

October 2006

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Recommended Citation

Pulley, Patrick A. (2006) "On-The-Job-Training: Easy to Do if You Have the Right Program," *Online Journal for Workforce Education and Development*. Vol. 2: Iss. 2, Article 4.
Available at: <https://opensiuc.lib.siu.edu/ojwed/vol2/iss2/4>

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ON-THE-JOB-TRAINING: EASY TO DO IF YOU HAVE THE RIGHT PROGRAM

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Abstract

On-the-job training (OJT) has been used successfully as a training procedure from the beginning of recorded history. OJT can be an effective training method or it can cause many problems by not providing the skills and knowledge needed by the workers. This paper report on data collected from an actual study and creation of an on-the-job training program at a manufacturing facility located in the Midwest. Literature was presented to define the concepts used in on-the-job training and steps that created a company called "job certification program". The training program was discussed, procedures defined and the reasons for using the different checklists and tests to insure validity and reliability. The development and overall success of the program was identified by using qualitative research methods through focus groups, interviews and observations. The main research method that was used was the random interview technique to identify employee response to the on-the-job training. Comments and summary impressions were expanded and identified in the discussion.

ON-THE-JOB-TRAINING: EASY TO DO IF YOU HAVE THE RIGHT PROGRAM

Introduction

Human resource development has been a powerful tool in the manufacturing process. Markham (1967) stated that all phenomena of vocational education and training in our modern society have their roots in the past and we have not been dealing with anything new except with the expansion and development of what has already been created or existed. On-the-job training has been one of those phenomena of vocational education that has been around for a long time. Gray and Herr (1998) reported that by the turn of the 20th century, a consensus developed that to continue America's prosperity a workforce educational system was needed and generally on-the-job training was the selected training method. The goal of OJT was to equip the workforce with the skills, knowledge, understanding and motivation to meet the demands of an industrial and global economy. Rowley (1995) added that "training and development was important for the maintenance of the human resource base of the organization and must be viewed as an integral part of the core organizational strategy, rather than an ad hoc operation issue" (p. 5).

Industry has to be prepared to equip the workers with every advantage and learning technique to provide a knowledgeable, productive and satisfied worker. A deficiency in training has resulted in workers being frustrated and not being able to perform their assigned tasks. This has resulted in ineffective services, a lack of self-esteem, customer frustration and chronic low productivity (Jain, 1999). OJT has been

critical for human resource development and resource planning in the highly technical and demanding industrial and business environment.

It has been the conservative wisdom that factories of the future will be centers of continuous improvement, innovation and knowledge creation, with the focus being on the development of a set of strategies and organizational forms based on high skills, organizational flexibility and trust (Cook & Morgan, 1998). The industrial trainer had to provide a systematic approach that transforms an unskilled worker into a highly skilled knowledgeable employee. There have been two ways of accomplishing this task: formal educational training and informal on-the-job training (OJT).

Jain (1999) and Doeringer (1995) described formal educational training as mainly theoretical, obtained by academic diplomas and degrees, where individuals proved their ability academically but not practically. Informal on-the-job training (OJT) has been practical, and has prepared an individual to use acquired knowledge efficiently and confidently. OJT helped the worker build their skills on past experiences and knowledge. Cook & Morgan (1998) has identified OJT as a central feature of contemporary manufacturing. The organization has achieved their objectives by using the innovative abilities of individuals more effectively. Well trained individuals knew the extent, potential and strength of their jobs, and they have built on their knowledge and experience through OJT. Campbell (1990) described OJT as giving the employees normal working situations as designed to change the skills, attitude, and knowledge that has been directly related to the performance demands of the task. Training had to provide the individuals with the capacity for improvement and job satisfaction. Barton (2001) explained that employees have not been valuable in the abstract, but rather as a capacity of the jobs they execute, a direct expression of the human capital investments that came from the demands placed on the employee.

The purpose of this paper was to present a proven program of OJT development, training and techniques that has provided the skills and knowledge for job task completion. The author believed that the identification of the systematic creation of an OJT program may assist other business and industrial facilities in preparing their workers to be productive employees.

