

QUALITY SKILLS TRAINING: A ROADMAP FOR LEARNING

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SUMMARY

The purpose of this paper is to provide a blueprint for conducting monthly quality training to all associates. The major component of this blueprint is called Quality Skills Training (QST). QSTs are one and half-hour training sessions. This paper describes how these training sessions are designed and includes a teaching guide for one topic: creativity. This paper is designed to be part of an interactive session where the QST on creativity is presented as part of the blueprint.

INTRODUCTION

Industrial Distribution Group – Charlotte (IDG) is an industrial distributor based in Belmont, North Carolina. IDG implemented a quality improvement process in 1991. Since its inception, training has been a critical part of that process. Each of the 500 associates attends a monthly quality training session. The purpose of the training is to enhance associate skills and knowledge in a variety of areas that support the company's vision, goals and objectives. Training topics can vary greatly. On the "soft" side, there is teamwork, motivation, recognition, reinforcement, social styles, creativity and feedback. On the "hard" side, there is ISO 9000, problem solving methodologies, goal setting, measures and, of course, the basic SPC tools.

The formalized training program began under the leadership of an outside consulting firm. Their responsibility was to choose the topic, develop the packet, and train a group of associates to deliver the monthly classes. These associates are called QIP Coordinators, with the QIP standing for Quality Improvement Process. The QIP Coordinators had gone through two weeks of in-depth training on the soft as well as the process side of quality.

This approach worked well during the first couple of years. It helped begin the process of changing the company culture. The topics focused on basic quality tools and provided the foundation for moving toward continuous improvement. Associates used these quality tools on project teams.

After the first two years, the training became less useful. People complained that the training became too boring as well as too much on the problem-solving side and not enough on the people side of quality. In addition, there was no direct link between the training and the day-to-day work activities of the associate. Unless a method was found to link the training to the business, it was doomed to fail. Anything that operates outside the mainstream of the organization will eventually falter and go away. A change was needed.

A team made up of the President and his direct reports leads the company. This team is called the Process Leadership Steering Committee (PLSC). It is responsible for all company business processes, included the quality process. The PLSC made the decision to begin developing the training internally. The PLSC wanted to ensure that the training supported the company's vision and mission statement as well as the goals and objectives for the year. No further training would be given without a direct link. Associates needed to know what was expected of them once they left the training, i.e., what they were expected to do differently.

The QIP Coordinators team was given the responsibility of developing the QSTs. This step gave ownership of the process to a group of well-trained associates. The QIP Coordinators determined the important training issues and prioritized them. Associate input on potential training topics was gathered yearly. The topics were approved by the PLSC. Often, this group added training issues.

The QIP Coordinators developed a plan for writing and reviewing each training packet. Feedback was provided by the outside consulting firm on content and layout. The outline of the QST packets is described in detail below.

The transition to “owning” the monthly training represented the point in which quality “took hold” in IDG. The training topic for the month was presented to all associates within the company by the QIP Coordinators. Attendance was tracked and monitored by the PLSC.

Over the years, a large variety of topics have been covered in QSTs. Each year, one QST is devoted to the company’s goals and objectives. The President usually delivers this QST. The QST format is one of the best ways of communicating information to everyone in the company. One QST dealt with “Taking Care of Business” and described the business in detail and how \$100 in sales is broken out into expenses (what they are) and profit. “Who Moved My Cheese” was done as a play. One QST introduced associates to 10 different customers and included visits to some customer’s locations. Other topics have included creativity, change, paradigms, cost reduction and goal setting. The QST on creativity is outlined in the teaching guide below.

This process was in place and effective through 1999. As the quality process began to mature, the training needs became more diversified. The QST approach was still working, but input from the associates to determine and expand training topics was needed. A survey was developed to determine which aspects of QSTs were effective and which needed some improvement. Associate input was crucial and the driving force behind the monthly training process to date.

The biggest change to the process was the addition of Associate Driven Training (ADT) to the Quality Skills Training. The monthly training now has two different facets: Quality Skills (all associates receive the same training) and Associate Driven (associates are given the opportunity to choose his/her monthly training topic).

For ADT, course schedules are published toward the end of the month. The schedule includes training dates and a brief overview of each topic that will be offered in the next month. Topics that are considered mandatory for a particular group of associates are noted as such; otherwise, each associate determines which class to attend. A variety of topics, typically 5 – 10, are chosen to address current business needs as well as offer soft skills and personal development training. Past ADT topics have included goal setting, strategic planning, telephone etiquette, basic computer skills, Excel, PowerPoint, Outlook, CPR, and supervisory training just to name a few.

