



EMPLOYEES' TRAINING AND DEVELOPMENT AS EFFECTIVENESS INSTRUMENT FOR ORGANIZATIONAL PRODUCTIVITY IN MANUFACTURING SECTOR IN CHENNAI

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ABSTRACT The aim of this study is to examine the effectiveness of training and development in the manufacturing sector using training evaluation framework and transfer of training elements. Quantitative method through questionnaire survey was used for data collection in which questionnaires were distributed to respondents in various manufacturing companies in Chennai. The findings of this study suggest that manufacturing employees were evaluated at all five levels of evaluation, namely, the reaction, learning, behavior change, results and transfer of training levels. Factors that can affect the effectiveness of training in the manufacturing sector include lack of support from top management and peers, employees' individual attitudes, job-related factors and also the deficiencies in training practice. Information obtained could be practical when management decides to analyze the evaluation and transfer of training elements that has been addressed in this study as to get management support and to create conducive environment to apply related skill and knowledge on the job.

KEYWORDS :

INTRODUCTION

In India large-scale industrial growth started few decades ago mostly after independence. India's first Prime Minister Jawaharlal Nehru had futuristic vision to build-up a self-sufficient nation. He also initiated many science and technology institutions and research centers for making the nation superior in scientific and technological knowledge. India's growing economy has offered domestic entrepreneurs and international players multiple opportunities to invest. The Government of India has realized the significance of the manufacturing industry to the country's industrial development and is taking necessary steps to increase investment in this sector. According to a report by McKinsey and Company, India's manufacturing sector could touch US\$ 1 trillion by 2025. There is potential for the sector to account for 25-30 per cent of the country's GDP and create up to 90 million domestic jobs, by 2025. Many foreign investors have decided to invest in the country in the recent past due to low cost of setting up of plants and available manpower. Business conditions in the Indian manufacturing sector continued to improve in October, 2014 fuelled by accelerated growth of output and new orders according to the HSBC India Manufacturing Purchasing Managers' Index (PMI) data. Electronics goods production in India is expected to touch US\$ 104 billion by 2020. The country's electronics market is anticipated to grow to US\$ 400 billion by 2020 and expand at a CAGR of 24.4 per cent during the period 2012-2020. The manufacturing sector in India is an attractive hub for foreign investments. Several mobile phone, luxury and automobile brands, among others, have set up or are looking to establish their manufacturing bases in the country. The electronic system design and manufacturing (ESDM) industry will benefit from the government's Make in India campaign and is projected to see investment proposals worth Rs. 10,000 crore (US\$ 1.57 billion) over the next two years, according to the India Electronics and Semiconductor Association (IESA). The Indian chemical industry is also likely to touch US\$ 190 billion by the financial year 2017-18 on account of increase in demand of the chemicals from industries of various sectors.

Chennai is rapidly growing as a prominent automobile market in India. The development and up gradation of NH 45 and Chennai's excellent infrastructure for automobile industry and the existence of a good number of manufacturing plants are aiding the development of the Indian Automobile Market in Chennai. The efficiency and quick service of the administrative sector in Tamil Nadu in assisting the automobile industry in Chennai are helping the growth of the automobile sector in Chennai. BMW considers Chennai to be the most appropriate location for its manufacturing unit because it can afford a pool of investments. It has decided to invest nearly 180 crore in a time span of 5 years. The presence of the other major automobile players in Chennai has attracted the attention of the German company, Volkswagen. Chennai is rapidly becoming the choicest location for the automobile industry due to its skillful and efficient workforce aided with its expertise in the manufacturing sector.

Review Of Literature

According to Kirkpatrick (1998), the subject of evaluation or the level at which evaluation takes place is dependent on the phase during which the evaluation takes place. In Kirkpatrick's four level models, each successive evaluation level is built on information provided by the

lower level. Assessing Training Needs often entails using the four-level model developed by Donald Kirkpatrick (1994). According to this model, evaluation should always begin with level one, and then, as time and budget allows, should move sequentially through levels two, three, and four. Information from each prior level serves as a base for the next level's evaluation. Thus, each successive level represents a more precise measure of the effectiveness of the training program, but at the same time requires a more rigorous and time-consuming analysis. Training transfer generally refers to the use of trained knowledge and skills back on the job. Baldwin & Magjuka (1988) mentioned that for transfer to occur, "learned behavior must be generalized to the job context and maintained over a period of time on the job". Meanwhile, Saks & Haccoun (2007) views training transfer as the generalization of knowledge and skills learned in training on the job and the maintenance of acquired knowledge and skills over time.