Literature Review

Training Activities

Earlier research stemming from different disciplines suggested that many factors are involved in explaining the intensity of training activities and the differences in concentration between industrial sectors (Aalders & van den Bosch, 1992). Four groups of explanatory factors have been identified with each influencing the other. Yet, because of their uniqueness, each stands alone as an independent and separate entity. The factors were: the industrial structure, the business environment, the structure of the industrial training program, and the industrial relations within that sector (Aalders et al., 1992).

The industrial structures were those factors that include the size of the organization, the type of product, and the homogeneity of the production process. Training necessities of a *mom and pop shop* would require less training time and methods. But, because of the lack of the training skills and HR support, the smaller organization would lack the training discipline required to effectively train the smaller workforce. On the other hand, the large multi-location corporation would have the dedicated staff and training programs but because of production demands and type of products produced, may also have an inadequate training program for their employees because of the constraints of the business (Aalders et al., 1992).

The business environment was the second area under the training activities that identified the external demands placed on industry by regulatory bodies. The business environment had at least four factors that have an influence on the training programs. Government policy had moral and legal application for employee training. Legislation has been written that protects the employee from physical harm and has required the employer to inform and protect the employees from hazards that may be present in the manufacturing process. Technological developments had an impact on the industrial sector with the consequences of not having enough qualified employees to operate the new technology. Demographic and market development caused discrepancies between the company's demand for qualified trained employees and the supply from the local job market. Improving the internal qualifications of the current workforce helped reduce this demand but with attrition and an aging workforce, external resources must be explored in order to fill the gap created by this demand (Aalders et al., 1992). Making the decision to use internal and/or external employees to fill the labor demand delineated the expanding concern for adequate industrial training programs. Providing competent employees with the skills and qualifications to fill the industrial demands has been an ongoing challenge.

Intangible assets were those things that a corporation sometimes overlooks as a training basis for improving the skills of their employees. Knowledge was the baseline of job opportunity and wealth. Before any goods or services could be provided, the process to manufacture the final product had to be analyzed and understood. In the world of rapid change, ideas and knowledge had to be continuously created. Change can be resolved by looking at what was known, and applying the knowledge to what was not yet known (Bagshaw, 2000).

Knowledge based workers were actively involved in six intangible assets (Aalders et al., 1992). First, was the capability of having the knowledge and skills to perform the technological requirements of the job. Second, was capturing the knowledge to know where to get the required information and then how to deliver it to the necessary areas. The third intangible asset was to assimilate the knowledge available and make a reference database so that it can be used throughout the organization. Fourth, was making a connection through networks of knowledge exchange rather than traditional communication structures. Fifth, was the creation of new knowledge through the collective brainpower of different organizations. Employee groups have been very productive in new process innovation by sharing existing concepts and providing the

company with a competitive advantage. And last, conversion of knowledge to action in a way that has added value to existing process and methods.

Aalders et al. (1992) described the third group of factors that relate to the structure of industrial training as organization and finance. Organizational structures identified training as an internal resource with programs domestic to the organization or external resources with training being outsourced. Possible solutions to this question have forced similar industries to provide co-ops with comparable industries that share analogous training demands and training programs. Other specialized industries were forced to provide the distinctive mandatory training for their unique kinds of training requirements (Markham, 1967). Another question that industrial finance has answered was to provide funds, not only for traditional training programs, but for the lost process time and labor cost needed to meet the customer's demands because employees attended a required training program.

The last focus of industrial training was the industrial relations which had a very large impact on the training activities (Aalders et al., 1992). Labor union and employee support was an essential part of the training process and without this support, training success was almost impossible to obtain. Employee attitudes toward company policies were viewed as restrictive or convoluted and had to be re-defined with employee buy-in as a key ingredient for implementation and acceptance.

