

Back to the Future: A Dé-jà vu Experience with Quality Teachings

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Dé-jà vu (day zha voo): The illusion that one has previously had a given experience. The feeling of re-experiencing some specific event, sound, or scent from the past in the present. An impression of having seen or experienced something before.

My dad passed away in 1989 on his 70th birthday. When my sister and I were going through his things, I found mimeographed copies of training materials from his first “quality” class. The training was sponsored by the factory where he worked for 33 years. I decided to keep them because they reminded me of him. Seventeen years passed before I stumbled onto them while going through keepsakes and decided to share my learnings and observations with the quality community.

Most of us were not in the workforce in the 60’s – we were still in school or had not been born. As a result, those of us that work in the quality arena today do not have a personal perspective on how far we have come (or not come) in the development and implementation of quality concepts, tools and methods and workforce involvement. We can only study what was written about the processes used at that time.

Finding Dad’s classroom materials and notes was like opening a time capsule from the past. As a continuous improvement coach and consultant, I found it fascinating to compare and contrast training content and emphasis from 43 years ago with programs implemented today regarding:

- the type of quality training offered to employees
- words chosen by management to address the workforce and explain why their involvement is important to success
- impressions of those being trained in quality concepts.

This article uses tables to summarize my observations and learnings and compare and contrast subject matter in Dad’s training course with how those subjects might be treated today. If words chosen by management have changed significantly from those used today when communicating with a workforce, those differences are also noted.

As you read, you can decide for yourself

- How much has changed with implementation of quality programs.
- Where we have improved in quality training and changing behavior.
- If your personal experience with implementing quality programs is actually much different than it would have been 40 years ago, despite the changes in processes and tools used today.

Topics in the time-capsule material include:

- industrial training, (i.e., guidelines for effective training (instructor and student),
- the importance of good procedures
- business concepts and the plant organization chart
- job standardization
- process steps

Sound familiar? If you are like me, you will experience at least one dé-jà vu moment. Let’s go back in time together...

It was 1964.

That year my dad had 23 years of seniority at a manufacturing plant in north-central Indiana. This plant made springs of many sizes, from springs for railroad cars to tiny tension springs for various applications. Even the Indy race cars ran on springs that were proudly made at this plant.

A large corporation bought the plant in the early 60's. Most manufacturing plants at that time were unionized, and this plant was no exception. With the change in management came a new management philosophy that asked for the workforce's involvement in improving operating and financial results. This leading-edge philosophy was something new to the workers, including my Dad, especially given the separation between the workforce and management inherent in a union operation.

Part of management's strategy to strength their relationship with the workforce was to conduct a "training conference", which consisted of 12 sessions completed over a 3-month time period. There was a lot of thought given to program content and sequence of delivery of the sessions to create a memorable quality experience for its workers.

On February 2, management kicked-off the first training class. All workers in the plant were required to attend.

On the next few pages, I have consolidated the content of the material, and using a table format, compare and contrast this training approach to widely-used quality concepts, tools and methods used today. Unfortunately, I only found materials for session 1-7 and 12 (sessions 8-11 were missing), plus Dad's notes and thoughts about the training. Topics for the missing 4 sessions are unknown.

Session 1 appears on the next page.

SESSION 1 – Creating a partnership with the workforce

This session was an overview about the organization, the value it delivered to the community and the importance of the workers in the plant to the success of the plant.