Attendees fill out an evaluation form at the end of each session. They are asked to rate the following six questions:

1. Did the training meet the stated objectives?
2. How comfortable was the environment?
3. How would you rate the materials/visuals/exercises?
4. How effective were the instructors?
5. How relevant was the training to your job?
6. Did the training support the company’s vision, goals and objectives?

Control charts are used to monitor the results on a monthly basis. Each instructor receives individual feedback on his/her performance. The QIP Coordinators review the results on a monthly basis.

THE DESIGN OF THE MONTHLY TRAINING SESSION

Each QST (and many of the associate driven training) module follows the same basic design. Each associate is given a packet that contains the information presented. The design contains the following key components:

- Training objectives
- Focus exercise
- Review of company vision
- Presentation of the training topic
- Summary
- Closure

It’s fairly simple: tell them what you are going to teach, teach them and then tell them what you taught them. The key to success of the QSTs has not been this design by itself. It is the fact that each QST is geared toward the day-to-day business activities and is load with interactive exercises that make the QST FUN!

In the *training objectives*, the instructor lists the four to five objectives for the session. This tells the associates what they should expect to take away from the session.

The *focus exercise* is a key part of the QST. It accomplishes a number of things. Associates often come to training sessions thinking about what else they could be doing. The focus exercise allows them to shift their focus away from other topics to the training topic. Plus, it gets the associates involved and provides a method of learning more about one another. The original focus exercise was called Quality Wins. In Quality Wins, each person shares something positive that has happened to them over the past month. It could be anything that happened at work, at home, at church, in the community, the country or the world – anything that they thought was a win. The focus exercises in QSTs now are related to the topic, but still must meet the three requirements:

- Focus everyone on the topic.
- Get everyone participating.
- Learn more about one another.

The company *vision* is reviewed and the link between the training and vision is explored. This keeps the vision in front of all associates and helps everyone, in particularly new hires, to become familiar with the vision statement.

The *training topic* is then presented. The training can be any combination of lecture, exercises or videos. But there are some requirements. First, the presentation must be fun and interactive. All topics can be made fun and interesting. The training is designed for both the right and left sides of the brain. The entire presentation is done in PowerPoint to allow the introduction of color and animation. All the training is done as a slide show in PowerPoint.

After the training topic is complete, a *summary* is done. Each training objective is reviewed to ensure that the objective was met.

The last part of the training is *closure*. Closure includes an opportunity for each person to share what he/she has learned or what he or she is taking away from the training. Like the focus exercise, everyone participates in closure.

Classes consist of 10-25 associates working in all aspects of the business. This is to enhance the overall interaction as well as afford the opportunity for associates to learn more about processes outside of his or her own process area.

The outline for one QST on creativity is given below. The information in the outline serves as a teaching for the QST.

TEACHING GUIDE FOR THE CREATIVITY QST

The Creativity QST teaches the associates the concept of creativity as well as provides ample opportunities to practice a variety of exercises designed to improve creativity. Most importantly we do away with the old thinking “I’m not born creative so I can not be creative.” We can all be creative, we can learn how to become creative, if that is what we want to be! The design of this module is given below.

- Training objective
- Focus exercise on creativity
- Company vision review
- Creativity Training
 - Creativity definition
 - Need to foster creativity
 - Mechanics of the mind
 - Obstacles to creativity
 - Guidelines to becoming more creative
 - Fundamentals behind creativity tools
 - Creativity Exercise: “Pass a law against it”
 - The specifics of two creativity tools
 - When to use creativity
- Summary
- Closure

The creativity QST is an interactive 90 minutes module that easy could be expanded if needed. The training is constructed in a way that allows for maximum participation from the associates.

TEACHING GUIDE FOR THE CREATIVITY QST

To teach this QST, you will need the PowerPoint presentation that is described below. Only a few slides are shown in this paper to demonstrate the layout and the desire to teach to both sides of the brain. The presentation is available in the conference proceedings on CD-ROM or by e-mailing the authors. The room setup should be comfortable for learning and can be in a classroom setting or U-shape. The training works best with groups of 10 to 25.

Training Objectives

Begin the presentation with the slide that shows three quotes about the importance of creativity.