Training Procedures

Trends in training seemed to have gone in a cyclical pattern with new management styles emerging every year and always a new and better concept being developed. Many of the proven training procedures such as classroom, job instruction training and on-the-job training have continued to be the mainstream for employee training (Markham, 1967). Lifelong learning became essential because of the advances of technology and the elimination of the middle class through market globalization. Learning centers replaced teacher-classrooms settings; advanced technologies replaced classrooms with computers, virtual reality and on-line instruction. Training has gone beyond simply providing curriculum and structure to the different avenues and domains of procurement.

Rose (2003) stated that the skills required for modern manufacturing had never been greater than in today's high tech industry than at any previous time in history. Employees must have the knowledge, resources and skills to solve current problems with real time solutions. The end product of any training program has been the successful results that the employee has been able to apply to the existing process. Classrooms have been replaced on the shop floor with sophisticated technology such as computer aided software, computer screens with touch graphics, and online trouble-shooting services for analyzing process problems, production efficiency and continuous improvement of the manufacturing systems. Schettler (2002) added "you must deal with people where people live—in their hearts—and then tie it to their minds" (p. 40).

Employees continue to have the need to understand their learning styles, and management will have to provide a multiple curriculum to meet the demands of this new generation student. Employees will have to learn new ways to process information and solve problems that were not even thought about ten years ago (Hoyt, 2001). As industrial training continued to evolve, new ideas and concepts unfolded and projected future trends have been left to the science fiction writers. Those employees who have not conformed to the new training policies have created many problems in industrial labor demands. Companies have been forced to either convert these employees to the new continual learning process or replace them with employees who would comply.

Hoyt (2001) said that career education was most widely demonstrated and the best validated proposal for education reform. Training has evolved into a highly developed process that has relied on the latest technology to provide needed skills for the manufacturing processes. A study conducted by the National Association of Manufactures identified a serious shortage of qualified employees, which negatively affected America's ability to compete in the global economy (Rossi, 2005). The report went on to say that, "A highly skilled, innovative, high performance, workforce is essential for our manufacturing sector to remain vibrant and to compete in successfully in a global economy" (Rossi, 2005, p. 14). A highly trained and skillful workforce was not always a guarantee that the end performance of product quality, production costs, and delivery would be achieved. Other variables would come into play that would affect the overall efficiency of the operation.

The environment in manufacturing consisted of very costly processes and equipment. Some organizations viewed education as less important and training as a cause for turnover because of better skills and opportunity for employees to leave the company. Rose (2003) has stated that companies with vision have not been afraid to train their employees in new techniques, comprehension and skills. These companies provided clear defined leadership and have been aware of the benefits of a fully-trained employee that not only enhanced their human resources but attracts highly skilled workers.

On-the-Job Training

Over the last several decades not much has changed in modern industrial training. Rose (2003) stated that the skills required for modern manufacturing have been greater in today's high technology industry than at any previous time. Unfortunately, training in the manufacturing industry has still been badly neglected. The informal training has always been a part of the transfer of skills from one worker to another. The necessity for new employees to be trained as quickly as possible and 'bring them up to speed' has almost always fallen on the supervisor (Markham, 1967, p. 15). The most expedient method of training the new employee was to place that individual with an employee who could perform the task in a satisfactory manner even though the employee-trainer had little experience as a trainer. The trainer would facilitate the knowledge and the new employee would satisfactorily learn the task through an on-the-job training experience. Creth (1986, p.v) pointed out the benefits of on-the-job training:

- increase in quality of work because of understanding of the process;
- increase in quantity of work by knowing how to resolve problems;
- reduced need for close supervision because of the increase in the employee's self efficiency;
- confident, flexible staff with low turnover because of ownership and feeling part of the organization;
- high staff morale created by team interaction where each team member has a vital role in success of the organization;
- job satisfaction from the culmination of producing a quality product, on time to meet customer demand, at a cost that has been competitive and functioning with fellow workers to achieve mutual goals.