According to the transfer of training framework by Saks & Haccoun (2007), the transfer of training activities could be segregated into three phases which is before, during, and after training to facilitate and improve the transfer of training. However, for the purpose of this study, only transfer of training after training is being applied. In this case, the management must ensure that trainees have immediate and frequent opportunities to practice and apply what they learn in training on the job. The management should also encourage and reinforce trainees' application of new skills on the job. There are many other things that managers do to facilitate transfer such as develop an action plan with trainees for transfer and show support by reducing job pressures and workload, arrange practice sessions, publicize transfer successes, give promotional preference to employees who have received training and transfer, and evaluate employees' use of trained skills on the job (Wexley & Baldwin, 1986).

The trainer should conduct follow-up or booster sessions following a training program. Trainers should maintain their involvement in the training and transfer process by conducting field visits to observe trainees' use of trained skills, provide and solicit feedback and provide continued support and assistance to trainees (Lim & Johnson, 2002).

Trainees should be able to use new knowledge and skills on the job as soon and as often as possible. At the same time, trainees should meet with their supervisor to discuss opportunities for transfer. Trainees might also establish a network of peers who also attended a training program that can provide assistance and support each other for using their trained skills on the job. Trainees should also set goals for practicing their newly acquired skills on the job (Foxon, 1997).

Objective Of The Study

To examine the effectiveness of training and development in different level in manufacturing sector employees in Chennai.

Methodology

A quantitative approach was adopted and a survey was chosen as the method of enquiry. The development of the survey instrument, a questionnaire, was guided by the research questions and was based on the literature reviewed. The questionnaire assessed the five level of evaluation, namely, the reaction, learning, behavior change, results

and transfer of training levels. A total of 120 questionnaires were collected. Respondents were chosen from various manufacturing companies in Chennai using simple random sampling. The data were analyzed through SPSS (Statistical Package for Social Sciences).

RESULTS AND DISCUSSION

Level 1: Reaction

The reactions of respondents on one of the course they attended during the past one year. The findings revealed that a total of 78.3% of the respondents agree that they enjoy the courses attended. Most of the respondents (78.4%) agree that the objectives of the training program have been fully achieved. About 68.4% agree that their personal objectives for attending the training program have been achieved. Most of the respondents (78.3%) responded that their training program is relevant to their job. In addition, majority of the respondents (81.7%) reported that the training they attended is important to their job. The rest of the respondents (70%) agree that the content of the training was easy to follow. Out of 120 respondents, 56.7% responded that there were sufficient exercises, simulations and role plays in helping them to follow the training program. Most of the respondents (76.6%) responded agree that they have learned what they needed to, and got some new ideas from the training program. Majority of the respondents (80%) agree that the overall rating for the training program is good.

Table 1 : Reaction

No.	Factors	SA	A	N	DA	SDA
1.	Enjoy the courses attended	7 (5.8)	94 (78.3)	5 (4.2)	6 (5.0)	8 (6.7)
2.	Objectives of the training program have been fully achieved	11 (9.2)	94 (78.4)	2 (1.7)	9 (7.5)	4 (3.3)
3.	Their personal objectives for attending the training program have been achieved	17 (14.2)	82 (68.4)	8 (6.7)	4 (3.3)	9 (7.5)
4.	Their training program is relevant to their job	9 (7.5)	94 (78.3)	10 (8.3)	4 (3.3)	3 (2.5)
5.	The training they attended is important to their job	11 (9.2)	98 (81.7)	2 (1.7)	4 (3.3)	5 (4.2)
6.	The content of the training was easy to follow	9 (7.5)	84 (70.0)	15 (12.5)	8 (6.7)	4 (3.3)
7.	There were sufficient exercises, simulations and role plays in helping them to follow the training program	21 (17.5)	68 (56.7)	13 (10.8)	11 (9.2)	7 (5.8)
8.	They have learned what they needed to and got some new ideas from the training program	8 (6.7)	92 (76.6)	6 (5.0)	7 (5.8)	7 (5.8)
9.	The overall rating for the training program is good	9 (7.5)	96 (80.0)	5 (4.2)	4 (3.3)	6 (5.0)

This is in line with findings by Sanchez and Medkik (2004) indicate that trainees' reactions towards training were positive. According to a study conducted by Nancy (1988) revealed that whenever training is organized according to the employees' needs and is job-relevant it has a much higher impact on participants. Finally, even if the course contents and methods are adequate, if the organization's atmosphere is not conducive to implementation, training will have very little impact on the employee and his job performance.

