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IMPACT ASSESSMENT OF ON-JOB TRAININGS TOWARDS PERFORMANCE OF BIOTECH INDUSTRY EMPLOYEE

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Abstract:

Training is essential to the growth and economic well-being of Industry and technical employees are main key of any Biotech Industry. Therefore, training is required to nourish employee skills of all level in any organization. There is need two ways to train the employees in industry through on-job trainings i.e. common for all employees and specific for work oriented at their work place. In this study, we performed five task specific on-job trainings by trainers acquainted with theoretical, practical and demonstration skills. In other words, the training is one of the most pervasive methods for enhancing individual knowledge, skills, ability and attitude as well as improving job performance in the work environment. Training effectiveness must cause behaviour change i.e. skill transfer for job performance, thereby resulting in organizational performance. The results of this study show that on-job training is strongly and positively affects the technical employee in terms of result oriented, target achievement and improvement in their work quality.

Keywords: Biotech industry, Technical employee, Manufacturing and Quality Control Departments, On-job trainings, Assessment, Learning parameters

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Introduction:

In current scenario, there have been rapid technological changes and automation on existing jobs, which have called for continual training and re-training of employees in Biotech Industries. Some technical employees in the industries may lack the immediate knowledge of their jobs, either due to inadequate qualifications or lack of relevant technical skills to continue. Training will help to upgrade employees' knowledge, skills, ability and attitude to suit modern technological changes in the relevant fields in these industries.

As we know that employee of any organization is a blood stream especially technical employees in Biotech industries. Inadequate skill, knowledge, ability and attitude of those employees in Biotech industry are therefore some of the factors responsible for inefficiency and low productivity in the industry. Training could be a positive measure for re-directing various employees' perspectives and ideas to the goals and objectives of the organization (Elnaga and Imran, 2013). Employee's behaviour or attitude could either favour or retard the growth of an

organization. Training can improve the performance and productivity of the employee and ensure that they have the relevant skills. Training focuses on doing activities today to develop employees for their current jobs and development is preparing employees for future roles and responsibilities (Kinicki and Kreitner, 2007).

Training is an important and imperative tool for the organization to revamp the performance of the entire employee for organizational growth and success. It is beneficial to both employers and employees of an organization. An employee will become more efficient and productive, if he or she is trained well. Firms can develop and enhance the quality of the current employees by providing comprehensive training and development. Training is essential not only to increase productivity but also to motivate and inspire workers by letting them know how important their jobs are and giving them all the information, they need to perform those jobs (Anonymous, 1998). The general benefits received from employee training are: increased job satisfaction and morale, increased motivation, increased efficiencies in processes, resulting in financial gain, increased capacity to adopt new technologies and methods, and increased innovation in strategies and products.

Training methods could be classified as cognitive and behavioural approaches. Cognitive methods provide verbal or written information, demonstrate relationships among concepts, or provide the rules for how to do something. These types of methods can also be called as off-job training methods. On the other hand, behavioural methods allow trainee to practice behaviour in real or simulated fashion. They stimulate learning through behaviour which is best for knowledge development, skill development and attitude change. These methods can be called as on-job training methods. Thus; either behavioural or cognitive learning methods can effectively be used to change attitudes, though they do so through different means. Cognitive methods are best for knowledge development and behavioural methods for skills (Blanchard and Thacker, 1998). The decision about what approach to take to training depends on several factors that include the amount of funding available for training, specificity and complexity of the knowledge and skills needed, timeliness of training needed, and the capacity and motivation of the learner. Different forms of on-job training methods were previously discussed in detail such as job instruction technique, job rotation, coaching and apprenticeship training (Alipour, 2009). In present study, the purpose of the on-job training session is to provide employee with task-specific knowledge and skills in work area. The knowledge, skills, ability and attitude presented during on-job training are directly related to full fill their job requirements and to improve in their work quality.