Frick (1987) concluded that one of the attractions of OJT was to be a practical experience as opposed to theoretical discussion. Practical knowledge was longer lasting and easier to learn and retain than theoretical knowledge. OJT provided the new employee with the feeling of importance of the task by placing responsibility to either succeed or fail with the company assets, time and product. The practical aspect of OJT has been the relationship of new recruits to begin work immediately and become productive faster (White, 1982). OJT has been one of the best forms of training because it placed the employee in a learning situation to develop confidence and a sense of productivity. Training has been applied to improve the skills to a higher level or correct a skill deficiency. OJT has been used across the entire spectrum of employee development from an entry level new employee to a mastery level competence (Frick, 1987).

Developing the OJT Steps

OJT has been developed in four distinct stages (Pulley, 2004). Stage I was to identify and create a detailed breakdown of the skill requirements for a specific position and was called the job task analysis. Stage II was the cognitive perspective of the adult learner. Stage III was the role of the trainer in the OJT process and Stage IV was the evaluation of the OJT process and outcomes.

Stage I. Job Task Analysis. Developing a job task analysis required four steps: job process, job description, recognized skills, and an effective curriculum (Mager & Beach, 1967). The first step was to determine if the current process steps were the most efficient and achieved the desired results that meet the state of the art for manufacturing in safety, quality and productivity. Once the specific criterion for the most efficient operation had been met, the second step was to write a job description.

The job description process has involved three functions: writing a general description of the tasks performed, identifying the step by step job tasks, and listing the detail steps for each job tasks (Mager & Beach, 1967). The job description has listed a general account of the person's activity, the frequencies of motion and repetition, described the environment of the work station and a description of the level of skills required to perform the task. Once the job description (summary) was written, the job could be divided into tasks that identified the content of the job description.

Mager and Beach (1967) described task analysis by discussing three phases of course development. The first phase was preparation to identify the job detail steps and determine prerequisite skills required to begin training. The second phase was determining the content, sequence and lesson plan for the identified job training requirements. The third phase was improvement to compare the performance of the training to the objectives and provide feedback to improve the process.

The concept of a development model was to provide a step-by-step procedure to help the trainer and student identify what the job consisted of in terms of tasks, performance, and frequency. After the tasks descriptions have been identified, each task would be divided into detail task steps that would describe the specific functions in focused elements. Mager and Beach (1967) described the intent of the task description was to capture the divisions or categories that described the structure of the job contingent. A good rule to verify the validity of the task descriptions was to check to see if every aspect of the job description structure was being identified by the task descriptions. In other words, does the task description stand alone and contradict the other task descriptions or do they complement and add to each other to form a cohesive summation of the content of the job description (Mager & Beach, 1967)? According to Mager et al. (1967), there were three areas that needed to be identified with task listings in the task description. The three were: the frequency or repetition of tasks, importance of the task in relation to job function, and the task learning difficulty. Each has a rating scale that identified the degree of difficulty or repetition.

The third step of job task analysis was to identify the skills needed to perform the identified tasks. Basic skills have to be identified before job task analysis can be developed. Mager et al. (1967) said, "The strategy of developing effective instruction then is one that called for performance orientation rather than subject matter orientation. The strategy is to use the job as the basis for deciding what will be taught and in what order and depth, rather than simply to present as much subject matter as possible in the allotted time" (p. 3). The process to identify or describe the job began with a general description that presented a general summary of the overall function of the job. The job description should list what was actually being performed, not what should be performed or what the employee knew.

Stage II. Cognitive Perspective. The cognitive perspective of the adult learner was the second stage for developing OJT. Akdere and Conceicao (2006) described cognitive perspective as the focus of the adult learner on perception, insight and meaning. Cognitive perspective portrayed the concept that the adult learner was not a passive

system with stimuli being delivered and an expected response leaves. Akdere and Conceicao (2006) concluded that thinking persons have interpreted sensations and has given meaning to the events that affect their consciousness. The locus of control has been the individual and not the learning environment. Cognitive perspective has focused on three simultaneous processes: (1) acquisition of new information, (2) transformation of the knowledge to their specific application, and (3) evaluation of the learning process (Akdere & Conceicao, 2006).