1964	Today
<p>ORG CHART: The term “Chain of Command” was used as the name for the organization chart. Accompanying text stated that “hourly workers are just not the bottom of the totempole but they are the foundation of the cooperation structure and business”.</p>	<p>The term “Chain of Command” is still found in military but not in corporate environments where workforce involvement is important. Management seems to be attempting to change workers’ perception about them being at the bottom of the organization and unimportant.</p>
<p>THE COMPANY: The company was described as “a collection of Materials, Money, Machines and Men - All must function together and each in the proper proportion.”</p>	<p>Since there were no women that worked in the plant at that time, it was commonly accepted to say “men” when talking to the workforce. Today, “men” would be replaced by employees or another gender-neutral term. The 4 M’s bring a root cause analysis to mind.</p>
<p>ECONOMICS: Reasons “why jobs are available” were stressed – “to produce a product, for the good of the community, to make a profit for the company and the workers, to make a better product, and so that each worker and his family can live.”</p>	<p>Today, the same words are used by management teams to strengthen the partnership with their workforces. How many times have we seen these phrases in our own careers?</p>
<p>CONNECTING THE WORKFORCE:: A 2nd set of reasons why plant jobs existed:– “to produce a product, to make money for everyone concerned, to think and make decisions, and because men are NEEDED to do the jobs.”</p>	<p>This list changes the message from a purely economic one to one that involves thinking and decision-making. It reinforces that people are needed. Maybe there were rumors of a layoff or maybe a layoff had just happened, since the word NEEDED was in all caps.</p>
<p>CONCLUSIONS were presented by Management that send an interesting message: 1) “men are involved in the Chain of Command (org chart) structure 2) men are a part of the company, 3) if they fail to function with other elements of the plant, the whole plant would be in serious trouble, and 4) since jobs are important and I have one of these important jobs, I am an important man.”</p>	<p>The conclusions to the left communicate that the company valued its workforce and the workforce created value. Management may have been trying to soften hard feelings between the workforce and prior management, or to alter current perceptions of new management held by the workforce.</p> <p>Today customer-supplier requirements and cost of quality to help employees see how their work creates value. Mission and value statements express how we value employees. Management seeks to develop a culture that reinforces this view.</p>
<p>“INSTRUCTION ESSENTIALS” set expectations for teachers and students at the beginning of this program. Teacher and Student: Have a basic amount of job knowledge, practice safety at all times, be in proper position, show patience, cooperation and consideration at all times. Teacher: maintain interest of student, organize the steps of a job (if teaching process steps or SOPs), show and tell the steps (i.e., understand the complete picture of the job and provide a clear description of the job), observe the student in supervised work. Student: meet physical requirements of the job, be motivated and have an ability to learn, understand the complete picture and description of the job.</p>	<p>I found this section very interesting because it set expectations for <u>good instruction</u> as well as learning. My experience has shown that the quality of training is generally less emphasized than an employee’s responsibility to learn the material. .</p> <p>How often does management document or verbalize these kinds of expectations for quality instructors / trainers or for employees / students before we start training? Too often I have seen good material presented poorly OR good material presented well but employees not held accountable for using what they learned. Both scenarios yield a poor result.</p> <p>Do we ask trainers to watch a trainee after the training, or as consultants, do we make sure that we were effective in enabling a behavior change by observing? This section provides some food for thought in these areas.</p>

SESSION 2a – Objectives of On-The-Job Training and Effective Training Techniques

Part 1 consisted of a 5-Step Process for Executing Effective Training.