Objective of the study:

The present study was based on need of on-job trainings for technical employees from manufacturing and quality control departments in Bharat Immunologicals and Biologicals Corporation Limited (BIBCOL), Bulandshahr, Uttar Pradesh, India as a Biotech industry. On the basis of training need, total five trainings were taken under consideration and conducted with the following objectives:

i. To identify on-job training for technical employees of manufacturing and quality control departments on the basis of need.

ii. To design and conduct the trainings.

iii. To develop and maintain the training records in our organization.

iv. To assess the training impact on the departmental technical employee

Methodology:

On-Job trainings and its Participant

A total 54 numbers of employees were participated in five on-job trainings from manufacturing and quality control departments of BIBCOL, Bulandshahr, Uttar Pradesh, India viz. 26 employees from manufacturing and 28 employees from Quality Control department of the organization. It is also necessary to make the employees use the newly acquired skills from the training program. Therefore all technical employees from Manufacturing and Quality Control departments are included in the on-job training as participants.

As described in Table 1, on-job trainings (Training Code OJT-001 to OJT-005) of the employees were designed according to need of the participants. The trainings were organized from OJT-001 to OJT-003 in month of April 2016 and OJT-004 to OJT-005 in month of June 2016 after approval of the Training Head. Records of individual participant for the trainings were maintained such as mark attendance, lecture deliver in form of power point presentation,

demonstration, evaluation through question & answer session and monthly report submission.

Trainer for On-Job trainings

For on-job training to be effective, the best is to have the appropriate expertise trainer within the organisation. An advantage using an existing employee to become a trainer is that trainer already has experience in the field and knowledge of the work within organization. An on-job trainer acquainted with title knowledge, preparation of power point slides, effective presentation skill and dealing with topic related difficulties. Finally trainers are an officer of grade not less than Manager Designation from production, quality control, quality assurance and training departments. There are two categories of trainers:

i. Conducted trainers for performing the training through lecture, demonstration etc.

ii. Panel trainers for supervision, evaluation, assessment etc.

Data presentation and analysis

Present study data was compiled and presented in tabular form by using Microsoft word software. Assessment of all five on-job trainings impact through learning parameters (theoretical, practical and demonstration) need for employees was determined according to previously described method of Pfau, R.H. (2005) and following symbolic grading system was adapted and applied to measure the learning parameters on the employee's performance after completion of the on-job trainings. Symbols for the grading system stand for:

i. +   = somewhat useful in developing such learning

ii. + +   = often very useful and effective

iii. + + + = highly useful and very effective

Results and Interpretation:

Improved capabilities, knowledge and skills of the talented workforce proved to be a major source of competitive advantage in a global market (McKinsey, 2006). To develop the desired knowledge, skills and abilities of the employees, to perform well at their workplace, requires effective training programs that may also effect

employee motivation and commitment (Meyer and Smith, 2000). In order to prepare their workers to do their job as desired, organizations provides training as to optimize their employee's potential. Most of the firms, by applying long term planning, invest in the building new skills by their workforce, enabling them to cope with the uncertain conditions that they may face in future, thus, improving the employee performance through superior level of motivation and commitment. When employees recognize their organization interest in them through offering training programs, they in turn apply their best efforts to achieve organizational goals, and show high performance on job.

It is well documented that on-job training is a most effective tool through designing basics and specific training programs and it is always useful to improve employee understanding towards their work within organization (Hameed and Waheed, 2011). Therefore the training is crucial and result oriented of each employee in any organization. In present study, training department initiated, marked, developed and performed on-job trainings with learning parameters like theoretical, practical and demonstration aspects to nourish and update technical skills and job proficiency of technical employees, those are working for manufacturing and quality control departments in our organization as a Biotech industry.

Identification designed and conducted on-job trainings

Total five on-job trainings were included in this study and detail of the trainings with code and department wise participants as described in table 1. The departmental employees were participated actively with positive and learning attitude in training codes from OJT-001 to OJT-005 and were assessed after successfully completion. A total 54 employees were participated in all five on-job trainings and training wise participation of the employees summarized in following table for different on-job trainings. Employees from manufacturing and quality control department were participated in OJT-001 to OJT-004 trainings. OJT-005 training was specially designed for quality control employees and they were only participated in the training.