Level 2: Learning Level Of Evaluation

The evaluation of respondents towards training which based on the learning (level 2) of Kirkpatrick's evaluation model. The findings revealed that most of the respondents had little (35%) or fair (55%) level of knowledge before completing the training program attended. Only 8.3% of the respondents reported having high level of knowledge and skill on the topic of the course before attending the training program. However, most of the respondents (73.4%) were found to be having high level of knowledge and skill after completing the training program. And 23.3% of the respondents had fair level of knowledge and skill upon completing the course. However, this is in contrast with findings by Salas et al., (2006) indicate that the impact of training on learning and behavioral changes suggest mixed results across and within domains.

According to a study conducted by Nancy (1988) who reported that the course had some kind of impact on the increase of trainees' theoretical

knowledge. The comment most commonly expressed was that program attendance stimulated the desire for further reading and study and that it had a 'broadening effect', which led to looking at old things in new and different ways.

Table 2 : Learning

No.	Factors	SA	A	N	DA	SDA
1.	The level of knowledge before attending the training program.	23 (19.2)	66 (55.0)	19 (15.8)	8 (6.6)	4 (3.3)
2.	The level of knowledge and skill on the topic of the course before attending the training program.	9 (7.5)	10 (8.3)	4 (3.3)	3 (2.5)	94 (78.3)
3.	The level of knowledge and skill after completing the training program.	6 (5.0)	87 (73.4)	8 (6.2)	4 (3.2)	15 (12.0)
4.	The level of knowledge and skill upon completing the course.	10 (8.3)	29 (23.3)	68 (56.7)	4 (3.3)	9 (7.5)

Level 3: Behavioral Change Level of Evaluation

The results revealed that most of the respondents agree that what they learn can be applied to their job. As shown in the analysis, more than three quarter (78.3%) of the respondents agree that the content of the course is practical and useful to their current work. In addition, 75% of the respondents reported their ability to use the knowledge and skills gained through the course to their jobs. In the literature, for instance, Santos and Stuart (2003) found that only 34% of managers reported using new skills or knowledge learned in training compared to 61% of non-managers. In addition, according to a study by Nancy (1988) revealed managers admitted that their organization's climate, even though favorably disposed towards training, would rarely allow for implementation of new ideas and techniques. About 70% of the respondents agree that the course content focused on what is specifically needed to learn. Majority of the respondents (81.7%) agree that they have acquired information and knowledge that is new to them. More than three quarter (78.3%) of the respondents rating the overall training program as very useful and beneficial to them.

Table 3 : Behavioural Change Level Of Evaluation

No.	Factors	SA	A	N	DA	SDA
1.	Content of the course is practical and useful to the current work.	12 (10.0)	94 (78.3)	6 (5.0)	7 (5.8)	1 (0.8)
2.	Ability to use the knowledge and skills gained through the course to their jobs	10 (8.3)	90 (75.0)	8 (6.7)	7 (5.8)	5 (4.2)
3.	The course content focused on what is specifically needed to learn	11 (9.2)	84 (70.0)	12 (10.0)	8 (6.7)	5 (4.2)
4.	They have acquired information and knowledge that is new to them.	3 (2.5)	98 (81.7)	10 (8.3)	5 (4.2)	4 (3.3)
5.	Overall training program as very useful and beneficial to them.	6 (5.0)	94 (78.3)	4 (3.3)	5 (4.2)	11 (9.2)
6.	Expect the training program will make a difference in the way they do their job.	7 (5.8)	92 (76.6)	8 (6.7)	4 (3.3)	9 (7.5)

Finally, about 76.6% expect the training program will make a difference in the way they do their job. Even though there are only a minor of 5% of the respondents that do not expect this training will make a difference in the way they do their job, the organization should not take this lightly and keep on sending them on training programs. They should instead take measure to act on their weaknesses and feedback from the respondents on various factors. Open discussion between the superior and the subordinates will be necessary for mutual benefit.

Level 4: Results Level of Evaluation

From the analysis shows the response in relation to results of the training program they have attended. Most of the respondents (71.6%) think the ideas and information will improve their effectiveness and results. Only 3.3% responded disagree on the ideas and information acquired from the training program will improve their effectiveness and results. Majority of the respondents (66.7%) view on-the-job performance will improve after attending the training program. Out of

120 respondents, 55% respondents think the management will give promotional preference to employees who have received training and transfer of training. This is true where beliefs about the potential benefits of training such as promotion or increases in pay better predict the likelihood for training success than the training budget (Elsbach, 2004). In addition, a clear link between training and an organization's career development and reward system signals that training leads to recognition and advancement (Santos & Stuart, 2003).