Stage III. Role of the Trainer. Management has had the responsibility to provide resources for training under the OJT system. The role of the trainer became paramount in helping to expand the needed skills that the new employee must develop. Martyn and Webster (2005) concluded that the trainers must encourage the OJT employee to take responsibility for developing the competencies needed for the new job, express an effort to learn the skills and demonstrate competency. The trainer and employee will have to conduct a self-assessment through a gap analysis, to determine deficiencies in the required criteria for the task assignment and the current knowledge base of the employee. The trainer has the role of mentor, the employee as student.

Stage IV. Evaluation. Effective teaching has been emphasized as a means to transform the OJT employee into an effective learner. Akdere and Conceicao (2006) described the fast changing business environment where the individual learner and trainer must be strategically linked with the technological changes and innovations of the organization. Effective trainers would have to react and make changes relevant to the individual needs while synthesizing individual efforts to meet common objectives. Best and Kahn (1993) identified checklists as the simplest of the devices that identified a prepared list of behaviors or items that were relevant to the task at hand. The presence or absence of the behavior was indicated by a yes or no with the completion of the behavior being observed. The recording of the completed list has helped to ensure the consideration of important aspects of the object or act observed. In the case of OJT, the sequence of events that have been learned and also the observed performance of the employee completing the assigned task have been an indication of the evaluation of the OJT learning process. The OJT training checklist provided consistency in the materials presented from trainer to trainer and student to student. The use of the paper and pencil written test has also been used to determine competency of the OJT learner as a progression in the learning process.

Research Project

This paper has drawn from data gathered for an actual development of an on-the-job training program that was named 'Job Certification Program' by the company and used techniques described in the literature review. The manufacturing facility was located in the Midwest and manufactured components for the entertainment industry. The highly technical process required employees to be skilled technicians who could respond to a changing and demanding manufacturing process and schedule. The customer demand required that the product delivery be shipped within three to five days from the initial order. The overall goal of the OJT program was to develop a training program that would provide a training base for a highly skilled and technical process that could respond to

changing conditions and product demand. De Vinney and Tegler (1983) concluded from the data collected in their research that OJT has been the most important means of learning job responsibilities. The program development phase of the Job Certification Program has been presented to identify the theory and application of the OJT approach.

Qualitative research has used a technique called triangulation in collection and analyzing data. Fontana and Frey (2005) identified triangulation as a method to allow researchers to use different methods to achieve broader and often better results. Qualitative data were gathered through focus groups, interviews and observations in order to understand the approach to learning, improvements with each of the unique processes and formulation of the on-the-job training procedures.

Kamberelis and Dimitriadis (2005) defined focus groups as unique and important formations of collective inquiry where theory, research, pedagogy, and politics converge. Focus groups were developed to examine and construct procedures by a panel of experts that were used to identify, organize and establish on-the-job training checklists. Tuckman (1999) described checklists as a list of events or procedures that led to a desired conclusion. The know-how of the panel of experts has been developed through actual job knowledge, performance and experience. The focus groups not only provided the expertise for the technical knowledge, but the procedures to effectively train a new employee in the specific process using OJT criteria.

The second procedure in the qualitative process has been the employee interview. Fontana and Frey (2005) described interviewing as a “face-to-face verbal exchange that can be structured, semi-structured or unstructured. It can be used for the purpose of measurement or can be the understanding of an individual or group perspective” (p. 698). Selected individuals were interviewed on the shop floor in an informal manner to collect impressions of the OJT training program. Records were collected during the development, implementation, and trial run of the OJT program and used to correct and improve the overall process. The responses were used to infer job satisfaction and competence with the new OJT process.

Observations by the focus groups have been a useful tool to compare the checklists with the actual step-by-step procedures of the process. Detailed accounts were recorded and documented to insure the accuracy of the checklists and training procedures.

OJT Development.