Table 1: Number of participants from Manufacturing and Quality Control division in On-job Training

Training	Title	Department		Total Code
		Manufacturing	Quality Control	
OJT-001	Weighing Tasks and Procedures	05	09	14
OJT-002	Pipetting Techniques in QC Testing Procedure	07	06	13
OJT-003	Working in a LAF	07	04	11
OJT-004	Non-Destructive filter integrity testing	07	03	10
OJT-005	Cell Maintenance and Preservation	00	06	06
	Total	26	28	54

Development and maintained of the training records

Records of on-job trainings from OJT-001 to OJT-005 were generated and maintained date-wise in form of marked attendance of each trainee; lectures with the topics, brief outline of lectures, stepwise detail of presentations and demonstrations of individual conducted trainer including name, designation & signature for each training and supervision, evaluation & assessment record of individual Panel trainer including name, designation & signature for each training.

Impact assessment of the trainings

Impact assessment of on-job training on the technical employees in our organization was done individually on the basis of maintained the records. Results of individual on-job training was compiled and summarized with different learning parameters (theoretical, practical and demonstration) for departmental technical employee as participants in following table 2.

Table 2: Learning parameters of each On-Job Training for participants

Training Code	Learning Parameter	Knowledge	Skills	Abilities	Attitudes
OJT-001 1. Theoretical					
	1.1. Action	+ + +	+ +	+ + +	+ +
	1.2. Coaching	+ +	+ +	+ +	+ +
	1.3. Job Instructions	+ ++	+ + +	+ + +	+ + +
	1.4. Reading	+ +	+ + +	+ +	+ +
	1.5. Feedback	+ +	+ + +	+ + +	+ +

2. Practical				
2.1. Action	+ + +	+ +	+ + +	+ + +
2.2. Coaching	+ +	+ +	+ +	+ +
2.3. Job Instructions	+ + +	+ + +	+ + +	+ + +
2.4. Learning observation	+ + +	+ + +	+ + +	+ + +
2.5. Feedback	+ + +	+ + +	+ +	+ +
3. Demonstration				
3.1. Action	+ +	+ + +	+ +	+ +
3.2. Briefings	+ +	+ +	+ +	+ + +
3.3. Orientation	+	+	+	+
3.4. Learning by doing	+ + +	+ +	+ + +	+ + +
3.5. Feedback	+ + +	+ +	+ + +	+ +
OJT-002 1. Theoretical				
1.1. Action	+ +	+ +	+ + +	+ + +
1.2. Coaching	+ + +	+ +	+ +	+ +
1.3. Job Instructions	+ ++	+ + +	+ + +	+ + +
1.4. Reading	+ +	+ + +	+ + +	+ +
1.5. Feedback	+ +	+ +	+ +	+ + +
2. Practical				
2.1. Action	+ + +	+ +	+ + +	+ + +
2.2. Coaching	+ +	+ +	+ + +	+ +
2.3. Job Instructions	+ + +	+ + +	+ + +	+ + +
2.4. Learning observation	+ +	+ + +	+ +	+ + +
2.5. Feedback	+ + +	+ + +	+	+ +
3. Demonstration				
3.1. Action	+ +	+ + +	+ +	+ +
3.2. Briefings	+ +	+ +	+ +	+ + +
3.3. Orientation	+	+	+	+ +
3.4. Learning by doing	+ + +	+ +	+ + +	+ + +
3.5. Feedback	+ + +	+ +	+ + +	+ +
OJT-003 1. Theoretical				
1.1. Action	+ +	+ +	+ + +	+ +
1.2. Coaching	+	+ +	+ +	+ + +
1.3. Job Instructions	+ +	+ + +	+ + +	+ +
1.4. Reading	+ +	+ + +	+ + +	+ + +
1.5. Feedback	+ +	+ +	+ + +	+ +
2. Practical				
2.1. Action	+ +	+ +	+ + +	+ ++
2.2. Coaching	+ +	+ +	+ +	+ +
2.3. Job Instructions	+ +	+ + +	+ + +	+ + +
2.4. Learning observation	+ +	+	+ + +	+ +
2.5. Feedback	+ + +	+ + +	+	+ + +
3. Demonstration				
3.1. Action	+ +	+ +	+ +	+ +
3.2. Briefings	+ +	+ +	+ +	+ +
3.3. Orientation	+	+	+	+
3.4. Learning by doing	+ + +	+ +	+ +	+ + +
3.5. Feedback	+ + +	+ +	+ + +	+
OJT-004 1. Theoretical				
1.1. Action	+ +	+ +	+ + +	+ +
1.2. Coaching	+ +	+ +	+ +	+ + +
1.3. Job Instructions	+ ++	+ + +	+ +	+ + +
1.4. Reading	+	+ +	+ +	+ + +