Table 4 : Results Level Of Evaluation

No.	Factors	SA	A	N	DA	SDA
1.	The ideas and information will improve their effectiveness and results	16 (13.3)	86 (71.6)	8 (6.7)	4 (3.3)	6 (5.0)
2.	On-the-job performance will improve after attending the training program.	12 (10.0)	80 (66.7)	5 (4.2)	7 (5.8)	16 (13.3)
3.	The management will give promotional preference to employees who have received training and transfer of training.	23 (19.2)	66 (55.0)	19 (15.8)	8 (6.7)	4 (3.3)

Furthermore, according to a study conducted by Nancy (1988) indicate that most respondents said that their organization provided some kind of training for their managers, a formal training policy, linking training with planning, recruitment, appraisal or promotion practices. However, only a few organizations would consider promotion possibilities when deciding upon a manager's training and would take his participation as a positive element when appraising his performance.

Level 5: Return On Investment

It shows from the analysis that the return on investment (ROI) on training program the respondents attended during the past one year. It displays that 75% of the respondents agree that the training program will help them to contribute significantly to their organization's bottom line. Out of 120 respondents, 23.3% fairly agree and only 1.7% disagree that the training program will help them to contribute significantly to their organization's bottom line. Based on the research by Sels (2002) indicates that the size of the training investment has no predictive value in terms of the extent of efforts regarding needs analysis, training design and effect evaluation. Furthermore, the more an organization pay to evaluating the effectiveness of training efforts, the more an organization will be able to separate effective from less effective types of training (Sels, 2002).

This study examined the evaluation framework and transfer of training elements in relation to the effectiveness of training and development in the manufacturing sector. The findings revealed that on the use of a five level evaluation model for employee training program; at level 1, most of the respondents were satisfied with the training programs. It shows the appreciation of training by participants, thus gaining insight into the usefulness of training and progress of learning process. At level 2, majority of the respondents learned the skills taught. At this phase, the respondents were evaluated on their progress or behavioral changes through testing of knowledge, skills and attitudes acquired. At this stage, evaluation on the way in which knowledge was transferred is being done to ensure the effectiveness of training. At level 3, the findings reported that the respondents use the new skills on the job. This is the measure during performance of job after training to see the usefulness of training aims, change in behavior or approach after the training and the evaluation of training method. At level 4, the findings revealed that the training programs was productive and cost effective that is to measure change in the results of the organization to ensure the progress made at organizational level.

Table 5 : Return On Investment

No.	Factors	SA	A	N	DA	SDA
1.	The training program will help them to contribute significantly to their organization's bottom line	0	90 (75.0)	28 (23.3)	2 (1.7)	0

Finally, at level 5, respondents agree that the training program will help them to contribute significantly to their organization's bottom line and thus improve the effectiveness of training.

Implications Of The Research Findings

There are several implications of these research findings since many manufacturing sector had increase their concern with regards to the effectiveness of training and development since it is critical to enhanced on-the-job performance in order to achieve Key Performance Indicators for each employees. Thus, from the aspect of the evaluation and transfer of training elements; management might start from employees' support system, because lack of support and cooperation from Management. The Effectiveness of Training in the manufacturing employees are one of the most cited reasons for ineffectiveness of transfer of training.

Limitation And Recommendation For Future Research

The sample size of the survey was relatively smaller where it covered a small number of manufacturing employees across various companies in Chennai. With a longer time frame, perhaps it will allow a higher response rate thus making the survey more representative and convincing. Due to limited resources and time, the survey was designed to utilize questionnaire as an instruments of study to collect the necessary information from selected respondents, which using both quantitative and qualitative methods. An established questionnaire is a means by which participants express their feedback regarding the effectiveness of training through a series of quantitative and qualitative survey questions completed at the end of the training program. Perhaps with observations as a means to collect the data and assistance by research assistants could help to improve the reach to a larger audience and thus improving the response rate and sample size. A more details analysis will then be more meaningful with the larger sample size.

In future, an in-depth analysis of the performance and promotion trend of manufacturing employees could be made to understand how their training and development help in their career development and growth. The reasons why the reactions part of evaluation scores high percentage could also be studied. A comparative study between (he perceptions of manufacturing sector employees and IT sector employees could provide different insight into the subject matters.

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