Stage I. Job Task Analysis

Several teams consisting of supervisors, technicians, quality control and production employees were assembled in each of the eight production and support areas of the manufacturing processes. The OJT assigned task required each team to gather all data in their respective areas related to the description of the process, information dealing with process operations and any assumed information that had been used in the process but was not documented. The ISO 9001 preparation project had just begun at the

company and all documents had to be written and placed in the controlled database for ISO certification. Liebesman (2006) described ISO 9001 as an effective quality management system (QMS) and compliance in meeting system requirements had been a starting point for achieving excellence in the organization. The ISO documentation process had helped to organize and compile huge amounts of data. Work instructions were written from the information collected from the task and detailed task analysis. The functions of the teams were very effective because each of the members of the different teams had hands-on experience with their respective process.

Stage II. Cognitive Perspective

After many months of data collection, writing work instructions and process specifications, the information was compiled into an OJT training program format. The teams decided the sequence of operations for learning a specific process and then created a checklist to ensure those steps were followed. The process checklists were named to describe their function and were entered into the controlled document database of the ISO web-based document system. The ISO controlled document system was developed to ensure the consistency and accuracy of documents used in the manufacturing process and allowed only specific individuals to have the authorization to create or modify controlled documents. The ISO document system was a web-based library that was accessible to all employees through computer terminals or kiosk with read only access.

Stage III. Role of the Trainer

Volunteers from the focus groups were asked to be trainers and were given instruction in a train-the-trainer program using the process checklists that they had just created. McAteer (1991) concluded that the design phase would result in a simulation model prototype suitable for testing. Stage III procedures would test the appropriateness of the simulation model with a sample of the target audience. The Job Certification Program has designated the trainer as a mentor, advocate, and instructor to correct, implement and encourage employee learning. The trainers would use the process checklists as a tool to train each other and the supervisors to test the consistency of the instruments. The validity and reliability of the process checklist were proven and any inconsistencies that were identified were modified to correct the anomalies. The team members then created an observation checklist that would identify important characteristics of a process that needed to be completed in sequence and done correctly without leaving out any critical steps. The observation checklist would be used to verify the employees' ability to perform the required task.

Stage IV. Evaluation

The validity and reliability of the observation checklist was tested by the team members and any inconsistencies were identified and the checklist modified. The observation checklists were then placed in the ISO document control system to insure consistency and current information. Trainers were assigned to their respective areas and a re-training program was completed for all employees using the new OJT processes and checklists.

Summary of the Findings.

The supervisors assigned each trainer a group of employees to re-train. The OJT program stipulated that the trainer only train one employee at a time but experience later demonstrated that a trainer could coach or mentor several employees simultaneously. The trainers would take the multiple checklists for their respective area and had begun to review the work instructions and process specifications listed with their assigned employees. The trainer would establish a consensus with the employee to review a block of materials in a specific time. It was then the employee's responsibility to review the work instructions, process specifications, and any forms within that specified time. The trainer was available if the employee needed help but the responsibility for timely completion was with the employee. The supervisor would periodically check progress of the re-training and take corrective action if needed. Some employees had not seen the urgency of the re-training progression and corrective action was required. In those few cases, a short one-on-one meeting with the supervisor brought the employee back on schedule.

When the employee had completed the block of information on the checklist, they were given a written test and had to achieve a score of 80% or greater to pass the test. The trainer, employee and supervisor would sign and date the process checklist. For the employees who did not pass the first time, the trainer would devote additional time to help the employees understand the work instructions, process specifications and forms. The employee was not allowed to move on to the next area until completion of the current task was completed and the employee passed the written test with the 80% score.

After the employee had passed the specific block of information, the trainer and supervisor would ask the employee to demonstrate the process. The observation checklist was used to ensure that all the steps were done correctly and in the proper sequence. If the employee had completed all the steps on the observation checklist, the trainer, employee and supervisor would sign and date the form. Completed checklists for both the process and observation checklists were sent to Human Resources where a training database was used to store the results of training. After a block of information or process checklist was completed, the employee would move to the next training area in the sequence. A few of the simpler training procedures only had three or four process and observation checklists while the complex training areas had eight to ten process and observation checklists.