1964	Today
<p>TRAINING OBJECTIVES: Seven objectives focused on efficiency and improving the workplace for the worker:</p> <ol style="list-style-type: none"> 1) To get workers producing quality and quantity production in shortest possible time, 2) Train the worker in safety practices, 3) Develop the confidence of the worker in his ability to perform the job, 4) Eliminate waste of time, materials, tools and equipment, 5) Develop an informed worker, 6) Develop a feeling of membership in a team, and 7) Show the worker that someone is interested in his welfare. 	<p>Today our quality message is often about reducing waste and cost, improving productivity and working safely, which are all mentioned at the left. Three of the seven objectives indicated a desire to change the way workers FELT about their job.</p> <p>Number 7 is most interesting and is probably there to help improve relations between management and the workers. It is the least likely objective to appear in today's training materials because 1) we assume that training employees shows that we care about them (no need to say it) OR 2) companies want people to feel expendable (i.e., not important) to maintain flexible workforces and outsourcing opportunities (a change from several decades ago).</p>
<p>PROCESS FOR ON-THE-JOB TRAINING: A 5-Step Process for how to conduct On-The-Job Training was presented in detail. The five steps are:</p> <ol style="list-style-type: none"> 1) Preparation for Instruction and Instructor, 2) Presentation, 3) The Learner Performs, 4) The Follow-Up, and 5) Re-Teach Specific Material if Necessary. <p>The largest section in this process was the preparation section. See the following two boxes for detail on its content.</p>	<p>The preparation section demonstrates the importance that the company assigned to quality of training. There were two checklists included – one provided preparation guidelines for the instructor to create a quality learning experience for the workers. The other checklist helped the instructor “interact” with the workers to make them feel at ease and welcome.</p> <p>Even though we depend ALOT on process to make improvements, feelings can be hidden barriers to the success of an initiative. It is important for quality professionals to consider this as we work to improve operating / financial results and corporate culture.</p>
<p>Preparation for Instruction: A checklist provided a set of guidelines to follow to create a quality learning experience for the workers. Main steps were</p> <ol style="list-style-type: none"> 1) Analyzing the job for materials, operations or processes, specifications, tools and equipment, safety and housekeeping, 2) Organizing content into a sequence for presentation, 3) Determining how to demonstrate the material, 4) Selecting supplemental teaching aids, 5) Gathering tools equipment, and materials in advance, 6) Allowing for adequate time for instruction, and 7) Prepare your mental attitude (includes self-confidence in your plan, performance and knowledge, accepting and appreciating the learner as a fellow man, be friendly, courteous, calm and poised, show that you want to instruct, “if the learner doesn't learn, the instructor has not taught.”). 	<p>Step 7, Preparing Your Mental Attitude, may be expected today but is seldom communicated as part of a trainer's responsibility. Most interesting was an expectation for trainers to treat trainees as “equals” and with compassion. How an instructor conducted himself was emphasized as much as what he taught; if the instructor was a member of management (foreman or superintendent), this would be especially critical to how the training was received by the workforce. Have you had an instructor that made you feel inferior when answering a question?</p> <p>Also fascinating was the statement that the instructor was ultimately held accountable for workers learning. How often have we sat through training and wished the instructor had been more prepared to train or more knowledgeable about the material and how it related to our work, knowing that we would have learned and retained a lot more?</p>
<p>Preparation for Instructor: This 10-point “kick-off” checklist is a script for the trainer of what to say when starting a training session:</p> <ol style="list-style-type: none"> 1) The introduction 2) Welcome to the department and plant 3) The learner is a part of the group 4) Share hobbies and interests with the group 5) Ask workers to share their experience and background as it applies to this job. 6) Answer questions that the learner may have since orientation 	<p>Have you ever met instructors that failed to “set the stage for learning” by not reviewing the basics before getting into the detail? Remember how lost you felt?</p> <p>Nine of these ten points could be applied to some degree in any training opportunity to improve the overall learning experience and create a consistent process for delivery. This consistency is especially important in “train the trainer” applications.</p> <p>I use Points 7 and 9 in my work. They involve a</p>

1964	Today
7) Describe the department's organization and products 8) Make the learner feel at ease 9) Review the job and the workstation – how material is handled, the importance of this job, how this job relates to the finished product. 10) Determine the learner's attitude about being taught the job.	concept called Process Orientation, as well as the development and sharing of customer/supplier requirements, both powerful tools to help employees understand how they add value in the big picture and deliver what is required to their customers. Point 10 implies that the instructor may have been responsible for changing or influencing the attitude of the trainee about learning new material. Today employees, not trainers, are responsible for their attitude when learning new material.

SESSION 2b – Objectives of On-The-Job Training and Effective Training Techniques

Part 2 included a training demonstration and feedback on good practices, pitfalls, and benefits of planning training sessions.

