst and in training transfer process and will optimise the employee productivity.

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