- *“It is necessary to innovate, to predict needs of the customer, give him more.” - W. Edwards Deming.*
- *“To succeed, you have to disturb the present.” - Roberto Goizueta, CEO, Coca-Cola.*
- *“Every organization needs one core competence: Innovation” - Peter Drucker.*

Discuss each quote and what it means to the organization. Next, present the *objectives* for the session. The objectives of this training session are to:

- *Encourage you to be creative.*
- *Understand why we should foster creativity and innovation.*
- *Learn the dilemmas facing leaders embracing creativity.*
- *Understand the mechanics of the mind - how does the mind think.*
- *Learn how we become creative and innovative.*
- *Learn guidelines for becoming more creative including two creativity tools.*
- *Challenge you to put what you learn into practice back on the job.*

Explain that you will be teaching how the mechanics of the brain function and how you can utilize creativity tools to become more creative in your everyday life. Stress that creativity isn't fully creative until we use it to change something - to make it better.

Focus Exercise

You are now ready to have your attendees complete the focus exercise on creativity. First you ask all associates to answer the questions below individually or in dyads. The answers to this and the exercises are given in the PowerPoint Presentation.

1. *How many four-cent stamps in a dozen?*
2. *How many birthdays does the average person have?*
3. *Which month has 28 days?*
4. *I have in my hand 2 U.S. coins that total 55 cents. One is not a nickel. What are the two coins?*
5. *Do they have a 4th of July in England?*
6. *If you take two apples from three apples, what do you have?*
7. *Is it legal in the U.S. for a man to marry his widow's sister?*
8. *How many animals of each species did Moses take on the ark with him?*
9. *Why can't a man living in charlotte be buried west of the Mississippi?*



10. *If a rooster, facing north, lays an egg on a pointed roof, what side would it roll down?*

You will then ask for answers from different individuals/dyads to each of the questions. The focus exercise has two primary purposes. It gets associates to speak up and it gets their mind geared towards, and opened up for, the challenges we need to overcome to become creative. Plus, it is fun.

Company Vision Review

The company vision is then reviewed. IDG's vision statement is given below.

*Our Vision is to be **the** service company recognized for creating unequalled value for its shareholders and stakeholders through profitable growth and superior return on investment
And acknowledged as being integral to the success
of our customers, associates and suppliers.*

A brief discussion is then held on how being creative helps IDG achieve their vision. This helps provide the link between the training and the company vision statement.

Creativity Training

You are now ready to begin teaching the creativity topic. You start with a definition of creativity. Begin by asking the participants how they would define creativity. You can define creativity as simply as "thinking differently is the same as creativity" or you can be fancier and define creativity in psychological terms¹:

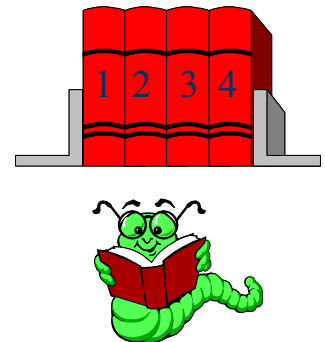
"A group of cognitive processes used to generate useful, original, and novel ideas or solutions to problems."

All in all, creativity is also the ability to look at the same thing as everyone else, but to see something different. You will end the definition portion by dividing participants into dyads and have them solve the challenge of the "life of a bookworm."

Each of the four volumes depicted here has the same number of pages and the width from the first to the last page of each volume is two inches. Each volume has two covers and each cover is one-sixth of an inch thick.

Our microscopic bookworm was born on page one of volume one. During his life he ate a straight hole across the bottom of the volumes. He ate all the way to the last page of volume four. The bookworm eats in a straight line, without zigzagging. The volumes are in English and are right side up on a bookcase shelf.

How many inches did the bookworm travel during his life?



Next, you cover the need for companies to foster creativity. Leaders are faced with the imperative of change. It must occur today and no one likes change. But to change and stay ahead of the competition, you must foster creativity within your organization. The five key reasons for fostering creativity identified by business research are listed below. You should review each one and ask the group for input or if they believe each is true. Ask for examples. The five key reasons are:

- Superior long-term performance.
- Customers increasingly demand innovation.
- Competitors are becoming better at copying past innovators.
- New technology enables innovation.
- What used to work doesn't anymore.

The next to introduce is the way the brain works. Paul Plesk has examined in detail how the brain and creativity works.² The mechanics of the brain is like a paradox. It creates wonderful opportunities for us in terms of being able to think. On the other hand, that exact skill, the process by which our thinking becomes a skill, turns it to being an obstacle when we need to be creative. We need to understand the mechanics of our brain to be able to utilize our capabilities to the fullest. While all individuals have the ability to think in new patterns, human minds are optimized to think in existing patterns! So in

order to be creative we need to do some thing radically different in order to even be able to use mental capacities different from our usual “mental ruts.”