1964	Today
SERVICE RECORD: This session started by recognizing the average years of service in the plant (22.4 years) and a congratulations given by management for "such a fine service record".	Still a common practice where experience, seniority and loyalty to an organization is valued. This statistic reinforces urgency when included in the kick-off an improvement initiative, especially when a large percentage of the workforce is ready to retire.
TRAINING DEMONSTRATION - FEEDBACK: The group gave feedback in four areas: Good points to be practiced: 1) Have courage. 2) Be in the proper position. 3) Make the subject interesting. 4) Select a good topic. 5) Have and use proper equipment. 6) Know how to do the job. 7) Know how to instruct and relay information. 8) Give the name of the object first. 9) Make a good explanation. 10) Give clear and complete instructions. 11) Make a good application. 12) Give helpful and unique suggestions. Pitfalls to be avoided: 1) Explanation given too fast. 2) Not specific with names and actions. 3) Did not show how to use object. 4) Improper terminology used in explanation. 5) Too many assumptions made. 6) Complete operation cycle not explained. Benefits of planning for giving instruction: 18 Benefits were listed: Time is saved, Easier work, More logical sense, Organization of work, Efficient work, More work accomplished, Better results, Lower costs, More jobs, Job security, Uniform procedure, Increased self pride, Better self control, Better job understanding, More simple operation, To see ahead, To make progress, To eliminate trouble Results from lack of planning: More material to rework Loss of time Higher job costs Waste of material	I included a lot of detail from the document so that quality trainers could see the feedback from the demonstration. Most items listed on the left could easily appear on white boards and flip charts today. Having courage was the first point listed under good points to be practiced. As professionals in the quality field, we become comfortable with the tools and processes we teach. Sometimes we forget that those trying to learn from us may be afraid or unsure of themselves. It make take courage for employees to participate in improvement initiatives due to personal issues or because the culture and management system tends to propagate fear in the workplace. Examples include: Personal Fears: 1) fear of making a mistake 2) fear of peers finding out that they do not understand a concept 3) fear of expressing their opinion in a group 4) fear that others will find out that they cannot read well or are not good at math 5) fear of standing in front of a group to explain a concept or report out on team progress. Workplace Fears: 6) fear to speak up about a recurring problem 7) fear of discussing a process problem with another department 8) fear of talking about breakdowns in communications or no communication It is important for us to anticipate these fears and coach the workforce and management teams to make them comfortable when learning and applying new concepts and tools. Their fears can become real barriers to improvement if not addressed.

SESSION 3 – Job Analysis (Process Flow Concept)

1964	Today
<p>JOB ELEMENTS: Were defined as the “skeleton outline of the job task” and referred to as “job analysis”. Listing the detailed job steps of operations was recommended as a good start toward better job instruction.</p> <p>Job Elements were classified into three areas:</p> <ol style="list-style-type: none"> 1) Do (the actions that one does to accomplish a job), 2) Know (the information needed by the operator to do a successful job, and 3) Safety (the safety hazards and precautions involved in working at the job at hand). <p>Exercise: Process steps were listed for an automatic coiling operation.</p>	<p>In 2007, we would describe the “Do” area as defined here as process steps or a process map. The “Know” step would include SOPs, Customer Requirements, and Safety Practices.</p> <p>I was pleased to see “Safety” broken out as a separate category. It is the number one topic when I work with industry and always ranks high on the priority list in any training effort. Forty years ago, management recognized the benefit of separating it from other job procedures to raise awareness.</p>

SESSION 4 – Job Analysis Exercise (List the Process Steps in Your Job)

1964	Today
<p>DAD’S NOTES in his handwriting – Job Analysis: Dad wrote the process steps for setting up “B” machine. He did not draw a process map, but listed in order the steps required to complete the task. He wrote “DO + KNOW” at the top of the page and provided detail for each step that could have been converted to an SOP for machine set-up. He listed three of the common items under SAFETY below.</p> <p>Each person was required to read what they had written to the group. Common points were identified by the group for each area:</p> <p>DO: Start the job analysis at the beginning of the sequence.</p> <p>KNOW:</p> <ol style="list-style-type: none"> 1) How to read the job order and blueprint to find job specifications. 2) The type of size of materials needed for the job. 3) Where to find the material. 4) How to read measuring instruments (micrometers and rules). 5) Basic math in order to do necessary job calculations. <p>SAFETY:</p> <ol style="list-style-type: none"> 1) Wear safety glasses at all times. 2) Practice good housekeeping at the workstation and throughout the plant. 3) Keep guards in place. 4) Shut off the power before putting the hands inside any machine. 	<p>When we start any process flow, we recognize that selecting the first box is key to the level of detail, departments or processes included, and the overall quality of the end product. It is interesting to see that this group recognized the same problem when they documented the “DO” steps in their processes.</p> <p>The common items under “KNOW” are not what I expected to see. Instead of common procedural steps in factory work, these points sit on the outside of a specific job process but affect the quality of the final product.</p> <p>Items 4 and 5 could be pre-requisites for employment or items that should always be covered in the training program. Today, robots or computers replace the need for these items in most applications.</p> <p>It is obvious that an orderly workplace was important to the majority of the attendees. Today we might implement “5 S” to implement and sustain good housekeeping practices.</p>