After a period of several months, all employees had gone through re-training for their respective areas. When the managers and supervisors felt that the OJT re-training was adequate for current positions, another OJT program was begun to cross-train specific employees in other areas to test the system. Experienced employees who were unfamiliar with the work in other process areas were given OJT instructions to measure the training system validity and add flexibility to the manufacturing process with additionally trained employees. Feedback from these employees was used to clarify and update the OJT process for the areas being tested. When the OJT system had been

sufficiently tested, newly hired employees were assigned a trainer and they progressed through the new training system.

Qualitative Method

Toward the end of the training phase of the OJT training, interviews were randomly conducted on the shop floor in an informal manner and the conversations were taped recorded. Employees were approached and told of the qualitative study and asked to volunteer their opinion of the OJT process. All the employees who were asked gave some response and no one refused the interview. Responses from the supervisors, technicians, trainers and employees on the shop floor were transcribed and kept on a database along with the OJT training materials. Questions were kept in simple terms like “how do you like the training program”? Interviews were conducted at the individual work stations and around the different departments and only lasted ten to fifteen minutes. Coding of the database was evaluated with a word find and comments arranged based on those findings. A few of the words and phrases used in the coding were “like” or “dislike”, “learned skills”, “understanding”, “do my job better”, and “consistent between shifts”.

Discussion

Several of the interesting observations made during the interviews were the comments of several older seniority employees. The constant theme that came from these high senior employees was that with the OJT program, they now knew why they ran the process in a particular sequence. Prior to the training, they did not know why they did their jobs a particular way except that they were told to do it that way by their trainer years ago.

The employees felt more confident in the process because they now knew where to find information to answer their questions and also used the trainers as a resource to ask questions and solve problems. Responses also came from the employees about less stress when dealing with the highly technical process because now they had a first hand knowledge of how the system worked. Interview results also demonstrated a very positive reaction by the majority of the employees in their perception of doing their jobs correctly without fear of making mistakes or rejects. The employees had commented on the satisfaction they received from the responsibility in the training procedure to have control of their learning progress. Comments included words like ‘control of my own destiny,’ ‘work at my own pace,’ and ‘had any problems, the trainer would help me.’

The trainers also had several interesting comments about the training process. They felt ownership in the training process because they had helped create the program. They also reported less stress because the training structure was defined in the process and observation checklist. Before the OJT program, each shift trainer would train employees differently and process consistency varied from shift to shift. The trainers also added that with the process checklist, written test and observation checklist, all employees were trained the same and the consistency between shifts was equal. Having the flexibility to develop consensus with the employee to cover specific curriculum, the trainer reported that they were able to train several employees at the same time but with

different sequences. This allowed employees to address their own learning styles and to have a much better understanding of the materials presented.

The supervisor reported more time to devote to other issues instead of spending time with new employee training. The supervisor also felt that the degree of comprehension and retention of OJT program was much better and the employees understood the process parameters and made fewer mistakes. The observation checklist was identified as a key training tool where they could observe the employee and feel confident that the employee could do the job without being watched or excess time spent checking on the employees' progress. The information compiled through Human Resources could be used to identify employees that have or have not been trained. The supervisors commented that now they had a resource that could tell them who was trained on specific jobs from other shifts or departments and could be substitute freely into a process job without fear of an untrained employee making huge process mistakes.

Conclusion

The OJT job certification program was very successful in its development and outcome. Employee attitude and productivity has improved along with customer satisfaction and delivery. Every aspect of the agenda has been successful and the ability to constantly modify and develop new training procedures has built into the program the automatic capacity for continuous improvement.

This research only skimmed the surface. There were several questions that were not addressed such as: return on investment, employee attitude, productivity, rejects, and on time delivery. Further, the initial work that was conducted suggested that the plant may look at other alternatives using the team and OJT concept. The contribution and involvement of the vast majority of the employees has made a measurable impact on the continuous improvement activities of the plant. Programs similar to this OJT job certification program have possible implication in related industries and business. The research possibilities have great potential.

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