1.5. Feedback	+ +	+ + +	+ + +	+ +
2. Practical				
2.1. Action	+ + +	+ +	+ + +	+ + +
2.2. Coaching	+ +	+ +	+	+ +
2.3. Job Instructions	+ + +	+ + +	+ +	+ + +
2.4. Learning observation	+ + +	+ +	+ +	+ +
2.5. Feedback	+ + +	+ + +	+	+ +
3. Demonstration				
3.1. Action	+ +	+ + +	+ +	+ +
3.2. Briefings	+ +	+ +	+ +	+ + +
3.3. Orientation	+	+	+ +	+ +
3.4. Learning by doing	+ + +	+ +	+ + +	+ + +
3.5. Feedback	+ +	+ +	+ +	+
OJT-005 1. Theoretical				
1.1. Action	+ +	+ +	+ + +	+ + +
1.2. Coaching	+ + +	+ +	+ +	+ + +
1.3. Job Instructions	+ ++	+ + +	+ + +	+ + +
1.4. Reading	+ +	+ + +	+ + +	+ + +
1.5. Feedback	+ +	+ + +	+ + +	+ + +
2. Practical				
2.1. Action	+ + +	+ +	+ + +	+ + +
2.2. Coaching	+ +	+ +	+ + +	+ +
2.3. Job Instructions	+ + +	+ + +	+ + +	+ + +
2.4. Learning observation	+ + +	+ + +	+ + +	+ + +
2.5. Feedback	+ + +	+ + +	+	+ +
3. Demonstration				
3.1. Action	+ +	+ + +	+ +	+ +
3.2. Briefings	+ +	+ +	+ +	+ + +
3.3. Orientation	+	+	+	+
3.4. Learning by doing	+ + +	+ +	+ + +	+ + +
3.5. Feedback	+ + +	+ +	+ + +	+ +

All technical employees from manufacturing and quality control departments were participated actively with learning enthusiasm throughout the on-job trainings. Overall the trainings have positive impact on knowledge, skills, abilities and attitudes of the participants from manufacturing and quality control departments. As inferred from the responses of the participants and trainers, the on-job training course objectives were accomplished and it indeed contributed in enhancement of different learning parameters for employees, which in turn contributed to the overall outcome at their work places. The current impact assessment also indicated that the on-job training courses have other positive impacts such as employee enhanced confidence level, create working environment, improved quality of work and output (Truitt, 2011; Shah 2016). Overall the training courses have contributed to the personal development such as improved communication skills, work knowledge and other relevant skills necessary for performing tasks that were covered in the trainings.

During period of the on-job trainings, the employees had indicated positive response and interest and the responses of employees and trainers indicated that the overall impact of the on-job training courses was impressive and remarkable based on analysis and findings of the study.

Conclusion:

The on-job trainings are based on basic techniques and used in routine basis by technical employees working in manufacturing and quality control departments. Therefore the training were needed and conducted in our organization. For assessment of the on-job training impact on the departmental technical employee, the study was carried out and this is first report from our organization. The conducted trainings were found effective in terms of their learning parameters based on theoretical, practical and

demonstration and grading for knowledge, skills, abilities, and attitudes of the technical employees. In spite of the above, there are other important benefits such as interaction with other departmental employee and healthy technical discussion during the training within organization. Finally, present study suggested that the training have positive impact on the departmental technical employees based on different learning parameters.

Acknowledgment:

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