SESSION 5 – Review of Training Objectives

1964	Today
<p>TRAINING PHILOSOPHY: Follow a step-by-step procedure. First things first. Too much detail right away may not be good. Training a new worker will be done by the demonstration method (showing and telling).</p> <p>Aids available to the trainer include: 1) Fraction-decimal conversion tables, 2) A sample product, 3) A machine operator's instruction manual 4) Written notes of part names</p>	<p>As a new employee, do you remember how you were trained? Depending on the level of chaos in the department, you may not have had the benefit of much training using the demonstration method. If you had little training using the demonstration method, you probably remember the pain of struggling for hours to learn something that someone could have shown you how do in minutes.</p> <p>As training opportunities in the quality area arise, we should keep the "show and tell" method in mind to shorten the learning curve.</p>

SESSION 6 – Benefits of Industrial Training

1964	Today
<p>BENEFITS OF INDUSTRIAL TRAINING: Were split into three categories: company benefits, personal benefits and union benefits.</p> <p>All 14 company benefits would be listed today (better quality, higher production, improved safety, economic security, less waste, lower cost, etc.)</p> <p>Personal benefits included improved mental attitude, less worry, easier work load, less "stack blowin", better chance for pay increase, improved verbal expression, better job security, increased knowledge of one's own job, and experience helping others.</p> <p>Union benefits included more membership, more jobs, better bargaining power, reduced grievances, less labor trouble, more dollar benefits, and earlier retirement.</p>	<p>Benefits of good training were listed in Session 2. The benefits in Session 6 are related to industrial training in general. This is the first time we see union benefits documented.</p> <p>Based on the documentation in this section, it was unclear if these benefits were developed by the group or handed out by management for review at the session. The personal benefits indicate that there was a problem with tempers and possibly morale. How this list was created / delivered was a large factor in the degree of buy-in by the workforce.</p> <p>Sometimes we use benefit slides to "convince" the audience to buy in to a program during kick-off. It is important to realize that showing these slides may not change any opinions. Only hands-on experience and success with new tools and methods will create the buy-in we need for sustainability.</p>

SESSION 7 – Step-By-Step Instruction

1964	Today
<p>A TRAINING FILM was shown called "Instructing the New Worker on the Job", followed by a review of the six steps of step-by-step instruction:</p> <p>:</p> <ol style="list-style-type: none"> 1) Learn the student's background and experience. 2) Instructor shows and tells: Explains part location and importance, Shows proper student position for learning, Explains operation and demonstrate, Clears out chips (cleans equipment). 3) Student tells while teacher does the work. 4) Student tells <u>before</u> doing. 5) Student gives reasons why – helps memory. 6) Follow-Up – Experience for student and teacher observes, Teacher shows and tells how to correct trouble. 	<p>Even though the learning steps are designed for an industrial application, they could easily be modified for use in training managers and employees at all levels in quality concepts, especially for training exercises used to demonstrate and teach concepts.</p> <p>If we modified the 6 Steps for quality training applications, Step 1 could be restated as "Know your audience". The detail in Step 2 would be concept-specific. Step 3 would be a verbal exchange about the concept to test the level of understanding. Steps 4 and 5 could be executed as a practice exercise. Step 6 could be a review of learnings after the exercise, and could extend into the workplace when a concept or tool is put into practice.</p>