Next, introduce a creativity exercise to explain how we get into mental ruts. Divide the class into groups and give each group 12 pennies. The objective is to form a square with five pennies on the side. Most groups fail because of the way they view a square with five pennies. It is their mental rut. The solution to this problem is quite simple once you see it. But, in reality, the solution can be quite hard to get simply because we are not used to thinking differently, to using the different valleys of our mental landscape.

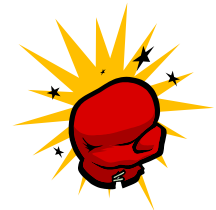
This exercise is followed by another creativity exercise. This exercise can be done in dyads or in groups. Ask the dyads or groups to decode the following groups of words and lines into common phrases. For example, the translation of the first one is “thermal underwear.”

<i>Wear</i>	<i>me quit</i>	<i>t</i>
<i>thermal</i>		<i>o</i>
		<i>u</i>
<i>0</i>	<i>knee</i>	<i>c</i>
<i>B.S.</i>	<i>Light</i>	<i>h</i>
<i>M.A.</i>		
<i>Ph.D.</i>		<i>w</i>
		<i>o</i>
<i>R/e/a/d/i/n/g</i>	<i>ecnalg</i>	<i>r</i>
		<i>t</i>
		<i>h</i>

Next, you will cover three obstacles to creativity. Being creativity is not necessarily easy; then there are all these obstacles. Some are internal to us; others are external. Why is it we have such a hard time using different valleys of our mental landscape? One reason is functional fixedness.³ In functional fixedness, we view an object as functioning only in the customary way. A hammer is a hammer. That’s it.

Another reason we have obstacles to creativity is mental sets - - the tendency to persist in solving problems with solutions that have worked in the past.

The third obstacle to creativity is what we call Killer Jobs. These are obstacles, not from within us, but from the society that we are part of and function in. Studies have shown that negative “no-can-do” statements outweigh positive “can-do” statements by substantial margins. We are bombarded daily by killer jobs that block our attempts to develop and implement creative solutions. Some Killer Jobs are listed below. Review these with the attendees. Ask if they have heard any of these before and what impact it had.



1. Yes, but . . .	10. The boss will never go for it.
2. We tried that before.	11. If it ain’t broke, don’t fix it.
3. We haven’t the manpower.	12. We’ve always done it this way.
4. Don’t rock the boat!	13. It’s all right in theory . . .
5. Great idea, but not for us.	14. Do you realize the paperwork it will create?
6. It’s not in the budget.	15. I’ll get back to you.
7. It will be more trouble than it’s worth.	16. It’s working OK so far.
8. Let’s stick with what works.	17. Get a committee to look into it.
9. It’ll never fly	18. No way!

At this point, some people may well be wondering if they can be creative. You’ve done some creativity exercises that may have stumped them. So it is important to show them that psychologists have found that virtually everyone possesses the intelligence and cognitive processes needed to be creative. However, the creative individual values creativity as a personal goal. In many cases, the real creative leap involves recognizing that a problem exists. We often overlook creative

opportunities by dismissing trivial annoyances rather than recognizing them as potential problems to be solved. Review with the class the guidelines for being creative and how to **CREATE**.³

- Choose the goal of creativity – the creative individual values creativity as a personal goal.
- Reinforce intrinsic motivation – the creative individual is motivated by his/her own interest, his/her enjoyment of a challenge and a personal sense of satisfaction.
- Engage in problem finding – the creative individual easily recognizes when a problem exists; they find the problems to be solved.
- Acquire relevant knowledge – the creative individual has a solid knowledge base.
- Try different approaches – the creative individual is flexible in his/her thinking; he/she play with many possibilities.
- Exert effort and expect setbacks – the creative individual is persistent.

Next, the tools to help associates become creative are introduced. There are many creativity tools available. In this training, you will be introducing two tools that can be used to develop creative solutions to quality and process problems. Both these tools help you escape existing mental patterns and allow you to use more of your mental landscape. The two tools are “Pass a Law Against” and “Imagine How Others Would Do It.”^{2,4}

To introduce this method, discuss the following example: waiting in line at the grocery store checkout line. Wouldn't it be nice to decrease that time? You can use the “Pass a Law Against” method to find some creative ways to accomplish just that. For example, a law has been passed that it makes it illegal to wait in a grocery store checkout line longer than 2 minutes. Demonstrate the methodology by going through the following steps:

- Make a list of rules or givens about waiting in line at the grocery store check out counter (i.e., why do we have to wait in line at the grocery check out).
- Take each item in the list and develop a way of purposely avoiding it.
- Continue until you have found the way to avoid “breaking” the law.