SESSION 12* – Asking Questions, When Training is Complete

1964	Today
<p>Guidelines for asking questions: :</p> <ol style="list-style-type: none"> 1) Limit questions that only require a “yes” or “no” answer. 2) Don’t ask questions that require only memorization by the trainee. 3) Make the question brief and clear. 4) Concentrate on one main idea. 5) Fit questions to the individual. 6) Ask questions that stimulate thought and questions in return. <p>When is this training program complete?</p> <ol style="list-style-type: none"> 1) When individuals recognize that trained men are important to the efficiency of plant operation. 2) When trainees have developed the ability to: <ul style="list-style-type: none"> - analyze job cycles. - identify the key points of the operation concerning doing, knowing and safety - identify the minute details - make all preparation of his equipment, materials, tools and other things necessary to use in doing the job - ask questions and stimulate questions by asking questions. 	<p>Today we say that there is no such thing as a bad question and we encourage everyone to ask whatever they would like to ask. As a result, we may get questions we wish hadn’t been asked, but at least we have done what we could to remove any barriers that might keep people from asking. Even though the criteria at the left sounds reasonable for creating good questions and not wasting time during training, I wonder how many questions were not asked as the result of these guidelines.</p> <p>The missing 4 sessions must have contained information on identifying minute details and making preparations to do the job, since these are listed as requirements but not covered in the prior sessions.</p> <p>When I read the requirements for completion, the first thing that occurred to me was “How did management quantify these criteria to understand percent complete or identify a need for more instruction?”</p> <p>Measurements and trends are blatantly absent from this program, indicating a gap that has been filled through time as computers helped make data available for Run Charts, Control Charts, Key Performance Measures, the Balanced Scorecard, and more complex improvement systems like Six Sigma..</p> <p>If Dad was here today, I would ask him which of these requirements was the most difficult to meet. My guess is that he would say that asking the right kind of question was the hardest and most frustrating for him – I know it would be for me.</p>

* Steps 8 through 11 were missing from the documentation (topics unknown).

Evaluation of the Instructor and the Course

Dad was asked to evaluate the instructor and the training program. Here are his words:

EVALUATION OF INSTRUCTOR: On our first day, he introduced himself and in turn we did the same. He has a very good personality and there was good cooperation between student and teacher. I’m no expert on teaching, but to my knowledge he did very well on **trying to teach an old dog new tricks**.

EVALUATION OF TRAINING SESSION: When I was asked what I thought of it, I said **I could not see where it was going to benefit me in any way**. I think it is a good thing for the company. A lot of employees with several years of service will mean retirement of experienced workers. In getting younger men trained for these jobs, production will go on without interruption.

SUMMARY

Knowing my dad and his work ethic gave me additional insight about his comments that a casual reader would not have the opportunity to gain. He was very dedicated and almost never missed a day of work in 35 years. He was a natural-born engineer and used to invent and build things on Saturday in the garage. He was a perfectionist, so doing his best work and producing a good product was very important to him.

I'm sure that Dad tried to have a good attitude throughout the course, but having spent so many years doing this type of work must have made it difficult to accept the changes that came with the training program. He may have felt that it enabled the company to replace him easier (and maybe earlier) than it could have before. (Dad was 45 years old in 1964. He worked there 10 more years before he retired at age 55 with 33 years of seniority. His only break in service was during World War II, when he joined the Army and went to Europe for 2 years.)

His comment about "trying to teach an old dog new tricks" indicates that he either did learn something or the teacher did a good job trying to teach him something, given his age and time out of school.

His statement that the course "did not benefit him in any way" is **very interesting**, given the effort put forth by the company to create and sustain an excellent training program, involve the workers, and increase their understanding about the value they added to the company. When management received feedback like this, the phrase in Session 2A about responsibilities of the trainer must have come back to haunt them: **"if the learner doesn't learn, the instructor has not taught."**

There is a lesson here for all quality professionals. In 2007, we have high tech visual and audio tools to communicate ideas and track progress. We may spend man-months designing the most enriching program possible for employees or clients; we have high expectations for the value it will deliver and its ability to change the culture. But, if we have failed to show employees the value, despite the type of initiative (Six Sigma, Lean Continuous Improvement, etc.), sophisticated tools and training approaches, then **we are at fault for not finding the "sweet spot" that resonates with them.** This may always be our biggest challenge in this work...and our biggest reward when we succeed in connecting with what managers and employees care about most. Buy-in, sustainability and culture change are sure to follow.

Kay Sever implements continuous improvement with a unique and balanced approach between continuous improvement concepts/tools and the people side of improvement. She works with every organizational level to remove barriers that hide opportunity and promote cooperation and measurable improvement. She coaches management teams on Improvement Leadership to help them drive and sustain improvement initiatives. Kay speaks frequently on lost opportunity and barrier removal. More detail about her services is available at her website: miningopportunity.com. Kay can be reached at 480-545-9095 or via email at kay@miningopportunity.com.