Next, the class has the opportunity to practice the skill. Divide the class up into small groups of 4 – 5. Give the groups a scenario that is familiar to most people in your organization and ask them to work on developing creative methods of not breaking the law. Examples of possible skill practices for “it is illegal” include:

- For a customer's call not to be answered by the third ring.
- For a customer not to be talking to real, live human being within 20 seconds of the call being answered.
- For a customer shipment to be late.
- For a quality improvement team to fail to meet its mission.
- For each associate not to have one quality improvement suggestion implemented per quarter.
- For a customer invoice to be wrong.

Give each group flip chart paper and pens to record their results. Debrief by asking each group to present their results. It is often interesting to have all groups do the same topic to see the variety of ideas that are generated. The exercise and debrief will take about 20 minutes.

Sometimes groups have problems coming up with a topic to work on in the class or, at least, getting agreement about what to work on. If that happens, you can use a nifty little tool called “bug listing.”³ Sometimes we overlook creative opportunities by dismissing trivial annoyances rather than recognizing them as potential problems to be solved. You will want to share the following story with your class. Consider the minor annoyance experienced by a man named Art Fry. Fry, a researcher, regularly sang in the church choir. In order to locate the hymns quickly during the Sunday service, Fry would use little scraps paper to mark their places. But the scraps of paper would sometimes fall out when Fry stood up to sing, and he'd have to fumble to find the right page⁵. While sitting in church, Fry recognized the “problem” and came up with a relatively simple solution. If you put a substance that is sticky, on the scrap of paper, they'll stay on the page and you can take them off when they are not needed anymore. Yes, Art Fry worked for 3M and invented Post-It Notes. Fry's story demonstrates the creative value of recognizing problems instead of simply dismissing them. A useful way of identifying potential problems is bug listing. It involves creating a list of things that annoy or irritate you.

You are now ready to introduce the next creativity tool asking what if someone else were solving the problem.⁴ The someone else could be anyone: your father, your mother, Sigmund Freud, W. Edwards Deming, Jesus, Bill Clinton, George Bush, Oprah Winfrey, a four year boy – anyone! Using the same groups as above, pick another problem and ask the group to use the "what if someone else were solving the problem" method. Each group needs to pick someone else to solve the problem. The group then looks at the problem from that person's viewpoint. Ask the groups to determine the following:

- What assumptions would the person bring in?
- What constraints might the person ignore?
- What unique twists might they give to it?
- What creativity changes would they make?

Again, debrief the exercise by asking each group to present their results. Their results should be recorded on flip chart paper. The exercise and debrief will take about 20 minutes.

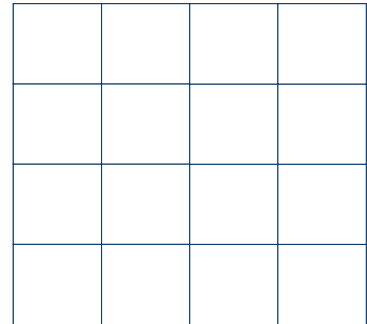
The last portion of the creativity training covers when to use the creativity tools. Creativity tools can be used every time we are stuck in the way we are doing things or when we know we need a new way of tackling a process, eliminating a bottleneck, a business constraint, solving a problem or reaching a goal. Creativity tools can be used when we want to challenge the current way of doing things to ensure we are ahead of the competition or to foresee future customer shift in demands for the product and services offered by us.

Summary and Closure

The last part of the training is the summary and closure. Briefly review what you taught the group. You will encourage the associates to make it a goal that they want to be more creative, on the job and at home. Then challenge the group with one last creativity exercise. Ask the group how many squares they see in the figure to the right.

Finally, end the session with closure. Ask each individual in the group what they are taking away from the session and how they think it applies to their job. Finish the training session with this quote from Walt Disney:

“It’s always fun to do the impossible.”



CONCLUSIONS

This session has provided the blueprint that one company uses to provide on-going monthly training to all their associates. This training has been one key ingredient in making quality part of the organizational culture. The cornerstone of this training is the Quality Skills Training (QST). The layout of the QSTs was given and one QST topic, creativity, was presented to demonstrate how the QSTs flow.

REFERENCES

1. Amiable, Teresa, and Tighe, Elizabeth, *Creativity*, Edited by John Brockman, Simon & Schuster, 1993.
2. Plsek, Paul, *Incorporating the Tools of Creativity into Quality Management*, Quality Progress March 1998.
3. Hockenbury, Don and Hockenbury, Sandra, *Discovering Psychology*, Worth Publishers, 1998.
4. Von Oech, Roger, *A Whack on the Side of the Head*, Warner Books, 1992.
5. Kaplan, Steve “Capturing Your Creativity,” Annual Editions: Psychology, 1990/1991.